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

convenes

THE SUBCOMMITTEE FOR DOSE RECONSTRUCTION REVIEW OF THE

ADVISORY BOARD ON

RADIATION AND WORKER HEALTH

The verbatim transcript of the Meeting of the Subcommittee for Dose Reconstruction Review of the Advisory Board on Radiation and Worker Health held at the Marriott Airport, Hebron, Kentucky, on March 25, 2008.

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C O N T E N T S

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TRANSCRIPT LEGEND

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-- (sic) denotes an incorrect usage or pronunciation of a word which is transcribed in its original form as reported.

-- (phonetically) indicates a phonetic spelling of the word if no confirmation of the correct spelling is available.

-- "uh-huh" represents an affirmative response, and "uh-uh" represents a negative response.

-- "*" denotes a spelling based on phonetics, without reference available.

-- ^/(inaudible)/ (unintelligible) signifies speaker failure, usually failure to use a microphone.

P A R T I C I P A N T S

(By Group, in Alphabetical Order)

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National Institute for Occupational Safety and Health
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MEMBERSHIP

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Senior Operator, Nuclear Fuel Handling
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GRIFFON, Mark A.
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MUNN, Wanda I.
Senior Nuclear Engineer (Retired)
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ANNOUNCED PARTICIPANTS

BEHLING, HANS, SC&A
BEHLING, KATHY, SC&A
FARVER, DOUG, SC&A
HINNEFELD, STUART, NIOSH
HOMOKI-TITUS, LIZ, HHS
HOWELL, EMILY, HHS
KOTSCH, JEFF, DOL
MAURO, JOHN, SC&A
OH, KATHERINE, SEN. REID
SHARFI, MUTTY, ORAU
SIEBERT, SCOTT, ORAU

P R O C E E D I N G S

(9:00 a.m.)

WELCOME AND OPENING COMMENTS
DR. LEW WADE, DESIGNATED FEDERAL OFFICIAL

DR. WADE: This is the Subcommittee Conference Room and we're ready to begin. This is Lew Wade, and I'm filling in for Christine Branche who's the Designated Federal Official for the Advisory Board. Dr. Branche is, in fact, with some others visiting the Nevada Test Site as part of her data gathering for her function in support of this program.

This again is the Subcommittee on Dose Reconstruction and that subcommittee is ably chaired by Mark Griffon with members Gibson, Munn and Poston. Alternates are Brad Clawson and Robert Presley. In the room is the Chair, Mark Griffon, Wanda and Brad Clawson. Let me ask if there are any other Board members including subcommittee members who might be on the phone.

(no response)

DR. WADE: Poston, Griffon, Presley on the phone? Gibson, I'm sorry.

(no response)

DR. WADE: Okay, well, we have a quorum of the Subcommittee with the three members present, and we can continue our business. Let me go around the room and have folks here introduce themselves. Then we'll do the introductions of those involved in the phone.

MR. SHARFI: Mutty Sharfi, ORAU team.

MR. HINNEFELD: Stu Hinnefeld from OCAS.

MS. HOWELL: Emily Howell, Health and Human Services.

MR. CLAWSON: Brad Clawson, Advisory Board, not conflicted.

MS. MUNN: Wanda Munn, Advisory Board.

MR. FARVER: Doug Farver, SC&A.

DR. BEHLING: Hans Behling, SC&A.

DR. MAURO: John Mauro, SC&A.

DR. WADE: And as mentioned, this is Lew Wade and...

MR. GRIFFON: Mark Griffon with the Advisory Board.

DR. WADE: And now let's ask for other members on the phone of the NIOSH/ORAU team.

(no response)

DR. WADE: NIOSH/ORAU team members on the

phone.

(no response)

DR. WADE: SC&A team members on the phone.

MS. BEHLING (by Telephone): This is Kathy Behling.

DR. WADE: Welcome, Kathy. It's cold here in Cincinnati.

MS. BEHLING (by Telephone): It's cold here, too.

DR. WADE: Okay, any other SC&A team members on the phone?

(no response)

DR. WADE: How about other federal employees who are working on this call?

MR. KOTSCH (by Telephone): Jeff Kotsch with the Department of Labor.

DR. WADE: Thank you, Jeff, for joining us.

MS. HOMOKI-TITUS (by Telephone): Liz Homoki-Titus with HHS.

DR. WADE: Hi, Liz, how are you?

Other federal employees on this call?

(no response)

DR. WADE: Are there members of Congress or their representatives on the call?

MS. OH: I'm Katherine Oh from Senator

Reid’s office.

DR. WADE: Welcome, it’s nice to hear your voice.

Anyone else on the call, workers, worker representatives? Anyone who would like to be identified for the record as being on the call?

(no response)

DR. WADE: Katherine, would you spell your last name for the record, please?

MS. OH: It’s just O-H.

DR. WADE: Anyone else on the call who would like to be identified?

(no response)

DR. WADE: Briefly, the rules of decorum -- we’ve been doing very well I think, but please mute your phone if you are not speaking. If you are speaking, use a handset if at all possible. As Dr. Branche has discovered and told you, if you don’t have the ability to simply mute your phone, hit star six. That will mute your phone. And then star six again will unmute it if you feel you need to speak. I can’t think of anything else that needs to be covered, so Mark?

INTRODUCTION BY CHAIR

MR. GRIFFON: I guess I didn't circulate an agenda but got a request the other day for an agenda. And I think briefly what I'd planned on covering was -- and in this order makes the most sense was the fourth and fifth set would be a draft letter for the fourth and fifth set and then move on to the tenth set case selection.

Because I think we want to have those done, especially before the next meeting in April, and then we can move into the sixth set, and we're in the middle of comment resolution there. I think it might take us -- we haven't looked back at it in awhile so it may be some memories that lapsed on that, too. And if we don't complete that, I figure we should do that last because the other two, I know we want to get done for sure in the time allowing. We'll, hopefully, get through the whole sixth set, but we may not.

So I don't have anything else for the agenda for this one. I did mention doing a first hundred cases draft report. I haven't done a draft of that yet. About a week ago I

think SC&A circulated some statistics on the first hundred cases, and between that time and now I just haven't had a chance to really draft it. Plus, I thought it was most appropriate to discuss that fourth and fifth set letter first, and then do the full draft of the first hundred cases.

So any comments or additions to the agenda? I think if that's okay, we'll proceed on that.

DR. MAURO: Mark, just the two matrices for the fourth and fifth sets, it turns out not everyone had them so I brought them over to the front desk about 15, 20 minutes ago. They said they would make copies up and bring them here as soon as possible so that may slow things down a bit.

MR. GRIFFON: All right. Well, it's up to, I can summarize. I mean, the last Board call I distributed the matrices, and I believe there were from that time and this version here there's two edits. And they were basically changing unresolved to N/A, I think, in both cases so they're the same matrix basically. I don't think there's much further

discussion on the matrix unless we have to go back to look at if somebody has questions on the Board action or one of those items. We certainly can discuss it, but otherwise I was going to focus on the letter really if that's okay.

MS. MUNN: Thank you for clarifying the changes that were made because I didn't cross-check them.

MR. GRIFFON: Yeah, I'm pretty sure it was just like two unresolves that we had to put a ranking in, and I think they were both N/As.

DR. WADE: Here are hard copies of the fourth and fifth set if somebody really needs them.

MR. GRIFFON: And does everyone have the draft letter that I distributed? I should say I did, on the last Board call Paul had asked to see a draft of that before I circulated it to the Subcommittee. So I did send it to Paul. He gave me a few minor edits, and they're included in the version that I sent around to the Subcommittee.

MS. MUNN: I assume we'll be working from the edited version that Stu sent us?

MR. GRIFFON: Yeah, we can use --

MR. HINNEFELD: All I did was insert some of the numbers in there.

MR. GRIFFON: Some of the numbers, yeah.

MS. MUNN: That's the one I marked up.

MR. GRIFFON: That's fine. That's fine. Which is cases 61 through 100, Report rev. one, underscore SLH, is it or S-H? S-H.

MR. HINNEFELD: I may have put SL.

MR. GRIFFON: Okay, I need my glasses, that's all.

Yeah, I had actually asked NIOSH to, and some of the highlighted things, they weren't necessarily your questions, Stu, as you pointed out to me that some of the yellow highlighted areas I left, I asked NIOSH to shed some light on that. And also Attachment One is a table that summarizes the 40 cases that basically shows the sites, the POCs, all the general information that we can share without divulging any privacy issues as sort of the first attachment describing the cases. So, yeah, we can work from this last letter that Stu marked up.

So I mean I can walk through it. I

used the, while people are reading, I guess I can describe. I used the last letter that we sent as a, I used the template of the letter that we submitted with the second and third set of cases, and I edited from there. The conclusions are quite different, but the front end is very similar format anyway. I guess that's a starting point.

FOURTH AND FIFTH SET OF CASES CONCLUSION

MR. GRIFFON: We're looking at the letter regarding the fourth and fifth set of cases.

MS. MUNN: Are you ready for some general comments?

MR. GRIFFON: Yes.

MS. MUNN: When I looked at this letter I did something I haven't done in awhile. I tried to remove myself from any prior knowledge of what we had done and look at this with completely fresh eyes to get a feel for the tone of what we were sending to the Secretary rather than the content. I didn't have any question with a comment.

But as I was reading through it, it seemed to me that there was an extremely negative tone to, I recognize this is an audit

of sorts, and it isn't so much what's been said, but in several places the way it's been said seems to be, to my eyes when I was looking at it in that way, quite negative with respect to the work that NIOSH has done. I'm not sure that's our intent or the Board's intent. I would like us to think about that a little bit.

On that first page as we were going through -- this has nothing to do with negativity -- but in that last full paragraph there just before the summary of findings, as I was reading the sentence, that first sentence in that paragraph was the same sentence that I know we've used prior to, but I didn't catch the fact that it seemed rough toward the end.

I had suggested that after the 8,120 cases which have been adjudicated, and it just read better to me if we inserted were therefore available for Board review. It seemed to me to clarify what we were saying there, which have been adjudicated and available for Board review. The reason they were available is because they had been

adjudicated. That just seemed to be a clarification.

MR. GRIFFON: So which had been adjudicated and were therefore available?

MS. MUNN: I thought it would read better if we --

MR. GRIFFON: That's fine. I agree. That section reads a little rough.

MS. MUNN: And the very last part there I think could be smoothed out where we're talking about the group of cases that includes six that one of which was.

MR. GRIFFON: Well, I would actually prefer to put five in there.

MR. HINNEFELD: That was probably what I --

MR. GRIFFON: But the intent was, but 50 is compensable, right?

MR. HINNEFELD: Exactly 50 percent would be compensable.

MR. GRIFFON: So the one was compensable. So I think, I know we could put 49.9 now, and it's --

MR. HINNEFELD: Just say five and be done with it. I put those parenthetical notes in there sort of as explanation. I didn't expect

them to be part of the text that we'll --

MR. GRIFFON: But I agree. The number's fine, and we can leave out the parenthetical. I mean, I actually, yeah, I think that's five cases.

DR. BEHLING: Mark, let me have, make a comment here in that same paragraph. What is meant here by the word unrepresentative pool of 8,000-some cases? What does unrepresentative refer to?

MR. GRIFFON: Well, I was just, I mean, that came from our last, it came from the discussions on the second and third set of cases, and I was just going to ask at this point in the process it may have been more representative in the, I mean, the basic reason I think for including that in the first, in the letter for the second and third set of cases was that most of them were either overestimates or underestimates.

DR. BEHLING: Maximize.

MR. GRIFFON: Now we did have more best estimates, but there's still weren't a large pool of best estimates to pick from. We got five or six, I don't know exactly how many we

got, but we did get some best estimates in this round of reviews. But I remember the pool being kind of small still. So the question of does that you know represent the overall sort of distribution of cases. And, yeah, there may not be a ton of best estimates.

MS. MUNN: It seemed to me that this, for this letter that particular word probably is not as accurate as it was in the preceding letter.

DR. BEHLING: And it may have no meaning to somebody.

MR. GRIFFON: Right, right, it doesn't mean much here.

MS. MUNN: I think it muddies the water on this one.

DR. MAURO: It could be misleading and misunderstood.

MS. MUNN: And probably questioned.

DR. MAURO: Would it be true to say that the samples that were reviewed were representative of worker cases that were, in fact, adjudicated to ^ at the time that this was said?

MS. MUNN: That's essentially what it would say if you took the word unrepresentative out.

MR. HINNEFELD: Yeah.

DR. WADE: What is the truth?

MR. HINNEFELD: I think it reads easiest just not to say anything.

DR. WADE: But to be true to the process when a list was brought to the Board, was that a list of all or was that a list culled in some way?

MR. HINNEFELD: The lists that were brought to the Board, these initial selections lists, include all of the full internal and external designated code cases, and it includes a random selection from the others. So that's why you get two lists. And that's what we've done so far, and that's what we've done here.

DR. WADE: And that's for the fourth and fifth cases as well.

MR. HINNEFELD: Yeah. I'm not sure we did a, pulled the, I mean, for the fourth case I'm not sure we pulled all the full internal and externals. I'm pretty sure we did on the fifth. So I don't remember for sure how we did that, when we started doing that pulling.

DR. WADE: On the fourth set it was all. In the fifth set it was all plus a pull list of --

MR. HINNEFELD: No, we've always done a random selection. And I'm not sure if it changed at four or five. I think it changed at five, but we've always done a random selection of everything available. And then starting with, I think starting with at least the fifth set and maybe the fourth set, we did the random selection, but we also selected all of the cases that are identified as full internal and external. Now I think if you talk to several people, you'll get a different opinion on whether full internal and external translates into best estimate as well. So that's another thing, because there were 17 or 37 of these 20 are identified as full internal and external in the original selections.

MR. GRIFFON: Thirty-seven of the 40?

MR. HINNEFELD: Of the 40, I'm sorry, 37 of the 40 are identified as full in the original selection list. And if you get several reviewers a lot of people would say, well, this isn't really a best estimate.

MR. GRIFFON: Let me try this on for size because this is something I was actually thinking of in the plane after, as I looked at it and was thinking of possible points of discussion. And I'm taking the unrepresentative part out. But I'm rephrasing the sentence to say the Board's case selection criteria are designed to include a representative sample of DOE and AWE facilities, time periods and cancer sites. The 40 cases covered in this report were selected from a pool of 8120 cases which had been adjudicated and were therefore available for Board review. Period.

DR. BEHLING: And I think what needs to be said is that NIOSH adjudicated cases by priority meaning that the best estimates were basically pushed on the back burner.

MR. HINNEFELD: Yeah, that's how we did dose reconstructions right in that order.

MR. GRIFFON: But I don't think we need to really, I don't think we really need to touch that in this. Does that sentence read okay?

MS. MUNN: The way you read it actually reads better with a period at the end of

sites, and then a second sentence, the 40 cases covered in this report.

MR. GRIFFON: Okay, yeah, I'll do that because I don't like all these commas either.

DR. WADE: Could you read it again now, Mark?

MR. GRIFFON: So now what I have is, "The Board's case selection criteria are designed to include a representative sample of DOE and AWE facilities, time periods and cancer sites, period. The 40 cases covered in this report were selected from a pool of 8120 cases which had been adjudicated and were therefore available for Board review." So that's fine.

DR. WADE: I think that's a true statement.

MR. GRIFFON: I think the reason for the unrepresentative was more, we had more basis for it in the last letter. I agree. So we can take that section out. That's fine.

MS. MUNN: And you're going to reword that last sentence.

MR. GRIFFON: I just put, for the last sentence I just have, at the very end of the last sentence I just have, "However, it should be noted that this group of cases did include

five cases of POCs between 45 and 50 percent." I mean I think we can split hairs and put 49.99, but, you know.

MS. MUNN: There's no point.

DR. WADE: Just for the record there was a slight bias that the Subcommittee and the Board brought to the selection that you don't speak to here, and I think that's fine because you don't imply that you didn't. You just say selected, and I think that's fine. As you get into subsequent cases I think you might want to start to state that bias which was best estimate cases.

MR. GRIFFON: Or maybe show, we might even want to show our cases selected to-date, and how they'd break down and discuss that a little more.

DR. WADE: I don't think it's critical here, and I think what you said is exactly the truth. I think as you go beyond --

MR. GRIFFON: I think in the 100 case letter, I was considering let's break down the statistics a little bit. How many best estimates did we look at? How many -- you know. Lay that out a little bit along with

maybe a little more mention of the selection process.

MR. SHARFI: Mark, if you're going to provide a breakdown later, are you going to explain what you consider a best estimate? I'm not sure everybody, not everybody understands what you call a best estimate versus --

MR. GRIFFON: Yeah, I think we have to, and we'd appreciate maybe your definition, too.

MR. HINNEFELD: We'd have to give you one.

MR. GRIFFON: Yeah, I think we need yours because you're the one. That's where we're getting our definition from is from NIOSH. But I think that is good to include.

And I would be one of those people that doesn't consider all the full internal and externals, all best estimates for sure because a lot of them are the site models and things like that that you just, every case runs through the same model, so it's not really that quote/unquote best estimate. But I don't think we need to really get into that in this letter. This letter covers the fourth and fifth set of cases, and that's 40 cases

total.

I don't know, Wanda, your comment on the tone was, I mean, I think just editing that one paragraph helps.

MS. MUNN: That helps a little. My next concerns didn't come until we got down to conclusions and recommendations.

MR. GRIFFON: Sure.

DR. WADE: It might be worth having just a brief general discussion of the issue. I've worked in other places where we've written letters like this, and I think it's important to the Subcommittee to think about how it wants to proceed. And the best first rule to start with is simply state facts, attempt to do no spin unless you're purposefully trying to state an opinion, and then you need to state that opinion.

If you follow those rules, I think you'll come to a reasonable product. Reasonable people can still disagree about the feel of that product, but it's good to go through those steps I believe.

MS. MUNN: That's true. My concern more was with the tone rather than with the facts that

were presented. It's just, as I said, I didn't really encounter it so much until I got to the --

DR. WADE: Why don't you point out where it is, Wanda.

MS. MUNN: Under conclusions and recommendations, when I read through, if you read through number one, just read through it. You don't know anything about this. This is new information to you. You read through it and it says to me, well, NIOSH sure isn't handling this properly, when I got to the end of the paragraph. And I'm not sure that's exactly the inference that you wanted to, I'm not sure that's what we wanted to imply. It doesn't say that. There are no words that say that. It's just the feel of that.

DR. BEHLING: Well, I think one of the important things we already alluded to is to clarify the issue of a maximized, minimized and best estimate. And I think part of that definition, it can be a brief one, is to essentially establish the fact that when you maximize a dose, you already start out with the knowledge that this is not a compensable

case; and therefore, there is a fairly wide range of values that you could potentially misrepresent in one way or other, a more claimant favorable than it needs to be which we did on many occasions, said why are you giving so much dose to something that doesn't really justify it.

And on the basis of understanding what a maximized dose is, you could sort of say the findings may have limited impacts. The same thing for minimized. We know that for a minimized dose you're going to compensate with a partial dose reconstruction. I think those definitions along with a best estimate definition would clarify a lot of this misconception.

MS. MUNN: Sometimes, yeah.

DR. WADE: Now, you're talking about paragraphs one and ^.

MR. GRIFFON: I mean, you know. I don't know. Maybe it has --

MS. MUNN: You see, it's once again --

DR. MAURO: That's the word, see, that's what it is.

MS. MUNN: It's once again.

MR. GRIFFON: Maybe that's the tone you're talking about. Where's the once again?

DR. MAURO: Right in the very first line.

MS. MUNN: The very first line you start out saying okay, they're doing it again. Whatever it is they're doing, they're still doing it.

DR. WADE: That's a spin series of words. You don't need that unless you want it there.

MS. MUNN: Again, it's just I was trying to look at it with fresh eyes.

MR. GRIFFON: I guess the only, you know, this is a letter that's following the other letter where we made almost the same recommendation, so that's sort of why it is once again. You know, is that spin? Is that --

MR. HINNEFELD: Are you interested in NIOSH comments at all?

MR. GRIFFON: Sure, I guess.

MR. HINNEFELD: It's not our product. I mean, it's not our letter. My concern is that this paragraph implies to me that the description of CATI events, specific information CATI events, will not change until the revised DR format changes, and I don't

believe that's the case.

I believe if you had read dose reconstruction reports prepared recently, you will find that anything that's mentioned in the CATI is specifically rementioned in the dose reconstruction with an explanation of what was done, either how that either affected the dose reconstruction or why it didn't affect the dose reconstruction. And that's done in the existing format.

And so that kind of leads to my second point is that to the extent that this report describes a continuation of issues or a continuation of findings that were found before, recall that there was no specific attempt made to sample, I mean there was an attempt to sample newer dose reconstructions, but there were very many dose reconstructions in these sets that were as old as the dose reconstructions in the earlier sets.

DR. MAURO: ^ that transition.

MR. HINNEFELD: And so the fact that as you write these things serially, as the reviews are done serially, I think unless you're reviewing dose reconstructions that were done

serially in time, so you're only reviewing cases that were done since your last report, it's a little disingenuous to say that this is still going on when, in fact, it's not necessarily what you're describing.

MR. GRIFFON: Okay.

DR. MAURO: That's a very important point then. It's very difficult --

MR. GRIFFON: You know, that's true, Stu, but also that's a little, I mean, the DR report hasn't been modified.

MR. HINNEFELD: But the format has not --

MR. GRIFFON: So you are gradually making some of these changes --

MR. HINNEFELD: -- the format has not been changed.

MR. GRIFFON: I mean, otherwise in our resolution --

MR. HINNEFELD: -- but I think --

MR. GRIFFON: -- you'd say completed and done --

MR. HINNEFELD: -- it's worthwhile --

MR. GRIFFON: -- and you didn't say that.

MR. HINNEFELD: -- it's worthwhile to comment that that has not been done because

I'm like the proponent at OCAS for the changed format because it's difficult, I think it's difficult -- well, it's difficult for everybody to use, all these audiences. It's difficult for the claimant to understand what it means, and it's difficult for the reviewer to understand, to dig the information out that he needs for the review.

So I'm a proponent of the change. I think it's fairer to say that we've been planning to do this, and it's not done. But I think the way some of this stuff is couched and some of the reasons to do it don't necessarily line up with where we are.

DR. BEHLING: I think it needs perhaps a statement saying that the selection of the fourth and fifth set came from a pool of DRs that may have an adjudication date that is concurrent with the first three sets; and therefore, there's no reason to assume that there was a chance for modifying --

MR. GRIFFON: You're still missing the point. That's a good point, but look in the last column of the matrix, Resolution, and a lot of these still say under development. So

that tells me that not only did it not affect these cases, but it's still not finished. You know what I'm saying? If it was finished and being applied --

MR. HINNEFELD: It certainly worked --

MR. GRIFFON: -- you're right about the CATI stuff. I agree that --

MR. HINNEFELD: -- and it's certainly worthwhile to comment that that's not done.

MR. GRIFFON: Yeah, yeah, so maybe we --

MR. HINNEFELD: I am not worried about that. My main concern was the CATI. My original thing was that we're not, not yet that we won't address CATI stuff until the reformat's done, and that's not case. But I think it's certainly worthwhile to mention that. We agree to do this --

MR. GRIFFON: In other words we've made some changes already without having to reformat the whole report --

MR. HINNEFELD: Right.

MR. GRIFFON: -- and you haven't finished that yet --

MR. HINNEFELD: Right.

MR. GRIFFON: -- but you had implemented

some of the CATI changes.

MR. HINNEFELD: Right.

MR. GRIFFON: So I'll accept that. But I think the other is --

MR. HINNEFELD: Yeah, I have no argument with the fundamental point there.

MR. SHARFI: In your scope do you capture how old these claims or how long ago these claims were adjudicated?

DR. BEHLING: No, the date's not captured in this.

MR. SHARFI: I mean like a data range that these are claims that were adjudicated two, three years ago?

MR. GRIFFON: No, we can put that parenthetically in that sentence that we just edited. If we have that number, if you have that in your table, Stu.

MR. HINNEFELD: I could get the, we can get the dates when --

MR. GRIFFON: Yeah, I think that's useful.

MR. HINNEFELD: -- the dose reconstruction was approved. The adjudication's outside of our hands, but we can get you the dates when the dose reconstruction's approved. The

adjudication date we might be able to find it out, but it's not a date we have databased, and so it would be very --

MR. SHARFI: It might help you put these in context by how old they are.

MR. GRIFFON: It is helpful, yeah.

DR. MAURO: I don't think it's captured. In other words does it mention the groupings, and I think it's important. If we are moving in the system where we're looking at more and more recent dose reconstructions, and we can see the progress in terms of how the changes are made and reflecting, let's say, some of the findings, and right now I don't think that dimension is here. Mainly, that we're looking at a grouping, again, that really represents the same generation as an earlier one.

That whole concept may not, it may be important to communicate it to the reader that this is the way the process is structured. Unfortunately, they probably are not going to see the more recent ones that might reflect some of the commentaries that have been made earlier until maybe the next review. So I think that's an important concept that I

wouldn't want to leave the reader thinking otherwise.

MS. MUNN: Perhaps we can do a little wordsmithing over the lunch hour or at some point down the road here yet today and see --

MR. GRIFFON: Well, we can try. I mean, I guess I'm okay with taking out the once again although it is once again.

MS. MUNN: Well, yes --

MR. GRIFFON: You know, I don't want to set that, it's not necessarily to set a tone, and I, yeah, we can maybe wordsmith that middle section because I think Stu makes a valid point that the CATI, at least that one part of our concern, is being considered even though the DR report hasn't been completely modified. NIOSH is taking that into account now in how they write their DR reports.

MR. SHARFI: I think Stu's point that these dose reconstructions were done even before your comments from the first set were received, you have to consider that these will run with some of the same problems because they were done way before we ever looked at some of these issues.

MR. GRIFFON: Yeah, but again for the third time, the point I'm making is that in the last column the final action is, under development. It's still not completed. So even though, you know, I agree with your point, but it's still not done. That's the point I was trying to raise.

So, okay, we can maybe print this out, Wanda, and that's fine if we want to work a little wordsmithing at lunch time or whatever because it's hard to do it out loud.

MS. MUNN: It is. It is. And I don't think it's necessary to change the information that's here. I was suggesting that we change the presentation of the information rather than the information itself.

MR. GRIFFON: Well, and I want to clarify the one thing about the CATI. I think that's important.

DR. WADE: We're next, Wanda.

MS. MUNN: The next question that I had, I just put a lot of question marks after when I read the procedural issues item three. I didn't mark anything specific. It was just...

MR. HINNEFELD: I have one on paragraph two

if anybody's interested. There's a statement that workbook errors accounted for a high percentage of the findings in this set. And I'm interested in what's considered a workbook error here. I would have thought it would be a workbook that makes a mistake in the translation of the technical document. And I didn't find that many in any of these findings that I would call that.

It depends on what you mean by workbook error. There are many times when a workbook has been identified as the workbook didn't do this calculation correctly. For instance, it chose the full range of dose correction factors at Savannah River instead of just AP. But it did, when it was prepared, faithfully translated the technical guidance that was out there at the time it was prepared.

There were a number of findings about the TIB-0002 internal dose model calculating dose to the colon rather than the specific target organ. When, in fact, the first tool available for TIB-0002 only did the colon because that overestimated everything, and so

some cases could be done that way without building the rest of the tool that allowed the other target organs to be used.

So a lot of the findings in here that may be interpreted as workbook errors are actually cases where the workbook faithfully produced what the technical guidance said to produce. But they're subject to later technical guidance, sometimes in response to errors; sometimes because additional work could be done on target organs that has made a change since then.

So I was looking through here, and I'm hard pressed to find very many that I would consider what I would think would be a workbook error where a workbook was put together incorrectly so that it did not faithfully produce the technical guidance that was there. Or you may call it workbook error, an incorrect entry in a workbook that wasn't caught. There was at least one of those where data was entered -- or a couple of those -- where data was entered on the wrong line or for the wrong date and where residual data was entered for too long a time.

So there was some errors in execution of the workbook that could maybe fit in here. But I still didn't see just a high percentage that I would call that.

MS. MUNN: The question came to my mind whether that really meant that the workbooks had serious errors in them. There's a mention if there were errors in the spreadsheet that's carried in many cases. So did the workbook errors then mean that there were lots of these and that accounted for a high percentage of the findings? Or did it mean that while the workbooks were being used some interpretation or human entry resulted in the case? It's not clear, and it probably matters. We really ought to try to differentiate between whether the workbooks were in error or whether some of the use of the workbooks resulted in errors.

DR. BEHLING: Well, I think it can be both. For instance, I will give you an example of a workbook error. And it's a trivial issue, but it involved, for instance, the use of assigning LOD over 2 as a hypothetical value when the value came out to be zero. On the other hand the workbooks early on, let's

assume that for a film dosimeter, the LOD was 40 millirem but the rule was to assign 20 millirem to any value that was noted as zero.

On the other hand we noted over and over again there were instances where a person was reported as having one or two or three millirem, and, of course, a workbook doesn't recognize that. So in essence that person was shortchanged over a person whose dosimeter showed nothing, and he would have gotten 20 millirem for that zero as opposed to the one or two millirem which was a registered value. So there was a workbook oversight in the sense of that wasn't recognized.

MR. HINNEFELD: In that case though the instruction to use LOD over two in every case came after actually from findings from this group, I believe. And so there was not, and so the workbook as prepared was prepared in accordance with the technical direction that was there at the time or absent technical direction. But once the technical direction was given, yeah, because, I mean, you can make an argument, if you're collecting a bunch of dosimetry data that what their dosimeter

reports is the best estimate of what the number is, even if what the dosimeter report says less than LOD over two. I mean, what else, what other indicator you got? All you know it's some place between zero and LOD over two depending on how we define LOD here.

MR. GRIFFON: I guess how to capture the, I mean I see your point, Stu. I guess the reason I framed it this way was it's a quality control question.

MR. HINNEFELD: And I think the quality control --

MR. GRIFFON: And in that context --

MR. HINNEFELD: -- and I think the quality control question can certainly remain --

MR. GRIFFON: Right. I mean, I was saying in that context that if you just have some of the, and that was one because I e-mailed back and forth with SC&A with Kathy Behling mainly, and that was one of the ones that was a repeating error. And the question was if you had a manual process, would that likely -- and it may be if you added -- I see what you're saying, back to the written guidance. But my sense is that if it's in a computerized form,

nobody's even looking at that. And I think someone might have questioned it along the way if they were implementing that. That's sort of what I was getting at was the down side of the workbook. It certainly is more efficient --

MR. HINNEFELD: I think there's certainly a caution about workbooks --

MR. GRIFFON: Yeah, that's all. That was mainly what --

MR. HINNEFELD: -- if you make a mistake in a workbook, you make that mistake a lot of times, and you're right. So there's certainly a danger in that. I think that's worthwhile. It may be a caution to make sure that before a workbook is rolled out, you know, because nobody's really looked at the process of what is done with a workbook before it's rolled out and put into use in terms of the validation of it. A caution like that I think would certainly be appropriate.

But I don't think that we've observed in the ones that I've been looking through I don't count very many where, I don't count any where the workbook didn't faithfully produce

the technical guidance that was used, that was available when the workbook was generated. And so, but I think having said that I don't think that I would argue that there should be, you know, make some comment about quality control because there were a lot of findings, there were a lot of findings that had to do with, well, the procedure wasn't followed.

So there are some things like that, and there's a lot, I think you could, I'm not arguing with the paragraph being taken out. I just don't think that it's true that a high percentage of these findings were what I would call workbook errors, which I would think would be the dangerous kind that you were talking about which was the workbook does not accurately reproduce the technical guidance.

DR. BEHLING: Well, let me give you another one that we might want to think about how it falls into this picture of quality control or workbook error. But early on we identified that the DCFs were likely to be in error and that AP geometry was really the only credible DCF value that can be used. And then along came dose reconstructions that required a

triangle distribution for dose.

And the workbook, one of the things that I remembered in finding as a deficiency in the workbook was the use of a triangular distribution of DCFs that now made use of all four geometries as opposed to the three values that defined the AP geometry as a DCF. And you realize that the low end of the triangular distribution would suffer severely if you took the rotational or PA geometry as one of the options for selecting the low end. And so that was an error that was again an issue where the workbook did not track what we had agreed upon, and that is DCF values other than AP were not to be used.

MR. HINNEFELD: But the workbook was prepared before the finding.

DR. BEHLING: Yeah.

MR. HINNEFELD: And so the workbook was prepared in accordance with the guidance which really comes out of IG-001 which is now gone from IG-001, but about using --

MR. SHARFI: The issue was with the procedure, not the tool. The tool still followed the procedure correctly. The

procedure had an error.

MR. HINNEFELD: And then after the finding was made, then there were dose reconstructions that came up for review where the old version of the tool had been used that used the entire range. I don't remember the whole sequence of exactly what sequence, you know, did the finding first happen and then the tool was changed immediately or did the finding first happen and then we observed dose reconstructions where the tool was not, had not been corrected, and so then it was corrected. So I don't remember the, you know, I can't swear to what sequence, what dates things occurred in, but when the tool was prepared, the instruction or the guidance had not yet changed yet to use only AP.

DR. BEHLING: I don't remember the exact chronology.

MR. HINNEFELD: But I don't remember the sequence.

DR. BEHLING: But I remember identifying the issue of DCFs as one of the first things before we really even got into dose reconstructions because that was an audit of

the procedures under Task Three. And when I looked at IG, I realized that the DCFs were inappropriate. I think we brought that to your attention very early.

MR. HINNEFELD: And it, and like I said, it could be that the tool continued to be used beyond the finding, the original mention of the finding, which quite likely is a QC or a QA issue, you know, extent of corrective action when we have a finding, you know, extent of condition and correction. So that might be a finding, but it still to me doesn't sound like what I would consider, well, it's not what I would call a workbook error which is that the workbook did not faithfully translate the technical documents.

DR. MAURO: This is another important issue. We're doing something that's very difficult. We're trying to take a snapshot --

MR. HINNEFELD: Yeah, and try to write simply what we're going to write.

DR. MAURO: The reality is what we really have is a process, a continuous process, where we review the actual procedure, and then we step in right behind that and start reviewing

workbooks, all of which is in a dynamic state and not everything is caught up.

MR. HINNEFELD: The resolutions take awhile.

DR. MAURO: And then, bam, we take a quick look. Somehow it's a very difficult thing to communicate, but I think it does need, just like the previous item we talked about. Somehow it has to be captured in setting the table. In other words in a way in setting the table for this report the overall process and where we're coming into the process and how the findings fit into that process. That's a difficult thing to write, but I think we've got to try to get that.

MS. BEHLING (by Telephone): Excuse me, this is Kathy Behling. The other reason that I wanted to add some statement in here about the workbooks because it was only in the fourth set that we finally encountered the use of these workbooks and maybe the term error the way you're interpreting is not correct.

But there were some, as Hans pointed out, some factors that were entered in and some approaches that were being used or methodologies being used by these workbooks

that we didn't feel were appropriate. I do feel, like I said, it's important that we discuss something about the fact that we've now encountered these workbooks.

We've reviewed these workbooks in light of these dose reconstructions, and we have found some issues that we didn't feel the workbooks were appropriately interpreting some of the data. As Hans indicated, the LOD over two issue and these range of DCF values, and so that's why I made mention of the workbooks.

MR. HINNEFELD: I think -- well, like I said, I don't have a problem at all with QC finding. I don't have a problem with mentions of workbooks and cautionary because, like you said, when you have a defective workbook, you do the same things wrong a lot. I have no problem with things like that. I think that, well, I don't know that I would call a high percentage of the errors workbook errors by however you define it. But I think there can certainly be, you can comment about it being incorrectly used. I know there were two, there were instances of workbook error, or there was something. I just didn't feel like

a high percentage was accurate.

MR. GRIFFON: Yeah. What if I did, what if I tried this because a workbook error is probably, it's not --

MS. BEHLING (by Telephone): We could soften those terms. I'm not trying to insinuate that there, that that was a high percentage of the errors, but I wanted to point out that there were a few things that were caught with the workbooks.

MR. GRIFFON: Well, I think, I was going to say findings associated with the use of workbooks and associated guidance accounted for a high percentage. The only reason, I do think it might be a high percentage. And part of the reason for saying that is because quite frankly we saw several findings that just repeated again and again. And it's only that --

MS. BEHLING (by Telephone): I also believe that it was due to the fact that it was a lot of Savannah River Site cases in fifth sets, and that's where we first encountered this type of error or whatever you want to call it. It's not an error, but it's a

misinterpretation of the data.

MR. GRIFFON: I mean, I'm not trying to overstate that. Maybe just for several of the findings. I'm fine with that.

MR. HINNEFELD: If you say that problems with the technical guidance of the workbooks represent a high percentage, I would say certainly that's true because between those two items, that's probably almost all. There may be a handful of other ones that were just boners.

DR. BEHLING: Early on the biggest problem I think --

MR. GRIFFON: I put the workbooks and associated guidance so to keep those two together. And we're not --

DR. BEHLING: And it's mostly eight to ten --

MR. GRIFFON: -- for a high percentage, you know.

DR. BEHLING: -- that I think because the single most repetitive error was the misuse of OTIB-0008 and -0010, I mean repeatedly. And it's like here we go again. But it was the same thing where people, and as I said it was

a cascade of errors, two of which canceled each other out, and the only error left was the issue of an uncertainty that was deleted. So that was strictly not so much a workbook but a guidance document that people somehow or other felt uneasy in understanding or interpreting. And that has been corrected.

MS. MUNN: Mark, can you get the word early into the sentence that you just used? Because clearly what we're hearing here is the problems that were involved in early interpretation have been worked out over time, and one wants to somehow imply that in what's being said here so that the new reader doesn't assume that there's something wrong with the workbooks and it's going on continually.

MR. GRIFFON: Yeah, I guess we can try if that's, and I think that's a true statement.

MS. MUNN: I think that's what we're trying to convey.

MR. GRIFFON: I mean, although TIB-0008 and -0010 have been revised.

MS. MUNN: Then we talk about that down in procedural errors.

MR. GRIFFON: Right and that's covered --

MS. MUNN: That comes in under --

MR. GRIFFON: I can even put it after the findings associated with the use of workbooks and associated guidance in this early phase of dose reconstructions or something like that.

MS. MUNN: Yeah, yeah. Actually, the early phase of the use of workbooks. That's what I was attempting to convey.

MR. GRIFFON: Okay, I can put that in. So we can still wordsmith this a little bit, but I captured the thought. Findings associated with the use of workbooks and associated guidance in this early phase of the use of workbooks accounted for a high -- I don't like workbooks and workbooks, but anyway we can fool with that. It gets the --

MS. MUNN: Gets to the meat of it.

MR. GRIFFON: -- the idea, yeah.

Okay, on to three. Maybe we shouldn't let Stu participate in the --

MR. HINNEFELD: I was just going to say you may not ask my opinions any more.

DR. WADE: You're going to have to sooner or later.

MS. MUNN: In the next sentence my

preference, personal preference, would be to use the word previous rather than last, in the previous report to the Secretary.

MR. GRIFFON: Where's that, at the end of number two?

MS. MUNN: No, right after that workbook sentence that we were just talking about.

MR. GRIFFON: Okay.

MS. MUNN: Or proposed corrective actions, but don't we have assurance that that's underway, or not?

MR. GRIFFON: Tell me what sentence you're reading, Wanda.

MS. MUNN: Just the sentence following that one. The last sentence in the statement. See, that's another one of those that says to the --

MR. GRIFFON: Yeah, the Board has not yet received this report. That's kind of maybe the tone thing --

MS. MUNN: Yeah, that's for the tone I was talking about.

MR. GRIFFON: Well, it is a statement of fact, but I think that it is, I think Larry's scheduled to report to us in April on this

very issue, isn't he? Is that what I heard? Somebody said the Board or NIOSH is planning to report to the Board.

MS. MUNN: We've been advised that NIOSH will report to the Board on this issue.

MR. GRIFFON: On this issue at the next meeting. Okay, I got that. We can try to maybe reprint this up after lunch, too, if possible.

MS. MUNN: Hopefully clean it up a little.

MR. GRIFFON: If we're on to number three, I was going to suggest a tone change right up front, Wanda, to say that SC&A has identified several cases which where there were problems with the use of procedures, comma, many of which were associated with TIB-0008 and TIB-0010. So I think that's the realities that focused a lot on those two.

DR. BEHLING: And then maybe in fairness again to say that OTIB-0008 and -0010 are to be used only for non-compensable cases.

MR. GRIFFON: Do we need all that in there at this point? Maybe, I mean, that was part of the problem with this set of findings is that sometimes they weren't used for only non-

compensable.

MR. HINNEFELD: OTIB-0008 and -10 were.

MR. GRIFFON: Oh, TIB-0008 and -0010 were --

MR. HINNEFELD: TIB-0008 and TIB-0010 have always been used for non-compensable. And the error was on the high side, correct?

DR. BEHLING: I think, no. It may have left out the uncertainty at the end.

MR. HINNEFELD: I thought it was on the high side, but I could be wrong.

DR. BEHLING: There was three errors. One canceled the other one out. It was the weirdest thing the way --

MR. HINNEFELD: I was thinking it left out the uncertainty, but essentially left as the maximum dose what should have been a 95th percentile dose. So you entered the constant 95th percentile as a constant as opposed to entering half that as the mean of the profile. I thought that was, but it’s been so long I don’t remember.

DR. BEHLING: Kathy, do you remember what the consequences were for that error on eight and ten?

MS. BEHLING (by Telephone): I believe also

it was an uncertainty issue although I have to go back to refresh my memory. But I also recall it ultimately just boiling down to be an uncertainty issue.

MR. GRIFFON: I'll tell you why I wouldn't want to add that phrase that Hans just mentioned into this letter because if you step back like Wanda said, and you read this as a citizen, you'd say, well, wait a second. Why are they doing my reconstruction if they know it's non-compensable? I think that needs more explanation than we could do in a letter like this.

MR. HINNEFELD: I think you're probably right.

MR. GRIFFON: Better to leave it out.

MR. SHARFI: Maybe just your clarification that these procedurals never change compensability, never resulted in a change of compensability.

MS. MUNN: And that is really the bottom line in what people want to see.

MR. GRIFFON: But I think we said that in our summary up front.

MR. HINNEFELD: I'm afraid if you say it

here, then you're called upon to say it elsewhere and make some sort of judgment about what, here you're judged, you're called on to say, a lot of places.

MR. GRIFFON: Yeah, and we try to shy away from speaking to POC anyway because that's not our role. We're looking at dose, right?

MR. HINNEFELD: Yep.

MS. MUNN: Something to know it's done.

MR. GRIFFON: All right, so I'm just going to leave, put that phrase in that Hans just said, and now I'm taking it out because I was thinking of others, people other than us looking at the letter, and I just don't like that tone necessarily.

DR. WADE: But you're leaving in the eight and ten part of it?

MR. GRIFFON: Yeah, I did add in so it now reads, it starts off SC&A identified several cases where there were problems with the use of procedures, comma, many of which were associated with TIB-0008 and TIB-0010. I think that just softens it to say that a lot of it was these two procedures. It wasn't like across the board.

MR. HINNEFELD: In the last sentence is the intent to say that the cases that were reviewed were completed prior to the revision of OTIB-0008 and -0010? Is that the intent of the last sentence?

MR. GRIFFON: Yes, that is the intent. Should I just say prior to --

MR. HINNEFELD: To me it softens it a little bit if you, it clears it up a little bit if you say these were reviewed prior to the revision because just before that you mention the fact that they'd been revised.

MR. GRIFFON: Oh, yeah. And now they're revised. The cases reviewed in this were completed on procedures, instead of in place at the time prior to this revision?

MR. HINNEFELD: Yeah, something like that.

MR. GRIFFON: Well, I don't know. I've captured the thought anyway.

MR. HINNEFELD: Yeah, like I said, just a thought.

MS. BEHLING (by Telephone): This is Kathy Behling --

MR. GRIFFON: Because then I'd be concerned, which, you know, if there's another revision,

which, you know, prior to the revision.

MR. HINNEFELD: Yeah.

MR. GRIFFON: Anyway, go ahead, Kathy. I'm sorry.

MS. BEHLING (by Telephone): That's okay. The only thing I want to make mention of is I did look briefly through TIB-0008 and -0010, and I don't see any of the wording or what appears to have caused some of the confusion in the original TIB-0008 and -0010. However, we have not been authorized to formally review TIB-0008 and -0010 because those were, as I remember, they're a complete rewrite.

And so I thought that we had decided when it's complete rewrite the Board would give us the authorization to review those. We have not re-reviewed those, and to be honest with you, I haven't seen those new procedures show up in any dose reconstructions we're doing now because again we're trying to pick more of the full internal/external of what we might consider best estimate cases. So those procedures would not be used in those dose reconstructions.

MR. GRIFFON: I think that Wanda is taking a

note on that, and under the procedures review that may come up.

MS. BEHLING (by Telephone): Yeah, and I believe I had mentioned that to Wanda, but it may be something we do want to look at.

MS. MUNN: Yeah, I believe we're okay with that, but I'll make a note to check it.

MS. BEHLING (by Telephone): Okay, thank you.

MR. GRIFFON: Stu, if I say prior to the revision, I mean, I'm just a little, should I put rev numbers or...

MR. HINNEFELD: I don't have a strong opinion.

MR. GRIFFON: I think it's okay.

MR. HINNEFELD: I don't have a strong opinion about it.

MR. GRIFFON: I mean, we got in the fact that it's revised, and I think it's implicit that, the last sentence I know what you're saying, but I think it's implied that the revision wasn't in place at the time we reviewed. You know what I mean?

MR. HINNEFELD: Yeah.

MR. GRIFFON: So I might just leave that

alone.

MR. HINNEFELD: Yeah.

MR. GRIFFON: Anything else or are we on to number four?

(no response)

MR. GRIFFON: Okay, are we on to number four, Wanda? Is that okay?

MS. MUNN: Yes, I believe so.

DR. BEHLING: I guess I do have one comment here where the issue implies that the use of AP is necessarily a claimant favorable default approach. I don't see it that way. I mean, it's the best we can do, but it doesn't have to be claimant favorable. It would be claimant neutral if the exposure was, in fact, AP geometry, and it can be very un-claimant favorable if the exposure is anything other than that, especially APA geometry.

So the assumption that the surrogate use of AP as a default geometry is always claimant favorable is not true. It at best is accurate and at worse is very inaccurate. Consider the fact that you may have an exposure that's PA, in which case your badge will read an exit dose. And so all tissues on

the posterior side of that badge would be underestimated.

MR. GRIFFON: What if I said the most likely conservative geometry --

DR. BEHLING: It's the most practical solution at the moment. And I'm not sure in truth, when I looked at the complexity, I realized we were not going to change that, and it's just an issue that we shouldn't even attempt to correct. But at this point in time an option that may have to default to an AP geometry and not necessarily classify as a claimant favorable --

MR. HINNEFELD: Yeah, I'd agree with that. I'd agree with your statement that it's not necessarily claimant favorable.

MR. GRIFFON: So how do we, can we edit that line in any way to -- I agree with everything that was said.

DR. WADE: Trying to change the word conservative?

DR. BEHLING: Yeah, I would certainly avoid the issue remains unresolved meaning that this is an area that --

MR. GRIFFON: Most practical?

DR. BEHLING: -- yeah, I think we have to realize we can't solve this problem, and that the practical solution is to default to an AP geometry assumption.

MR. GRIFFON: Well, the most practical geometry factor?

DR. BEHLING: Yes.

MR. GRIFFON: Will be applied?

DR. BEHLING: Yes.

MR. GRIFFON: Take out conservative.

DR. BEHLING: Yeah.

MR. GRIFFON: Because you're right, it's not --

DR. BEHLING: And take out that issue of an unresolved because it won't be resolved.

MR. GRIFFON: People agree with that?

MS. MUNN: I'd like to hear the sentence.

MR. GRIFFON: Well, I'm just replacing conservative with practical. So has indicated that the most practical geometry factor will be applied. I can put AP.

MS. MUNN: Are you meaning to say, the issue is currently unresolved, semicolon, however?

DR. BEHLING: I don't think it will ever be resolved.

DR. WADE: You could take out in the interim. In the interim implies something is going to happen. Take out in the interim and the issue remains unresolved.

MS. MUNN: Semicolon.

DR. WADE: NIOSH has indicated that the most practical geometry factor will be applied.

MR. GRIFFON: Yeah.

MS. MUNN: Sounds reasonable.

MR. GRIFFON: All right, I'm okay with that. Number five?

MS. MUNN: At the end of it I put a bunch of dots and said, and so? And therefore?

MR. GRIFFON: Well, I don't know. Someone else finish the sentence for me. I mean, I didn't want to really say much more.

MR. HINNEFELD: Yeah, I didn't make any comments on this at all.

MR. GRIFFON: It's just a statement of fact.

MR. HINNEFELD: These have been really low profile. These are cases where theoretically the Department of Labor could go back to these claimants and ask for their money back. And these have been very low. The Department of Labor hasn't made an issue of it, hasn't beat

us up. In other words it's kind of a low profile kind of thing.

My only, I put a question mark by these thinking, well, is it so low profile that you want to make sure it doesn't, you know, not give the opportunity to raise it in a letter. Of course, that would then leave out clearly these findings were in the report. So I don't really have an opinion. I just wanted to make that comment.

MR. GRIFFON: They're in the report. I mean, I --

MR. HINNEFELD: Yeah, they are in the report --

MR. GRIFFON: -- can't imagine the Department of Labor going back and trying to --

MR. HINNEFELD: Well, I think that the people I talk to and the people I know at Labor have no interest at all in doing that. I think that just like they're not their bosses, we're not our bosses ultimately. They're not their bosses ultimately.

MR. GRIFFON: Yeah, I know. I understand. The thing is we've often said that we have to

look at the compensable claims as well as the non-compensable ones, and this was, it came up in several of the cases. So I thought it was significant enough in this group of cases to mention in a summary, you know, a summary --

DR. WADE: It was certainly a significant finding. It's mentioned.

MR. GRIFFON: -- conclusion. I didn't want to go any further than that, Wanda, when you ask, so? That's exactly why I didn't want to say anything more about it.

DR. WADE: The only so could be the obvious that NIOSH has been made aware of this.

MR. GRIFFON: I mean, what's the current practice? Maybe we can just say NIOSH --

DR. MAURO: Isn't that, the whole series of AWEs special TBD-6000, -6001, all the appendices, doesn't that put in place the vehicle to do more realistic treatment of --

MR. GRIFFON: So maybe we can say that. Maybe we can say NIOSH has developed TIB-6000, -6001 to replace -- is that --

MR. HINNEFELD: Well, it didn't, it's not purely replace this but allows a --

DR. MAURO: More realistic --

MR. HINNEFELD: -- more realistic dose reconstruction for --

DR. WADE: We can say that?

MR. GRIFFON: We can say that.

DR. WADE: And then you've got your so.

MR. GRIFFON: Is it OTIB-6000?

MR. HINNEFELD: It's TBD.

MS. MUNN: 6000 and 6001.

MR. GRIFFON: 6000 and 6001 to allow for -- help me out with those words.

DR. MAURO: A more realistic.

MR. GRIFFON: More realistic. All right, I may not have it perfectly, but NIOSH has developed TBD-6000 and -6001 to allow for a more realistic approach to this type of dose reconstruction case. So that completes it better.

MS. MUNN: I think that takes care of my and so.

MR. GRIFFON: Number six? Maybe we can roll five and six together. Is that what you guys were saying there?

MS. MUNN: Yeah, yeah.

MR. GRIFFON: It seems, because it's the same one, right?

DR. BEHLING: Well, in principle, not. I think when we wrote about the use of TIB-0004, we not only said is it inappropriate for compensable claims or non-compensable claims that should have been treated as non-compensable. But there was also the issue of assigning TIB-0004 to places like NUMEC and other places.

MR. GRIFFON: Actually, this so what that we just went through applies more to six than five, I think. Doesn’t it or does it apply to both?

DR. BEHLING: TIB-0004 was intended to be used for facilities that are essentially a uranium processing facility and West Valley was another facility. And we said this is inappropriate, regardless if a case is compensable or non-compensable.

DR. MAURO: It almost was a filler until West Valley came out with its TBD and we were in a much better position to do a West Valley case. Almost like TIB-0004, it was used as a convenience to get through cases when, in fact, it was questionable whether TIB-0004 was ever intended to be applied to a set like

that, and that has since been remedied. Not only with TBD-6000, -6001 for the true AWE cases, but also the issuance of a large number of other site-point files that covered these other sites.

MS. MUNN: And compensability and site application just because we were both used to using the same OTIB in both cases. It's still two different things, correct?

MR. GRIFFON: What if I added on the end of this, NIOSH has developed TBD-6000 and -6001 which include site-specific appendices, or which include a listing of --

MR. HINNEFELD: You could just call it, say site-specific technical documents.

MR. GRIFFON: Which includes --

MR. HINNEFELD: That would include those appendices. That would include site profiles for West Valley.

MR. GRIFFON: NIOSH has developed TBD-6000, -6001 which includes site-specific technical documents.

MR. HINNEFELD: Rather than be that specific I would say site-specific technical documents because that would include 6000, 6001's

appendices, and it would also include the site profiles for the sites where TIB-0004 was inappropriately applied to.

MR. GRIFFON: Yeah, but how does it, you also made a modification, I thought, to say don't use, only use this for this listed sites, right?

MR. HINNEFELD: Yeah, yeah.

MR. GRIFFON: So that was done in TIB-0004 that you put a listing of it's only appropriate in four?

MR. HINNEFELD: The list of appropriate sites is in TIB-0004.

MR. GRIFFON: So NIOSH has modified TIB-0004 to indicate -- or was that a modification or was that already there?

MR. HINNEFELD: I think it may have been there at the start.

DR. MAURO: It was in the beginning. That's how we came to.

MR. GRIFFON: So I mean your statement was true but it doesn't really get at the point of what happened, you know -- how did you modify the process.

MR. HINNEFELD: The more we describe it, the

more we highlight this stuff. I think if we just said that we have published technical documents, site-specific technical documents so that we don't, to remedy this or something like that you address everything that addresses all these other sites where they shouldn't have been used in the first place. It's a site issue.

MR. GRIFFON: NIOSH has now published site-specific technical documents to --

MR. HINNEFELD: Just to remedy this.

MR. GRIFFON: -- to remedy this issue. That's good enough for now anyway.

Can we take a comfort break at this point? Is that all right?

MS. MUNN: I think we should.

DR. WADE: For those of you on the phone, we're going to take a brief break. You can think five, ten, 15 minutes. I'm going to just mute the phone, and we'll open it back up when we're back in session. Thank you.

(Whereupon, a break was taken from 10:40 a.m. until 10:55 a.m.)

DR. WADE: This is the Subcommittee Conference Room and we're about to begin. I

would ask if there are any Board members on the call to identify themselves. Are there any Board members?

(no response)

DR. WADE: We're about to begin. Kathy, are you with us?

MS. BEHLING (by Telephone): I'm with you.

DR. WADE: Okay.

MR. GRIFFON: I think we're on to number seven in the conclusions. And here, one thing I had, Stu, was that X-X-X of the 40 were best estimate cases.

MR. HINNEFELD: Yeah.

MR. GRIFFON: Then we go into do we want to define best estimates, I guess.

MR. HINNEFELD: How we want to do that. I can, well, I looked at full internal and external, and there are actually 33. I said 37 awhile ago, but there are actually 33 of the 40.

MR. SHARFI: Maybe they shouldn't be called best estimates and just say full internal/full external.

MR. HINNEFELD: Well, if you want to make a judgment about best estimates, we can have

somebody do that. We could have Mutty here or somebody from the ORAU side look at the 40 cases and make a judgment of which ones, maybe even provide some categorizations of them or maybe just look at the 33. They wouldn't have to look at all 40 because the seven of them clearly aren't. Look at the 33 and sort of categorize those that there is going to be a fairly large chunk will be site model types. And there'll be others where they're perhaps some overestimating or underestimating assumptions built in but not over --

MR. GRIFFON: I was just going to say ideally, I'd like to ask SC&A to do the same thing, and hopefully, we get the same number, but that might be worth -- something fairly quick.

Kathy, you can look at that, right?

MS. BEHLING (by Telephone): Yes, Mark, I can do that. In fact, I was looking at the fourth set. I keep, when I make a chart for myself, I try to identify maximized, minimized and what I would consider best estimate. And I know in the fourth set I have two marked as best estimates as identified by NIOSH.

And NIOSH typically up front in your summary, you discuss that this case was performed using either overestimating assumptions or you make the statement up front in the summary that usually tells us what to anticipate, whether this is a maximized, minimized or best estimate. And so I use that typically to determine what approach was taken.

Now, in the fourth set I do have to say there was one Savannah River site case that I believe it was indicated that it was an overestimate, but I put best estimate with a question mark behind it. And I think one of the other things that I use to judge it is we do have the external workbooks that use Monte Carlo. And when those types of workbooks are used, I consider those as best estimates.

MR. GRIFFON: So the fourth set you had two or three?

MS. BEHLING (by Telephone): Originally two.

MR. GRIFFON: And the fifth set?

MS. BEHLING (by Telephone): I didn’t get to the fifth set.

MR. GRIFFON: Okay, okay. Well, we can do

this by e-mail. I mean, I think we can plug the number in, but hopefully we'll get a number that NIOSH and SC&A agree on, and we can plug it in here.

MS. BEHLING (by Telephone): And I can perhaps do that over lunch.

MR. GRIFFON: I guess the bigger question is the point being made in the conclusion here.

MS. MUNN: I guess I have a little trouble with the word questionable. And this says in this case several questionable judgments were made. I guess the reason I had a problem with that is I'm trying to identify how and who comes to the conclusion that these judgments are questionable. How do we get to that point?

MR. GRIFFON: What about that several judgments were made which may have impacted the overall -- well, I guess --

MR. HINNEFELD: I think if you said several judgments and then explained in a following sentence the importance of that. The fact that these outcomes possibly relied on the judgments that were made.

MR. GRIFFON: Yeah, that's the key is the

outcome.

MR. HINNEFELD: I think if you take out questionable and put in another sentence, it would read --

MR. GRIFFON: And I say, impacted the overall dose, the reason, that wording's in there for a particular reason because we've always shied away from saying affected the POC. We can't really --

MS. MUNN: We still don't want to do that.

MR. GRIFFON: -- this is not DOL. DOL determines POC. So we've been down that path.

MS. MUNN: My question at the ^ was this was because question mark, question mark.

DR. MAURO: If I recall -- and, Kathy, correct me if I'm wrong -- this might be related to really a procedure issue. This has to do with OTIB-0033 where the dose reconstruction is being done based on assumptions on dust load, airborne radioactivity --

MS. BEHLING (by Telephone): No.

DR. MAURO: No, this isn't that? Okay. My apologies.

MS. BEHLING (by Telephone): I'm sorry,

John, I've not seen the roughs, but let me tell you what my thinking was here, and most of this is my wording. And the reason I used the word questionable is one of the more difficult things to determine -- I think most dose reconstructors will agree with this -- is we get records from the DOE, and it is very difficult at times based on these external dosimetry records to determine where that person worked throughout his employment.

And so we have to make certain judgments based on the records that we have. Sometimes we do have supporting documents from bioassay records, handwritten bioassay cards, that will place this person in a certain location. But we take the information that we have, and we have to make a judgment as to where this person worked.

And that along with some guidance and procedures -- I'm thinking again of the Savannah River site cases -- where in my judgment I would have said I believe this person was in areas where he had the potential to be exposed to neutron exposure, and NIOSH did not come to that same conclusion. And I

also said to myself based on what I'm seeing in the records and based on what I'm reading in the procedures, because I don't know, I'm going to give the benefit of the doubt to the claimant. And I'm going to assume, yes, for these years he was possibly in these areas, and he should have been given that neutron exposure.

And I know there were several cases where NIOSH and I went back and forth several times. And I finally said we're going to have to agree to disagree on this one because I still cannot convince myself that I have to give this person the benefit of the doubt and I can't convince myself that he was not exposed in these neutron areas. And NIOSH did ultimately with those cases say, okay, we're going to go with you, and we're going to recalculate the doses, and they did follow through and do that.

But that's why I used the word questionable. I guess we also had some cases in which some internal dosimetry, internal dosimetry is very, there's a whole lot of uncertainties with internal. And sometimes

with the solubility classes we might have selected what we would consider a more claimant favorable solubility class.

Also -- and Hans can speak to this -- the issue of selecting a date of intake. You have a urine bioassay. You try to plot this information and look at it and make the best judgments you can make. In some cases my judgment and their judgment, I think, were a little bit different, and --

DR. WADE: Okay, Kathy, I think people have your point.

MR. GRIFFON: We got the idea.

DR. WADE: Now they're going to have to work on the words.

MR. GRIFFON: Yeah, I think my sense, and, see, this is what I struggled with in this first, in that sentence is I'd rather say it this way because I think this is the point we're trying to make. In this set of cases several findings related to judgments were made which may have impacted the overall outcome of the case. And I stayed away from may have impacted the overall outcome of the case because I thought, I wasn't sure we

wanted to go down that path of POC, but that's what we're getting at here.

So how do we say that without saying it in those terms? I mean, you know, if I say which may have impacted on the overall dose, then I have Wanda saying, so? I mean, that's the problem with, with how you write this. So what? It impacted on the overall dose. The point is that it could have impacted on the decision. That's what we're trying to get at. How do we phrase that? I mean, I'm okay saying overall outcome of the case may have impacted the overall outcome of the case. But I don't know --

MR. SHARFI: So you're deleting the word questionable?

MR. GRIFFON: Yeah, I think we could just say findings related to judgments were made which may have impacted on the overall outcome of the case.

MR. HINNEFELD: I don't have any particular problem with that.

DR. BEHLING: Again, Kathy made reference to some of the Savannah River cases early on. They may not even be in this set, but it's

very, very difficult to overlook the fact that when you have multiple cases for the same site in the same set, and you review these cases, and you realize not all dose reconstuctors think alike.

And I've always said I would love to see one very difficult case, let's say, be handed to ten different people, lock them in a room and says work these out and then let's compare notes and see how close you are and what assumptions were made. And there's clearly, without question, a certain amount of flexibility in the interpretation of guidance as it exists today.

Nothing is so absolute that 100 people will do the same thing each and every time. We know that. And so that the flexibility of guidance that involves some subjective decisions in the process leads you to question is it the luck of the draw in terms of the dose reconstructor that may, especially if the value approaches the magic marker of 50 percent?

And clearly, it could be decided by the subjective interpretation on the part of

some of the dose reconstructors. There's no question about it. The question is how do we address that?

MS. MUNN: Well, we can't --

MR. GRIFFON: Yeah, I think we've discussed, we don't need to put all that in.

DR. BEHLING: This is not a perfect world. We know that.

MS. MUNN: Yeah, it can't be done, so we just --

MR. SHARFI: You might get ten different doses, but I would hope that we'd get all the same conclusion for most, in most cases.

DR. BEHLING: Well, what happens when you have all hovering around between 45 and 50?

MR. HINNEFELD: When you're --

MR. GRIFFON: When you're that close, yeah.

MR. HINNEFELD: Well, 45 is not really as close as it sounds. Forty-eight's pretty close.

MR. SHARFI: Yeah, 48, 49, sure.

MS. MUNN: I guess one of my only remaining questions here is, were these three cases that were called out here, the only three under consideration when we're talking about this

particular issue?

MR. GRIFFON: That's why it, I don't know if Kathy might be able to shed some light on that, but I think that is important in the context of the X-X-X that we have to put in, too, because I think there are only six or seven best estimate cases.

MR. SHARFI: These three are definitely best estimates?

MR. GRIFFON: Right. I think so. I don't know. I don't know.

DR. BEHLING: The issue is really one of also realizing that when you approach -- you may start out, a dose reconstructor may start out being handed a dose reconstruction that appears to be a maximized dose. And then he realizes that, oh my, this is, you know, we're giving away the kitchen sink here, and we're approaching 50 percent, so we better go back off.

And the first place we'll usually back off is those areas where we, for instance, used TIB-0008 or -0010 or a certain maximized that are so easily fixed and then leave in place other portions that are still maximized.

And then you go back, and you run another calculation and say, oh my god, we're still too close. And so you back off and off and off and off.

And you make it to the point where a dose reconstruction is 95 percent best estimate with perhaps thrown in an environmental dose in spite of the fact that he was wearing a TLD. So you would say, well, that's trivial stuff, but it's still one small element of maximized dose where you could in principle say, well, you were monitored for external. You're not going to get environmental dose.

And so what you have is really a continuum that goes from everything, from everything is maximized to nearly everything is best estimate with the exception of one or two trivial items. And so it's almost subjective to say this was a hundred percent. There's some cases where every last millimeter was taken away and you couldn't justify it, but those are few.

MR. SHARFI: Yeah, the majority of them are the external's best estimate and the internal

was an overestimate or, because those are easy to --

MS. MUNN: To all intents and purposes in number seven we have a number of cases that we need to fill in there. And this last sentence needs to be reworked.

MR. GRIFFON: I reworked that last sentence I think, if that's, I mean, Stu is okay with that wording. I'll read it again, but also I would ask, maybe over lunch, Kathy, if you can answer that question that Wanda just posed is are these three cases in the last part the only ones that we found that fit into this group of findings. That's case 89, 91 and 67, and are they best estimate cases? That's another good question.

MS. BEHLING (by Telephone): I'll look at that.

MR. GRIFFON: So we've got a busy lunch ahead of us.

But I rephrased, let me try the sentence again, that one sentence leading up to the last two items. In this set of cases several findings related to judgments were made which may have impacted the overall

outcome of the case. And I dropped the questionable. That's okay on that.

Okay, last two. I don't know if this is a similar CATI thing as you were talking about before, Stu.

MR. HINNEFELD: This is pretty much what I was -- well, this kind of relates to the fact that the dose reconstructions are not temporally, you know, the ones discussed here aren't necessarily later than the ones discussed earlier. And I think that, you know, I agree with everything that's said here, but I think that it's unfair to say that we're not doing that based on these reviews because from the time this has been identified we've been telling the contractor that CATI has to be addressed, and the dose reconstruction report has to describe everything that's described in the CATI. So I think for awhile this has been addressed. So that's why it concerns me to have this listed as an ongoing concern the way it is there.

MS. MUNN: Regarding the statement that, it's being --

MR. HINNEFELD: I mean, it could be couched

that --

MS. MUNN: -- it's been addressed and continues to be addressed as concerns develop, or are eliminated.

MR. GRIFFON: Well, you were going to say could be couched --

MR. HINNEFELD: It could be couched such that in these cases, if this was observed, that things mentioned in CATIs weren't completely addressed, but since these were done some time ago, that the current process insists that things mentioned in the CATI be addressed, something along those lines. I have a little problem with this being under ongoing concern.

MR. GRIFFON: Yeah, ongoing concern, yeah.

MR. HINNEFELD: I think it would be certainly as a finding result. If you're categorizing finding results, you could categorize it as a finding result, and then it would be similar to the TIB-0008 and -0010 finding that there are a lot of these findings with a TIB-0008 and -0010, but that has been revised and so that shouldn't be happening any more.

MR. GRIFFON: Maybe we could just delete the ongoing concern and move it up to number eight, and then change the last sentence as well saying that instead of this concern was raised in the last report, put something to the effect that NIOSH has changed the -- help me with the words here --

MR. HINNEFELD: NIOSH currently addresses all CATI information in the dose reconstruction report.

MR. GRIFFON: NIOSH has indicated that because we haven't seen that, right?

MR. HINNEFELD: Okay, I'm not sure if you've --

MR. GRIFFON: It would be something like --

MR. HINNEFELD: In some of your newer reviews you may have actually, you may have actually seen that, but you wouldn't comment on it.

MS. BEHLING (by Telephone): This is Kathy Behling. In some of the newer reviews I am seeing much more time put into discussion of any radiological incidents that may have been mentioned by the claimant in the CATI portion. That's correct.

DR. WADE: But you can't make it a statement of fact. You can say NIOSH has reported or NIOSH has stated that it, something...

MR. GRIFFON: Okay, I'll get that sentence and then delete the, this concern was raised in the last report. I don't think that adds anything anyway. And I'd just say we'll move it up to number eight instead of having it as an ongoing.

MR. HINNEFELD: That would suit me a lot better.

MR. GRIFFON: This was just because of the, it was formatted that way before. I think that's why it just stayed there. I have no other explanation for it.

And then the last one which might just go to number nine. Yeah, I think maybe we'll just treat that as number nine.

MR. HINNEFELD: Sure.

MS. MUNN: I think that's reasonable.

In these last two sentences begged the question of validation. Of course, we've run this one around the track in more venues than this Subcommittee. And how to validate when data is acceptable and when it is not is not a

definition I have ever heard proposed by anyone anywhere. When is enough enough seems to vary widely with not only the individual but with the perception of the source of the data.

MR. GRIFFON: Yeah, that sentence I think is lifted from the last report, and also, I mean, you're correct, Wanda, although our procedures do say that the Board -- well, at least one of our procedures for SEC reviews says that the Board is going to look at this, not necessarily for dose reconstructions but for SECs.

MS. MUNN: So I guess the reason that bothered me was because if we have a mechanism in place for verifying and validating data, I'm not aware of it. Is there? I've certainly not seen anything. It's been the basis for many, many discussions and many, many of the Subcommittee --

MR. GRIFFON: I mean, you get into the --

MS. MUNN: -- so if we're saying we think everything ought to be validated and verified, then the question is by what standard?

DR. MAURO: Could I make a suggestion? In

terms of this particular finding it really goes back to the summary data. So in other words rather than take on the global issue of what constitutes validation verification and how far do you go, which is certainly a very important issue, but in the context of this comment really the problem is I think that very often in the records of a dose reconstruction -- Kathy, again, please correct me if I'm wrong -- there is summary level data.

And but also if you care to you can go back to the original data, the handwritten records for this worker that give you the breakdown by month or by film badge turnover which will allow you to convince yourself that, yes, the summary level data does, is or is not faithful to the highly granular data that makes up this person's records. And all I think is really being said here is that it's prudent to, when you're doing a dose reconstruction, to not just presume the summary level data is sufficient.

There is a certain series of steps that it would be prudent to take to convince

yourself that you have a full appreciation that the data have been summarized properly. But now that almost avoids this question of the term validation. Because the term validation verification has some very important meaning in a different venue.

So I guess I would say that that term, validation, really doesn't apply here. It's really a matter of checking to confirm that the summary level data faithfully represents the detail data that stands behind it. Those kind of checks are important when you're doing a dose reconstruction.

MS. BEHLING (by Telephone): This is Kathy Behling. Actually, in some situations the DOE records only include summary level data, and we don't get the exchange cycle data whether it be monthly or quarterly. And in some cases we'll get portions of these cycle data, but that's to imply that we don't always have that means of verifying all of the summary level data.

DR. BEHLING: I think this statement, Kathy, comes out of the fact that on several occasions I looked at the summary data and

where we really referring to external dosimetry data, and you get a yearly output for shallow dose, deep dose, sometimes neutron doses if the person was exposed, and in some cases they even integrate tritium exposure with the external.

So to get this one page that says, okay, this is for this year's employment da-da-da-da. And then you get also in many instances a detailed analysis of each wear period which may start out as weekly to monthly to quarterly. And I've looked at some of those and realized that if you tally up the individual dosimeter data against the annual data that you don't always get a match.

And so obviously in some instances a case where we as auditors looked at the detail data, tallied up the numbers and concluded that the summary data was in error. And the only issue here is that should the dose reconstructor take the additional effort to verify if he's going to use the summary data to be sure that the summary data does in truth reflect the individual exposures as are available.

MS. MUNN: And does this automatically negate the use of any summary data if the raw data is not available. Now, these are --

DR. BEHLING: It's the best you can do --

MS. MUNN: I know it's the best you can do.

DR. BEHLING: -- if that's all there is.

MR. HINNEFELD: There's usually a way to deal with an annual total on an external dose. If you know or if you have a decent or even make a good approximation of the badge exchange, you just assume that all the dose was received in one badge exchange, and you give them missed dose for the others. And so that's the most conservative thing to do in that situation.

There are cases though, there are cases where you get the detailed and the summary data, and they don't add up. There are a few, and I think in those instances we use the higher consistently.

DR. MAURO: Well, you've offered up a solution. Is that, in fact, in place? I'm not aware of it.

MR. HINNEFELD: I believe we've done, I mean, you see it occasionally on a Hanford

case. I don't remember seeing it very many places.

MS. BEHLING (by Telephone): This is Kathy Behling. That is what you do. In fact, if you go into some of the workbooks, I'll often see the dose reconstructors, they will enter in red, data that, if they find data on the summary sheet, if the summary totals are higher than the actual data in the detailed records, they'll actually add a record to, so that they can sum everything up to what's in that summary record.

But, yes, they do use the highest when there's a -- and they typically do make a comparison. I'm thinking in terms of when some of the data is not available. But there are times where we see differences in the summary level and the detailed records, but generally, they do use the highest.

MR. SHARFI: Are you indicating that this is a problem or just a F-Y-I? I mean, are you finding DRs where we have summary and we're doing them, you feel they're doing them incorrectly or you're just indicating that this is a possible concern but you have not

seen a problem yet? I don't get that from this paragraph which is --

DR. BEHLING: Well, we've seen it in both directions, Mutty, and as I said, I personally have looked at some where the detailed records would suggest a much higher dose which was not used because the person didn't invest the time to go through the detailed records, tally them up and realize that that dose would be higher than the annual dose.

MR. SHARFI: So you've seen cases where the detailed, they used the annual summary --

DR. BEHLING: Yes, and in lieu of --

MR. SHARFI: -- and not too often that we use the annual summary if we have details. Usually we always default to the details and add if we, if it doesn't come up to the annual summary, you'd always go to the cycle data before you'd use the annual summary.

MR. GRIFFON: But, I mean, I think since I drafted this in the last round of reviews, I was also looking in the more global context that you keep saying, well, if this doesn't match, if the summary doesn't match the details then we default to the more

conservative. If the summary doesn't match the details in a lot of cases, then I start to wonder, what is this mess I've got in front of me? Is this reality? Or is there a problem in the database? I mean, that's the question.

MR. HINNEFELD: Well, I think we would, too. From a site I think we would, too.

MR. GRIFFON: Well, that's the question that I've raised to NIOSH from the beginning of the project is that you've assumed all the electronic records were valid unless proven otherwise. And I guess I've been on the other side of that saying we want to, you know, and I think for years the public has been on the other side of that saying not all, I guess some people in the public have raised the question of the DOE records, and if you're just using the electronic records so that's the question, you know. There's different ways to treat it.

But we're still, not always but a lot of times, still dealing with database numbers that NIOSH has, and I mean, we as the Board end up going down this path on the SEC process sometimes. We don't necessarily have to say

how to do this. I just want to see my, I guess, my sort of reason for wording it this way, and it's a little vague, but part of it is that I think NIOSH needs to address this in their program, do we need some V and V on all of our data before we use it in the dose reconstruction process? That's what I was getting at.

And the only way we're seeing it sort of show up in the DR reviews is that we're getting some mismatches or only relying on the summary data or things like that. But the question then underlying that is have you, has NIOSH asked the question why. Why are these inconsistent with these? Why are these and have they -- not just for one case, but have they done it systematically --

MR. HINNEFELD: We have done it at some sites.

MR. GRIFFON: So you have done it --

MR. HINNEFELD: We have done it at some sites.

MR. GRIFFON: So I guess that's why I was phrasing it that way was that we brought this up in the next to the last line I think is

fairly similar with our last report. So I think it gets a little further than what John was saying for data confirmation in my mind. That's why we left it as validation verification.

DR. MAURO: Can I offer up the issue, when you get into the realm of validation verification we ran into that as a big issue on Rocky, going back to the logbooks to see how much could we trust the data. We're in the middle of that process right now at the Nevada Test Site.

And one of my concerns is that I guess we don't really have any formalism. It's almost like we work our way through. We interview people. We look at some logbooks. Along the way we use some judgment, have maybe some statisticians come in in terms of sampling the population of numbers. And in the end collectively we say, okay, I think we've looked at enough, and we could draw certain conclusions.

This is such a fundamental issue. In fact, it goes to the heart of everything we do. Perhaps we need to spend a bit more time

talking about how do you come at this problem and can there be some general rules or protocols developed for data validation verification or, unfortunately, is the nature of the beast such that it's so different from site to site that you have to deal with them and work with what you have and then on a site-by-site basis collectively use your judgment of what constitutes a good way to verify and validate.

I think that's where we are right now. We're doing that right now, for example, where we formulated for NTS. So I guess I'm just bringing this forward here. This is, when it comes down to it, this is where the rubber meets the road.

MS. MUNN: You're articulating my concern.

MR. GRIFFON: I think it's something we should ask NIOSH for. Do you have a standardized way of looking at this or is it sort of site specific or is there any, I don't know if there's anything proceduralized related to this.

MR. CLAWSON: Well, Mark, I think this is why you're voicing this in this letter. This

involves underlying -- and all of us on any work group, the question comes back to all of us. It's everything. Taking the best words is fine or whatever, but still it's an underlying problem.

MS. MUNN: Has to be there. Has to be in everything we do because it clearly is the bedrock of the decisions that have to be made.

MR. GRIFFON: Wanda, I think by bringing that up again maybe we can highlight this to NIOSH that this will sort of give them the impetus to give us a formal response on this. I think we should ask how are you doing this.

John, I know you're saying this is a good discussion to have, but I think NIOSH has to initiate it for us and then we may ask SC&A to review how they're looking at this. But I think certainly NIOSH would take the first crack at it. Stu said at some sites they have done some V and V.

MR. HINNEFELD: We have –-

MR. GRIFFON: So how has it been done and I think it might be –-

MR. HINNEFELD: Well, we've gone to some sites because we didn't feel like what they

gave us was what they, what they told us it was was what it was. So we've gone back with some like data capture stuff and things like that. But that's kind of like a site specific kind of identification, and it wasn't based on a particular set of criteria that said, okay, these guys didn't meet the criteria that we had established, and therefore, we're going to go do this.

It was just kind of because, well, this doesn't seem kosher, doesn't seem like we're getting what they said they're sending us. So we've done some of that, but we haven't, I would be hard pressed to tell you today a NIOSH position on this. And so I'm making my note here, first note I've made for myself, to go back to the folks at the office and say when this comes out, regardless of what the Secretary does with this, certainly the Subcommittee and quite likely the Board is interested in some discussion along these lines.

And so it may behoove us to prepare in terms of what we mean. I believe the law requires the Department of Energy to provide

their records to us. So there's some sort of presumption in the law that those are at least useful in some fashion. So I mean, that's kind of a starting point for this. But anyway I just have to go back and see.

DR. WADE: There are two or three maybe issues. Sometimes they're always the same issues; sometimes depending on how you look at the beast they're a different issue that come up, and they're appropriate to be discussed. The starting point as to what NIOSH does really needs to be the rules that are in place that will probably get into the public process.

They need to be looked at. The adequacy of those rules can be considered and passed upon. The Board can ask NIOSH to comment. And the Board should do that, and NIOSH should do that in a public forum. But these are not trivial issues. But there are rules in place that are now followed. Are those rules adequate? Is NIOSH following those rules is one question. Are the rules adequate is another question.

And those are germane for the Board to

comment upon in its oversight responsibility. The fix is NIOSH's when it comes to it, and then if that involves more formal process, then NIOSH can undertake that process within a public forum if that makes any sense.

This has come up on the issues of surrogate data. It's come up on the issues of SEC rules of procedure. They fall around the same issue.

MS. MUNN: Everywhere.

DR. WADE: The starting point has to be the rules in place.

MS. MUNN: So it still seems that this wording is close but doesn't quite get to it. Does that --

DR. MAURO: Can I speak? My thought is --

MR. GRIFFON: I was just trying to look at possible edits and every time I go around I don't know. The next to last sentence is the only one I was trying to maybe work with to soften a little instead of saying should be documented within the DR reports. I don't know. But every time I try to come up with a way to rephrase I don't think it's any better.

MS. MUNN: Have we really said that we think

that documentation needs to occur in the DR reports, in the individual DR reports?

MR. GRIFFON: Well, and that's what I'm wondering is I'm saying it there so I don't know if we said it in the last letter. That's a good question.

MS. MUNN: Well, and I don't know that we said it in the Board. We've talked a lot about V and V, but we have not, I don't know if we have said in each dose reconstruction we want a validation proof of some sort.

MR. GRIFFON: No, but this doesn't say that. That says that a reference to how the data for that site, for instance, was validated. I think that would be, you know. That's what I kind of understood that as was that data used for the Hanford dose reconstruction, you know, validation is a methodology for validating the data used in the Hanford dose reconstruction is included in TBD da-da-da-da-da, something like that. I don't expect that they in each DR they say we validated your individual data in the following method. I mean, it's a sort of a site thing.

DR. MAURO: Isn't it that though you're

trying to do two things in this and maybe if you do that's fine, but when I read this it seems to me the primary emphasis is on the summary level data and whether or not reviewing and using the summary level data is sufficient and the need to go behind the summary level data to make better use of it. And it sounds like you have a remedy that may or may not --

MR. HINNEFELD: Well, ^ do that in every case. I believe that's what we intended to do, but I'm not absolutely sure. I think we do.

DR. MAURO: But at the same time and the same thing you're using as a pointer and saying, well, listen, they didn't say, well, we're going to leave that, and we're going to now only talk about, even if you do have the detailed data sitting behind the summary level data, what you're saying is even then there's an obligation on the part of NIOSH to say something to the effect of the validity --

MR. GRIFFON: I guess the pointer is when the summary data didn't agree with the --

DR. MAURO: That would be one pointer --

MR. GRIFFON: -- that's a pointer to the fact that how do you know the validity of the overall dataset. I mean, that's what I was using as the pointer. So I don't think they're different --

DR. MAURO: Okay, I understand.

MR. GRIFFON: -- conclusions. That's why I was leaning to that one there.

DR. WADE: ^ to the ^ issue you could end the sentence by saying that dose estimates is verified, validated and should be addressed, period. The Board has asked NIOSH to make a presentation on this topic, or something. And you could point this out to NIOSH and ask NIOSH to come forward and address the issue.

MR. GRIFFON: We haven't asked them yet, but I guess we could before we...

In the last report, Wanda, that sentence was the same. I just copied it.

MS. MUNN: Yeah, but --

MR. GRIFFON: So we, I mean, I know you're saying we haven't discussed it on the Board but we sent a letter to the Secretary that says that very sentence.

MS. MUNN: I just wanted to continue a

pattern we had established earlier in this letter indicating that there is movement, that we're not still in the same place we were when we sent the last report. We're still moving.

MR. GRIFFON: But that could be construed as spin as well. I mean, I don't know that I see movement in this area so, you know, at some point you have to say what is, is. Nobody's validating as far as I can, I mean, there might be some cases that Stu's mentioned here, but I mean, I see mostly when we go to validate or verify it comes to an SEC comes before the Board, and then we have to go down that path.

So I'm saying it would help a lot if some of this was done up front. The SEC reviews might go a little smoother as well if some of this work was done. That's my point, but I mean, I guess I'm willing to say like what Lew said is that the Board has asked NIOSH to present on this topic or something like that, you know soften it a little, but I don't think much else has changed on that front.

MR. HINNEFELD: I hate to say nothing's

changed. I mean, in the more recent site profile -- Mutty reminded me of this -- in the more recent profiles, for instance, there's more effort involved in evaluating quality of this data, and are there certain time periods when you know for sure they didn't monitor for certain things.

So you know you're going to have, you know, those gaps are going to be there and is there a way to account for it. Or if there's a particular, I know some profiles say don't use the reported neutron doses because it was NTA film, and based on this work location it's no good. So some of the site profiles say that. So there's some work that's been done. It's not like nothing has been done.

MR. GRIFFON: Maybe we can delete that last sentence. That would maybe address a little bit of Wanda's concern that we're not just stagnant in this, you know, say this concern was, delete that and then say that the Board has asked NIOSH to present or to give an overview on their approach for validation verification.

MS. MUNN: Have we done that, the Board?

MR. GRIFFON: Well, I guess we're asking now and then we can put it in the letter.

DR. WADE: The Board can address that in April and then formally ask --

MR. GRIFFON: Or the Board intends on requesting NIOSH --

DR. WADE: Well, if you did, the Board's going to approve this letter in April so you could have it. It could be done at the same time.

MR. GRIFFON: At the same time kind of. It's a little awkward, but, yeah.

MS. MUNN: But I see no problem in that. My only other request would be that at the very first sentence that we might take out the word apparent. That's another one of those gotchas. In several cases that ^ summary data. In several cases in this set summary data such as blah-blah-blah.

MR. GRIFFON: So how did you want to rephrase that? I'm sorry.

MS. MUNN: Just in several cases of this set summary data such as --

MR. GRIFFON: That's fine. That's fine.

MS. MUNN: -- and in the summary reports

provided. I'm never sure what several means, whether it means more than two or less than a dozen.

MR. GRIFFON: Yeah, I think that's right. And then the last sentence I put in the Board has requested that NIOSH give an overview of their approach to data validation and verification on, I guess a presentation or, you know.

DR. WADE: I'm sure NIOSH would relish the opportunity.

MR. GRIFFON: That one paragraph, maybe we can work on some wording over the break, going back to that first one we discussed with the CATI, yeah, conclusion number one there. I think we were struggling with that, and I'm willing to look at that over lunch and try to come back and offer some words. And maybe I'll sit with Wanda and others and try to wordsmith that a little bit.

But are there any other -- that's the end of the letter. I've got down most of what was said. My hope is to, and I think if I -- let me ask a process question from Lew. If I get all of our edits from right now and

possible edits over the lunch time just on that one item, can I re-circulate this? I mean, I guess what I'm looking for is, is the Subcommittee prepared to offer this to the full Board for a vote?

DR. WADE: It's up to the three members here.

MR. GRIFFON: And can we do that if we vote today on the overall substance, and then by e-mail I can send out the final version and make sure there's no, as long as there's no concerns about it, then we can assume we don't have to re-vote, right?

DR. WADE: Correct. I think if you can get hard copy to the Subcommittee members this afternoon to consider, then they can vote their will on that. If there's a majority decision by the Subcommittee, then you can bring that to the full Board for consideration.

MR. GRIFFON: That's what I'd like to do.

I was going to say we can look at the tenth set, but it might be a good point to take lunch now if that's all right.

MS. BEHLING (by Telephone): Mark, excuse

me. This is Kathy Behling. Before we leave this subject I just wanted while we were talking here I did go back to the fourth and fifth sets, and at least from SC&A's point of view, I have down two cases from the fourth set were considered best estimates, and I believe NIOSH will hopefully come to that same conclusion. Although as I said there was one that I questioned, I felt really was a best estimate as opposed to a maximizing case.

And for the fifth set there were six best estimates. And again there was one case that SC&A felt, although it was considered by NIOSH at least, we felt it was considered by NIOSH as being a maximizing case, we thought it sort of fit into the best estimate category. So I would say there's eight total of these 40 that are best estimates. Now obviously, NIOSH has to confirm that. And when we talked back on these judgment issues, all three of the cases that I identified there, they did fall into the best estimate category.

MR. GRIFFON: Okay. And were there any other, maybe you can look at over lunch if you

haven't looked into this one, were there any other cases where this assumption or judgment question came up?

MS. BEHLING (by Telephone): I looked a little bit into that, and there were several cases, and again, we're just talking about a handful here of these best estimates. I did take notice in one particular case. I initially questioned the neutron issue; however, after getting a better explanation from NIOSH as to why they decided the way they did, I looked at the record. Then I agreed with them. And with regard to the internal, I did not do a lot of research on that.

MR. GRIFFON: So we'll leave it as three of eight, three cases of these eight. But I'm also going to ask NIOSH to maybe look and see how many they think are best estimates. It would be nice if we came to the same number. But we'll leave that as a tentative eight right now for total number of cases.

DR. WADE: Just before lunch, Mark, just on the record I would ask Stu since he represents NIOSH if there are any additional reactions or opinions you'd like to put forward at this

point, Stu. I mean, you've been participating as we go.

MR. HINNEFELD: I think anything I've had to say about this I've said. I think maybe this may not be a majority opinion at OCAS, but I think the review is a valuable tool for us to use in our work continuing going forward. So I have no, other than that I think it provides a valuable service to the program, to us in our efforts.

DR. WADE: Yeah, by definition audits are interesting processes. By nature they really have to focus on errors and mistakes, and that's what they're there to do. And I think from my observation the process has been extremely professional and positive and is towards eventually serving the people we serve who are the claimants and petitioners.

MR. GRIFFON: And I think all the input today was good, too. I think there were some adjectives that didn't belong there, and so this was worthwhile to --

DR. BEHLING: I have one more issue on the issue of subjectivity, and I don't know if we're going to get into that when we talk

about the fourth set and finalizing. But I think in that particular set it turned out to be one of the best estimate cases was the issue of assigning a date of intake for a series of high urinary exposures.

And I would like to say this, based on guidance documents if you had a dose reconstructor who would say, okay, we're going to assume that the intake for an episodic event or at least this is their judgment to say this was an episodic event was midway between the previous bioassay and the one that gave that high value. He would be very much in agreement with existing documents, or guidance documents, that would allow you to do that.

As it turned out the dose reconstructor in this case decided that in most instances there was a whole bunch of them, five, six different instances, where he assigned the intake date as the day before or two days before which would certainly minimize the potential intake using the bioassay data and back-fitting the inhalation quantity. And when we raise that as an issue, I think

everybody looked at it and then said, well, let's figure out if this is really something that we can live with.

And what they end up doing is saying, well, if, in fact, the assumption of a type F, I mean Type S, for solubility were to have been correct and been used at the midway point, then the subsequent bioassay would yield yet a dose that was not consistent with the real dose. And on that basis, they justified the assumption that the intake could have taken place the day before or two days because it fit the data.

The alternative would have been to say instead of Type-S, we could have used Type-M, we could have also used the midway point but not both. Now the question comes into play, and this is a hypothetical question, I understand the logic and the question is was that known at the time. And, for instance, would another dose reconstructor who would have said I'm going to default to two claimant favorable assumptions, a midway point and an insoluble value for the intake which would have raised the intake by a huge order and

raised that POC value way above 50 percent mark.

Now as it turns out, NIOSH can justify its final decision based on the additional calculation that says, well, if we assume, if we continue to assume the Type-S but move the point of intake midway between the previous one and this one, we would end up with a value that is inconsistent with yet a third data point that would show a value that is much, much higher than the one we observed, so therefore, we're correct.

The question really is was this done and was it just good fortune for NIOSH to be able to justify -- and I agree with that decision now -- but was it done in time and would, for instance, another dose reconstructor who would have said, well, you know, the dose reconstruction guidance documents allow me to take the midpoint when you don't know, and still also assume a claimant favorable solubility and end up with a different number. That's the dilemma here.

MR. GRIFFON: Yeah, I mean we've talked about this case at length, but I think if

nothing else, it highlights something that we might want to pay attention to in future cases. I guess the biggest concern there would be maybe consistency of decision making.

DR. BEHLING: Yeah, and this is where I always say if you have multiple dose reconstructors, you might have somebody that's very claimant favorable --

MR. GRIFFON: Yeah, but I also think --

DR. BEHLING: -- and defaulted to claimant favorable assumptions.

MR. GRIFFON: But I also think that on these closer cases you have a higher level of review, right? I think built in.

MR. HINNEFELD: And I think what normally happens on a case where you have, where the dose reconstruction actually uses multiple intakes and does a fit when you have multiple intakes and multiple acute intakes, if I'm not mistaken, the regime -- if it comes out close -- the regime is going to be the one that provides essentially the highest dose to the target organ that fits the bioassay data, all the bioassay data.

MR. GRIFFON: That better fits it, yeah.

MR. FARVER: One point I want to bring up is once you start deviating from a midpoint assumption that's documented or let's say we'll assume a chronic over the employment period, once you get into this best fit, best visual fit area, there doesn't seem to be an objective way to determine what is the best fit.

MR. GRIFFON: I guess that's the question we're raising is that from doing internal dose we all know that it's as much art as science, and then if you get, you know, we don't want to be in a position where it depends on who you get if you get over 50 or slightly under 50. So the program has to be able to handle that.

MR. FARVER: And I think that's something they could work on whether it's minimizing the errors, whether it's defaulting to the simplest model or something like that. You need some kind of objective method that you say, yes, this is how we did it. We determined that this is the value that we're basing it on. There needs to be less subject.

MR. SHARFI: I think the problem with the

specific case we're talking about was the documentation of the thought process in the DR --

MR. GRIFFON: That's true, too, and we brought that --

MR. SHARFI: -- not the assessment but the, how well they explained what their thought process was. And we have something that tried to address better now is documenting our thought process better in DRs.

DR. WADE: I think Brad would like to speak.

MR. GRIFFON: Because that came up a lot.

MR. CLAWSON: I realize everything's going this, and I want to compliment NIOSH and SC&A and how they handle a lot of this. I go through a lot of peer reviews on me, and one of the things that is always mentioned to me is this is to make it better. And I appreciate the wordsmithing because I didn't see a lot of that stuff in there, but I'm not very good at that stuff.

But I hope that nobody ever takes this as that it's shortcomings that we hope that we can strengthen and go from there. Because we also have other people depending on us to be

able to do that.

DR. WADE: To sort of end on a high point.

MR. GRIFFON: That's a good way to wrap it up.

DR. WADE: Well, to end on a high point. I mean your function is to advise the Secretary HHS on the scientific validity and quality of dose reconstruction efforts performed under this program. That's certainly what you're doing.

MR. GRIFFON: Well, on that note why don't we take our lunch break and reconvene at one o'clock. Is that all right?

DR. WADE: We're going to break the phone line now, and we'll dial back in just before one or when we assemble in sufficient numbers to warrant your participation.

(Whereupon, a break for lunch was taken at 12:00 p.m. and the meeting resumed at 1:00 p.m.)

MR. GRIFFON: This is Mark Griffon back with the, I'd like to go back to the letter for the fourth and fifth set cases just for a few minutes, and hopefully we can wrap this up and then move on to the tenth set case selection.

Looking at the language over lunch a little bit, I'd like to go through the letter from the top and kind of just review the suggested changes that we made during this meeting. Looking at the first page, the paragraph right before the summary of findings, and we deleted, we took out a few words. We deleted, at the end of the first sentence we deleted "much like the first sixty cases". And we deleted "some representative", I think was the big one.

There's another line in here that I have that I don't think I quite finished. It was after the second full sentence. It says, "the forty cases covered in this report were selected from a pool of 8120 cases which have been adjudicated and were therefore available for Board review." And I was going to add a sentence in here to say the cases reviewed had a DR completion date ranging from blank to blank and then let NIOSH give us those dates.

MS. MUNN: That would probably be a good idea to put it in context.

MR. GRIFFON: Yeah, that was suggested, and I just didn't get all the words down during

the meeting, but I got the thoughts captured. So I'll leave a placeholder for the dates then I'll add that sentence in.

Moving down to the end of that paragraph we edited it to say that, "However, it should be noted that this group of cases did include five cases of POCs between 45 and 50 percent." Going on to page three, the first conclusion.

And this is one we wordsmithed a little over the lunch break. So now the front part of the paragraph has been changed quite a bit. I'll read the first, the first sentence is the only thing that's been changed, and now it reads like this.

"After reviewing cases 61 through 100, it is apparent that the DR reports that NIOSH provides to the claimants and the auditor need to be reformatted and expanded to include more specific information about the claim and an auditable trail which identifies the origin of each line of the dose input tables used for IREP," parentheses, and the rest continues as it was. So we modified that first sentence fairly significantly.

We took out the specific reference to the not including information provided in the CATI. At the end of the paragraph added a sentence to say, “NIOSH has indicated that some of these changes have already been made to the template that was used at the time of this review.” I think that’s worded clearly enough. Even though the DR report hasn’t been completely reformatted some changes have already been put in place since our review.

Conclusion two, we changed the sentence about two-thirds of the way down the paragraph. We deleted, “The Board has not yet received this report.” Oh, no, that’s later. Anyway, we have a sentence in the middle there. I think people will remember it. It’s really the workbook stuff. “Findings associated with the use of workbooks and associated guidance in this early phase in the use of the workbooks accounted for a high percentage of findings.” So I think we discussed that one quite a bit.

At the end of that paragraph I added on a sentence to say that -- oh, this is where we deleted, “The Board has not yet received

this report." We changed that to say, "NIOSH is planning on reporting to the Board on this issue in the April 2008 Board meeting."

Number three, I think the only edit was the first sentence. "SC&A identified several cases where there were problems with the use of procedures, comma, many of which were associated with TIB-0008 and TIB-0010."

Going on to number four, the second sentence, "This issue remains unresolved. NIOSH has indicated that the most practical geometry factor will be applied." And we took out conservative.

Looking at number five, I added on a sentence at the end to say, "NIOSH has developed TBD-6000 and -6001 to allow for a more realistic approach to this type of dose reconstruction case."

Number six, similarly we added on a sentence at the end to say, "NIOSH has now published site-specific technical documents to remedy this issue."

Then number seven, we have this question of the number of cases of best estimates. Kathy provided eight. We're going

to have NIOSH just go through that same process and hopefully will come up with the same number. The sentence after the number of cases there has been modified to say, “in this set of cases several findings related to judgments were made which may have impacted the overall outcome of the case including,” and we have the examples.

Number eight, we added on at the end of that a sentence to say, “NIOSH has stated that the current dose reconstructions address all information provided in the CATI.” And again, I phrased that as NIOSH has stated that because we haven’t really reviewed that.

And the last one, number nine, has been edited, the first part. Instead of “it was apparent,” we have, “in several cases of this set summary data,” and then parentheses. Then it continues, and then at the end of that we have, “The Board has requested that NIOSH provide an overview of their approach to data validation and verification.”

That’s all of our edits. Now what I was going to ask is if we can, as a Subcommittee if we agree, if we can come to

agreement on this letter. I don't know that we have to make a motion, do we?

DR. WADE: No.

MR. GRIFFON: It would just be the sense of the Subcommittee, right? So if we are in agreement, we can bring this to the full Board meeting in April. I'll try to get those numbers added in, and I'll accept these changes, circulate it to you guys. But basically, it will stay this way. If there's any major change, obviously, we, you know.

MS. MUNN: This looks like an appropriate thing for us to do I think. If we'll consider any problems after we see the revised letter and everyone on the Subcommittee has had an opportunity to look at it, if there's a real problem, we could always have another, a teleconference.

MR. GRIFFON: Yeah, and it would have to come before the full Board anyway.

MS. MUNN: Yes, yes.

MR. GRIFFON: Everybody will get an opportunity there.

MR. CLAWSON: I have no problems with it. I think it'd be good, but you're going to fill

in the numbers and you'll get all that stuff together.

MR. GRIFFON: Yeah, I'll work with Stu and with Kathy Behling.

DR. WADE: Now, for the record you have a majority opinion of the Subcommittee as its configured today, and I think that needs to go forward. I don't know that you'll have the opportunity for Subcommittee members who are not here to vote on this because we will not have a noticed meeting of the Subcommittee before the Board meeting.

MR. GRIFFON: Right.

DR. WADE: I think you can bring it as the sense of the Subcommittee as it was configured here. Other members of the Subcommittee will have an opportunity to comment as they vote as Board members.

MR. GRIFFON: I think that's fine. We can bring it as the sense of the Subcommittee, and we'll note who was here.

DR. WADE: And just for Ray's record, it's Griffon, Munn and Clawson, present. No one else is present.

MR. GRIFFON: No one's on the phone?

DR. WADE: Any other Subcommittee members present on the phone?

(no response)

MR. GRIFFON: I think some people might be in Nevada, too. I think Mike Gibson, maybe he's in Nevada.

Okay, so we'll close on that item if that's okay.

DR. WADE: Well done.

TENTH SET OF CASES SELECTION

MR. GRIFFON: And then moving on to the tenth set of cases. Now, did everyone get the matrices? We had them at the last meeting, and I think Stu said they're the same set of cases.

DR. WADE: I've given hard copies to the two Subcommittee members who are here.

MR. GRIFFON: Good, good. Now, remember we have this two-step process that we're going to go through so our intent is, I think, to get 20 or 20-some cases out of this. But I think we want to shoot for more like 40 or more, and then Stu's going to give us a more in-depth breakout on those 40 to be ready for the Advisory Board.

Now we won't have a Subcommittee meeting at this Advisory Board, right?

DR. WADE: You could do your business as a full Board.

MR. HINNEFELD: There will probably be a Subcommittee report period, a working group and Subcommittee report.

MR. GRIFFON: So we can just, and I think I relayed that to Christine that we could do this during the report basically. So we'll have narrowed it down, and then we can have discussion on this at the report or at another appropriate time with the full Board.

The only thing I would say for our business today is that when I went through these, I tried to select, if I look at the full internal and external, I'd ask, or at least my opinion would be to start from the back because if you notice the date approved, it goes from the earliest date, 5/1/03, to the latest date is on the last page, page 18.

So I went through the matrix kind of in reverse order when I looked at selecting these cases.

MS. MUNN: And your specific criteria, other

than date was what?

MR. GRIFFON: No specific criteria, all the ones we've considered before, POC, sites we haven't seen before, years of work, I mean, no specific criteria other than what we've discussed before.

MS. MUNN: So we'll start with 672.

MR. GRIFFON: Page 18.

MS. MUNN: And work forward.

MR. GRIFFON: Right. On that page I can start. I had 667 and 666 as possibilities. Again, these are all possibilities. I expect we'll have more than 20, and then we can, you know.

MR. CLAWSON: Which ones are you suggesting again?

MR. GRIFFON: Sixty-six and sixty-seven, 666 and 667. I don't think we've done this Hooker Electrochemical before, have we?

MS. MUNN: I haven't seen one.

DR. MAURO: Hooker is part of one of the cases we're doing in the set of 40.

MR. GRIFFON: Oh, it is?

DR. MAURO: Yeah, I remember allocating someone to take Hooker Chemical. Yeah, we

have.

MR. GRIFFON: Kathy, you have that one?

MS. BEHLING (by Telephone): Yes, that's correct. We do have a Hooker in the ninth set of cases. The other thing that I did during the lunch break is I'm not sure if any of you can receive your e-mails, but I sent to Doug as well as you, Mark, Wanda and Brad, a summary list of the 218 cases that you've selected so far for the first nine sets. I don't know if you're able to get that or not, but I sorted it by, alphabetically by the facility name. If you could pull that up, that might help.

MR. GRIFFON: Yeah, thanks for sending that, Kathy.

DR. WADE: Kathy, would you send that to me as well? This is Lew Wade.

MS. BEHLING (by Telephone): Yes, I will. I'm sorry Lew that I didn't do that.

DR. WADE: Not a problem.

MS. MUNN: I have it.

MR. GRIFFON: So we can cross-check that. I would offer then to take off Hooker, because I think it's one site, one model fits all,

right? On that site?

MR. HINNEFELD: I don't recall. Some of these AWEs we actually have bioassay and film badge data on, and I don't recall which one there is.

DR. MAURO: Don't know. Haven't looked at it yet. Just know it's there.

MS. BEHLING (by Telephone): I believe that the Hooker is an appendix to a Technical Basis Document-6000 or -6001.

MR. HINNEFELD: They could still have data in the case files. I don't know if they do or not.

MR. GRIFFON: This is a tentative round anyway so we can --

MR. HINNEFELD: You can always leave it in at this round and put it in later, take it out later.

MR. GRIFFON: Maybe we can get a check on that.

DR. MAURO: Say, Mark, during the course of going through these cases, especially the AWE cases, in the past you had identified certain AWE cases where you felt it would be prudent for us to do what you would call a more

advanced review such as Blockson and Huntington, one other -- I forget the other. For those cases that are AWE, such as Hooker, if you would like us to do that special treatment, let's call it that, when you make your final decision, it would be good for you to identify at that time.

MR. GRIFFON: We should discuss that, okay. Good point.

All right, so 66 and 67, any thought?

MS. MUNN: Yeah, did you consider 655?

MR. GRIFFON: Yeah, I also had 662 as a possibility. Same kind of question on General Steel. I don't think we have done --

DR. MAURO: Yes, I --

MS. MUNN: Yeah, we've done someone.

MR. GRIFFON: We have done General Steel.

DR. MAURO: No, General Steel we talked about that in the hall.

MR. GRIFFON: Yeah, yeah, yeah.

DR. MAURO: You understand, so if there's another one that maybe could replace it that would be helpful.

MS. MUNN: We, I thought we've done that.

MR. GRIFFON: Well, I would offer 662, yeah,

that case may not be available, so we're --

MS. MUNN: Well, we've done at least one.

MR. GRIFFON: Just tentatively if we could keep that on the list, Wanda, 662.

MR. HINNEFELD: Yeah, my advice at this point is to be inclusive because you'll get another selection later on when you see more detail about these cases.

MR. GRIFFON: And 655, I agree with you, Wanda, on 655. So on that page I have four of them: 67, 66, 62 and 55.

Page 17, I have 38, 37, 35 and 34, again, as possibilities.

MS. MUNN: Yes, yes, yes and yes.

MR. GRIFFON: Any others on that page?

MS. MUNN: Everything we've looked at so far has long employment periods.

MR. GRIFFON: Yeah, I did pick some that have short periods. Yeah, we do want to look out for the, I think that's a good point, Wanda. The work decade we tend to get a lot of those in the '50s and '60s, and we haven't, I don't think we've targeted the '80s, you know, the later periods very much, and that may be a bias at what I'm looking for. But

certainly we have a lot of claimants that are interested in that later time period.

MS. MUNN: How many like 621 have we got?

MR. GRIFFON: Oh, you're on the next page. Okay, I was waiting for --

MS. MUNN: Oh, I'm sorry. I just turned it over.

MR. GRIFFON: Six twenty-one is okay. I didn't have that one, but that one's okay.

On that page I also have 623 and 630. And when I look at 630, Stu, I don't know if a lot of these Rocky Flats' cases may be under review?

MR. HINNEFELD: It may, in fact, have come back.

MR. GRIFFON: So we may lose some of --

MR. HINNEFELD: Some of these may drop out for that reason.

MR. GRIFFON: Right, for that reason, but we can tentatively identify it. So 21, 23, 30 on that page?

MS. MUNN: Right. Are we doing non-compensated or compensated also?

MR. GRIFFON: I think to sort of balance I picked a few that were over 50. I didn't pick

a lot.

Still on page 16?

MS. MUNN: I'm going on to 15.

MR. GRIFFON: Okay, page 15. I have 605.

MS. MUNN: I was looking at 604.

MR. GRIFFON: And 604, actually, both of those. And the years worked really interested me with both of those.

MS. MUNN: Right, me too.

MR. GRIFFON: And I'm also curious to see if they really are full internal-external or if there's a big overestimate portion of it or something, you know? So that's something we may, it may look interesting now, but when we see the details, it may not look as interesting. But those are the two on that page I identified.

MS. MUNN: What's that 601?

MR. GRIFFON: Six-oh-one?

MS. MUNN: Is that correct? Good grief.

MR. GRIFFON: I didn't hear you.

MS. MUNN: I'm just muttering to myself. Six-oh-one was the one I kept looking at.

DR. WADE: Nineteen-thirties?

MR. HINNEFELD: Well, that would be, that's

when the person hired in. It's well before the coverage period.

MR. GRIFFON: Are you really interested in 601, Wanda?

MS. MUNN: No, I was just expressing --

MR. GRIFFON: I'm glad.

I don't have any on page 14, but it is interesting to note some of these Bethlehem Steel POCs for the lung cancers and the lymphoma multiple myeloma. But having said that, they're all the same generic model, I believe.

MR. HINNEFELD: Yes.

MR. GRIFFON: So I didn't pick any on there mainly because they're all Bethlehem Steels almost.

DR. MAURO: Mark, just to point out something, those cases from Bethlehem Steel that have been done subsequent to the major revision in the Bethlehem Steel site profile, as you recall, all the Bethlehem Steel cases that we have done in the past were all done against the old, original version, I guess, Rev. one that goes back several years. I'm just offering this up for the consideration by

the Board.

If there are some Bethlehem Steel cases now that are moving through the system that have been done using the latest version, the one that's up on the web now which reflects major revisions to the methodology, that would be one way of sort of having a review, the degree to which the new Bethlehem Steel has reflected all the discussions we had.

If you recall, we came to the conclusion that, yes, the six major issues that were of concern on Bethlehem Steel have all been resolved, and this was based on verbal discussions during meetings. An opportunity would be here if we were to actually look at a real case that was now done under the new protocol, there may be some value to that.

MR. GRIFFON: I guess my feeling is that it's an SEC also, so --

DR. MAURO: Is it an SEC --

MS. MUNN: No.

MR. GRIFFON: Oh, it's not?

DR. WADE: No, it's not.

MR. GRIFFON: I thought --

MR. HINNEFELD: ^ petition, but there's not a decision. There's not a recommendation to add a class for --

MR. GRIFFON: Well, there's a petition --

MR. HINNEFELD: There is a petition.

MR. GRIFFON: Right. That's been, that's been --

MR. HINNEFELD: It is in front of the Board and --

MR. GRIFFON: Right, that's what I meant. I didn't mean an SEC. I meant --

MR. HINNEFELD: It's awaiting --

DR. WADE: It's awaiting the deliberation on surrogate data.

MR. HINNEFELD: -- surrogate data deliberation, right.

MR. GRIFFON: I'm sorry. I misspoke. It's an SEC petition out there, and assuming the Board's going to evaluate that, I think we're going to get all those issues so I don't know if a case review would be worth our resources. That was my point anyway.

MR. CLAWSON: What about 569?

MR. GRIFFON: Five sixty-nine?

DR. WADE: Page 13.

MR. GRIFFON: Yeah, I had that one identified on page 13, 569. So the only non-Bethlehem Steel one on that page.

MS. MUNN: So we're going to ignore Bethlehem completely?

MR. GRIFFON: Well, I mean, we can certainly pick one if John, you know, I don't disagree with John's point. I just thought where there's a petition waiting that I thought we have plenty of time to review those issues in place with regard to Bethlehem Steel, but a case review is a little different than that.

MS. MUNN: Before we get away from page 14, 596 might be...

MR. GRIFFON: Five ninety-six?

I'm on to page 12 now. I've got 554, 551, and I have a question that might relate to Kathy's e-mail. Did we do the Medina facility at all?

MS. MUNN: Medina. Hold on. Get down to the M's. Did one.

MR. GRIFFON: We did do one of those?

MS. MUNN: Yes, Pacific Proving Grounds. It was a non-melanoma skin.

MR. GRIFFON: The same as this.

MR. CLAWSON: It's exactly.

MR. GRIFFON: It might be the same case. I don't know. Is that possible that the cases will pop up again, Stu, that we've already done the way you sorted this? I can't remember.

MR. HINNEFELD: As I recall the ninth set may not have been omitted from this. All the previously selected ones that were selected for review would be omitted, would not be included. But the ninth set could be all in here.

MR. GRIFFON: This may be the very same case.

MR. CLAWSON: The same probability --

MR. GRIFFON: It shows that same POC.

MR. CLAWSON: It's got the same year.

MS. MUNN: I think that's the case. How about the one right above it, 544?

MR. CLAWSON: Sure.

MR. GRIFFON: Okay with me. Any others on 12?

(no response)

MR. GRIFFON: If not, I'm on to 11.

DR. WADE: The fact that these were not expunged raises an issue that you might have to check before the Board meeting. It could be the vast majority are the 40 that were selected the last time.

MR. HINNEFELD: It could be, yeah, it could be they've been previously selected.

DR. WADE: The same minds using the same criteria might have picked the same cases.

MR. GRIFFON: That's why we should get more than this. Yeah, make sure that we get a good high number on this, yeah.

MS. MUNN: As a matter of fact I think that's likely given the fact I was just checking 548 against Kathy's list. That also appears to be --

MR. GRIFFON: The same, yeah.

DR. WADE: Now, did you select 548?

MR. GRIFFON: No.

MS. MUNN: No, I was expecting -- it was right on the verge of my tongue to suggest it.

MR. GRIFFON: Wanda, did we do, I'm looking on page 11. Did we do Linde? I don't have that list open.

MS. MUNN: Yeah, we did several Lindes.

MR. GRIFFON: Okay.

MS. MUNN: We had two, one all male genitalia and one nervous system.

MR. CLAWSON: I was looking at 521 for Linde.

MR. GRIFFON: Yeah, I was looking at one of the Lindes. One of those I was actually, but if they're all the same model, you know, the lungs, all those 90s are the same like Bethlehem Steel. It's just the same model being re-used. So if we've already done a couple of Lindes, I don't see a point in picking another one.

MS. MUNN: Yeah, we've done two but not --

MR. CLAWSON: But neither of the Linde were the lung.

MS. MUNN: Correct.

MR. CLAWSON: It's all male genitalia and nervous system.

MR. GRIFFON: Yeah, but it is the same model. But, I mean, we can certainly look at the details on one --

DR. WADE: Five twenty-one?

MR. GRIFFON: -- and decide later.

Five twenty-one, Brad?

MR. CLAWSON: Yeah.

MR. GRIFFON: Five thirty-four I have, and do we have Blockson? This may be the same question.

MS. MUNN: I believe we have one with a POC of 7.82.

MR. GRIFFON: So this 534 is a different one.

MS. MUNN: It is.

MR. GRIFFON: But is, I guess the --

MS. MUNN: Let’s do it.

MR. GRIFFON: Yeah, I guess I would pick that for the question of, because there was a modified site profile, right? So I don’t know --

MS. MUNN: Correct.

MR. GRIFFON: -- when that was modified either.

MS. MUNN: Well, I don’t think anything was done. I think the first one that went out was, everything was put on hold almost instantaneously.

MR. GRIFFON: Yeah, I think you’re right.

MS. MUNN: I don’t believe anything was done under that first TBD at all.

MR. GRIFFON: All right. But we'll leave 534 in, at least tentatively.

On page ten I had 501 and 499 as possibilities. Four ninety-nine intrigued me because of the 0.4 years worked again.

MR. CLAWSON: POC of 26.

MR. GRIFFON: Yeah, a high POC, could be multiple skin cancers, and it's got stomach and skin.

MS. MUNN: What's the number here?

MR. GRIFFON: That's 499 and 501 is the other one. Five-oh-one is a Hanford and Nevada Test Site combined.

MS. MUNN: Yeah, that's interesting.

MR. GRIFFON: So 499 and 501, any others on page ten?

MR. CLAWSON: No.

MS. MUNN: Are you sure?

MR. CLAWSON: At this point.

MS. MUNN: Let's take a look first at --

MR. GRIFFON: It's tough after-lunch activity, isn't it?

MS. MUNN: It really is.

There's 492, we have only one gaseous diffusion plant, and it's combined with

another site.

MR. GRIFFON: Okay, 492.

MS. MUNN: Kathy, your list is being very helpful. Thank you so much.

MS. BEHLING (by Telephone): You're welcome. One of the things I also wanted to point out, if there is nothing under the tab column, that means it did come from the ninth set because I haven't assigned tab numbers yet. That might help you --

MS. MUNN: Good, thank you.

MS. BEHLING (by Telephone): -- make a comparison.

MR. GRIFFON: Thanks, Kathy.

We're on to page nine. I have 486, 487, 488, a couple really close to the 50th percentile and a Y-12 one with a real few number, one-and-a-half years.

MR. CLAWSON: One-and-a-half years, yeah.

MS. MUNN: We have a lot of Y-12.

MR. GRIFFON: We do?

MS. MUNN: Yes, we do. We have 13 plus and another half dozen combined Y-12 and K-25.

MR. GRIFFON: It's a big site, but I'm willing to drop that one.

DR. WADE: Okay, you're dropping which one?

MR. GRIFFON: Four eighty-eight. It was more of a curiosity than anything. I was curious whether that could be a best estimate. So 47 and 46 I still have on the table. And actually 45 is kind of intriguing. I know we have a lot of Savannah Rivers, but I think we also have a lot of Savannah Rivers that were from an early time period. Is that accurate?

MS. MUNN: Hold on, and I'll tell you.

MR. GRIFFON: This one's approved a little late, 7/17/06.

MS. MUNN: I'm sorry. We don't include the time period on the list that I have here, but we do have well over a dozen.

MR. GRIFFON: I know that several of our findings, we noted that procedures had changed, right, Stu? Am I accurate on that?

MR. HINNEFELD: Yeah, I'm trying to remember dates when these changed, but I don't remember when the dates changed.

MS. MUNN: There's something on the order of 25.

MR. GRIFFON: I would argue to at least include it on the list for now, and if we see

that we had others in that timeframe, then I would be willing to drop it.

DR. WADE: Which one?

MR. GRIFFON: Four eighty-five.

MS. MUNN: I think we've done a number in that timeframe.

MR. GRIFFON: But a lot of the ones I remember reviewing, they were from the very old, some of the original TB, you know, the original workbook, the original TBD.

MS. MUNN: Yes.

MR. GRIFFON: And their response was that's been updated and so I think if this addresses that question, I think it's worthwhile doing.

MS. MUNN: Well, we had one, two, three, four, five, six, seven, eight, nine, ten, 11 that are full internal and external on that site.

MR. GRIFFON: Yeah, but that's a good question. I wonder how many best estimates.

MS. MUNN: Best estimates are a little, are right at 20, actually, a little more than 20.

MR. GRIFFON: I'm confused, but anyway --

MR. HINNEFELD: If you think in terms of two-and-a-half percent of the total which has

been talked about, that's pretty trivial. I'm sure we've got probably 3,000 dose reconstructions from Savannah River.

MS. MUNN: You've got over a dozen that are full internal and external, and you've got over 20 that are best estimates. So we are --

MR. GRIFFON: I don't understand what that means. How could it be, I thought it was the reverse.

MS. MUNN: What that means is we have close to 40 full cases of Savannah River.

MR. GRIFFON: I'm trying to pull up our table now, but, yes, that could be, okay.

MS. BEHLING (by Telephone): Excuse me, Mark. This is Kathy. I put this table together quickly, and I just cut and paste from some information that Stu had sent us. And so in some cases, as I indicated, this is a draft table.

In some cases I went in and changed the full internal and external to best estimate, but I didn't have the chance to do that for all of these yet. So I didn't really make a determination as to whether the best estimates are maximizing. I just cut and

paste from some of the things that Stu had sent.

The other thing that you might notice just to point out, I also have not refined this table to the point where in some cases you'll see Savannah River site spelled out, and other times I have it SRS, so you have to scan a little bit. It's just a draft table at this point.

MS. MUNN: It's three different pages actually so you've got a --

DR. MAURO: Kathy, this is John. When these tables are being prepared of what has been reviewed or is undergoing review, especially the ones that have been reviewed, it seems to me that it might be important to know that that particular -- let's say it's a Savannah River case that we have already reviewed a case, but it was reviewed against a given revision of the site profile which might be somewhat dated.

That seems to be an important parameter to know whether or not the new one that we're looking at has been more recent. It's similar to the discussion we had before

regarding Bethlehem Steel. Because it may turn out there's some, useful to look at a case that has recently been done using the latest version of the site profile.

MR. GRIFFON: That's what I was getting at with that one is to try to maybe keep it on the list and when we come to the full meeting if it turns out that date is before the update in the procedure, I'd say drop it. But if it's after, then I would say it's worthwhile.

MS. BEHLING (by Telephone): And I believe what we started doing at SC&A with I believe it was the seventh set is in our summary write-up review, we indicate in there when the dose reconstruction was completed so that you have an idea of what site profiles and procedures were used for that.

But speaking of that, this is one area where, in fact, we do have Don Loomis working on a matrix for the dose reconstruction work. And this may be one field that we want to capture, and that is when was the dose reconstruction completed so we have an idea of what procedures and site profiles were used at the time.

MS. MUNN: That will be helpful, Kathy, thanks.

What about 474?

MR. GRIFFON: Four seventy-four? Well, it's got Iowa and Pantex. Yeah, I think that's interesting.

Any others on page nine?

MS. MUNN: Don't see any.

MR. GRIFFON: Go on to page eight. I don't have any on page eight.

MS. MUNN: These are all almost all AWE. They're early, early people, all of them just about.

MR. GRIFFON: I think we're on to page seven. I have a few on page seven.

MS. MUNN: We're not doing any at all on eight?

MR. GRIFFON: Well, I don't have any.

MR. CLAWSON: There's a Kansas City Plant.

MR. GRIFFON: Which page is that?

MR. CLAWSON: That's on seven.

MR. GRIFFON: Now, the one with zero. I'm assuming that's non-rad areas, right? Or worker.

MR. CLAWSON: Well, I'm just wondering what

Kansas City Plant --

MR. HINNEFELD: Kansas City Plant did very little radiological work.

MR. GRIFFON: They did a little --

MR. HINNEFELD: Just very little, very little because it's in Kansas City.

MR. GRIFFON: With a POC of zero. I'm assuming --

MR. HINNEFELD: Yeah, it's still there.

MR. GRIFFON: -- there was probably not --

MR. HINNEFELD: They did very little radiological work. They were mainly an instrument place I believe, electronics place.

DR. WADE: Page seven?

MR. GRIFFON: On that page I have 431, 439, 440 and 441, again, as potentials.

DR. WADE: Four thirty-nine, 440 and 441?

MR. GRIFFON: Right, and you know what? Actually the Savannah River one I can drop that one. It's the same issue I have in my notes here, is this after the procedure was updated.

DR. WADE: So you're dropping 439?

MR. GRIFFON: I can drop 439 because we include the other one.

DR. WADE: Then you're including 440, 441?

MR. GRIFFON: Uh-huh, 431, 440 and 441, that's what I have.

MS. MUNN: What about 443?

MR. CLAWSON: Yeah, I looked at that one.

MR. GRIFFON: That's fine, 443, yep.

Page six, I have 422 and 418.

MS. MUNN: And another Y-12 one.

MR. GRIFFON: Is one of those Y-12?

MS. MUNN: Uh-huh.

MR. GRIFFON: Oh, yeah. Yeah, I'm willing to drop that. We have a lot of Y-12s.

MS. MUNN: We sure do.

DR. WADE: So we're dropping 422.

MR. GRIFFON: Y-12 is like Savannah River though, isn't it, in that there's a lot of claims --

MR. HINNEFELD: Yes.

MR. GRIFFON: -- for that site? I mean no particular interest in that one.

DR. WADE: So 422 is dropped.

MR. GRIFFON: Yeah, so 418 is the only one I have. I don't think we've done a ton of X-10 cases have we, Wanda?

MS. MUNN: Not a ton, but there are, there's

a big chunk, one, two, three, four. There are only four specifically at X-10 and another one combination X-10 with other places.

MR. GRIFFON: So we can leave that on there, 418. I'm also selecting these with the notion that several of them may be dropped because we've done them already or because of other reasons. So I wanted to be broader than more restrictive at least for now.

MS. MUNN: Well, 423 somehow leaves the cause of the cancer model rather than -- we have a batch of that site though.

MR. GRIFFON: Yeah, we do, and we're not going to really --

MS. MUNN: No, that won't give us anything.

MR. CLAWSON: What about 412?

MR. GRIFFON: Four twelve? I don't know how many Fernald cases we have either, probably not that much.

MS. MUNN: A bunch, over a dozen.

MR. GRIFFON: A lot of those Fernalds were minimized. I don't know if this one is.

MS. MUNN: Yes, they were, minimized or maximized.

MR. GRIFFON: We can at least check and see

if this is really a best estimate.

DR. WADE: So we'll add 412.

MR. GRIFFON: Four twelve, add 412, yeah.

Page five I have 406, 405, 404.

MS. MUNN: Hold on, wait, wait, wait. I haven't even turned the page, 406 --

MR. GRIFFON: Four-oh-five, 404 as possibilities. Again, two of those are Hanford and PNL.

MS. MUNN: Look at 402.

MR. GRIFFON: Four-oh-two?

MS. MUNN: We have one from that site.

MR. GRIFFON: This one I was assuming doesn't have its own data, but I guess we could check it, right, Stu? I don't know.

MR. HINNEFELD: Sure. I don't remember.

MS. MUNN: The only other one that we had was a maximized external-internal.

MR. GRIFFON: Yeah, I think we can check it anyway, include it for now, 402.

MS. MUNN: Check 391.

Actually, I'm sorry. We have two of them.

MR. GRIFFON: And then I arbitrarily -- this is arbitrary -- but I arbitrarily cut off my

search for cases on page four at 1/4/05, because I basically didn't want to go back to those very old approval date cases unless there's one, I guess, that really jumps out. My concern on some of those is that we're going to get the same batch of findings that we had as, you know.

DR. WADE: Did you pick up any on the bottom of page four?

MR. GRIFFON: No, no.

DR. WADE: So by my calculations --

MR. GRIFFON: But you can go through still if people see any that jump out at them in the first four pages.

DR. WADE: You have 37 signaled at this point.

MS. MUNN: Well, you stopped at 402, huh?

MR. GRIFFON: Yeah, but not necessarily. I stopped at actually 381.

DR. WADE: Stopped at the date, 1/4/2005.

MR. GRIFFON: Right.

But, Wanda, like I said, if some before that jumped out at you, I mean, these are supposed to be best estimates so --

MR. CLAWSON: What about 383? We've only

got one from that.

MR. GRIFFON: Three eighty-three?

MR. CLAWSON: Yes.

DR. WADE: Aliquippa.

MR. GRIFFON: I think that's a site-wide model, but --

MS. MUNN: I think it is. I don't remember specifically, but --

MR. GRIFFON: I mean, I don't mind adding it for now if we want to make sure of that.

DR. WADE: Okay, let's do that.

MR. GRIFFON: Yeah, we can add it for now.

MS. MUNN: You said we had, that makes 38?

DR. WADE: Makes 38 by my count.

MR. GRIFFON: How many do we want? Because I looked through the random list, too, and I had just on my review, and finding, again, as I think John said, we've been focusing on best estimates, looking for best estimates anyway? But some of the maximizing and minimizing procedures have been modified since we've done all those reviews. So it may not hurt to do some of those with later approval dates in the hopes that we could review the new procedure and how it was used.

DR. WADE: Given the fact that the ninth batch hasn't been removed, and given the fact that you're likely to find some that for other reasons need to be dismissed, I think it would be prudent to --

MR. GRIFFON: I found 20 more cases in the random section. It doesn't hurt to have it available, right?

DR. WADE: That's store for next time.

MR. GRIFFON: Yeah, so I did the same thing starting with the random cases, starting from the back end on page 11 I had none, actually. Page ten, I had a bunch.

DR. WADE: Okay, go ahead.

MR. GRIFFON: One, I'm looking at it right now, one I think is duplicate to what we just selected. It's 172, but I see there was four facilities listed together, and it looks very familiar to the one you just selected, Wanda, doesn't it?

MS. MUNN: It looks very similar. I can't remember what the POC was.

MR. GRIFFON: Oh, no, it's a different POC. I see it now, yeah, a different cancer but the same facility. So I don't know. Well, I'll

just tell you. I have 172, 173, 175, 177, 178 and 179. A couple of those are Rocky Flats and may be removed anyway. The other ones are Oak Ridge, various combinations of Oak Ridge facilities. So again, these are just potentials not, we can always take these off later.

MS. MUNN: How about 182? That's kind of interesting.

MR. GRIFFON: One eighty-two?

MS. MUNN: Uh-huh.

MR. GRIFFON: Yeah, it says full primarily external. Okay, add it on. I didn't have any on page nine.

MS. MUNN: What about 183 before you leave page ten?

MR. GRIFFON: One eighty-three? Brush Beryllium, huh?

MS. MUNN: That's a new one to me.

MR. GRIFFON: And they had a radiological operation, Stu?

MR. HINNEFELD: I think they were an AWE that probably did some metal machining.

MR. GRIFFON: Okay.

MR. HINNEFELD: It wouldn't be here unless

they had radiological operations.

MR. GRIFFON: Yeah, it just surprised me. I guess that's right, yeah. Okay, 183. It's a big page.

So I am on to page nine, and I still have none on that page.

MS. MUNN: Do you have any preferences in your mind with respect to dose estimation types on this batch?

MR. GRIFFON: No. I was focused probably more on the overestimates, but I picked a couple that were underestimates, too, that were over 50. On page eight I have, I mean, this page eight I have actually four of them, 139. One forty-one was interesting to me because it's Fernald. It's got a POC of 86 and 0.7 years worked, and that's an underestimate. So that was intriguing.

MS. MUNN: It must have been...

MR. GRIFFON: Then 144 on that page and 152. One fifty-two I don't think we've done Metals and Controls group or Corp., sorry.

MS. MUNN: I don't believe so. I don't think we did it or the other one, 144.

MR. GRIFFON: That's a good question. That

one doesn't jump out at me. We can delete that one.

MS. MUNN: (Indiscernible).

MR. GRIFFON: So 139 and 141 and 152 on that page. Any others?

MS. MUNN: What about 146?

MR. GRIFFON: Yeah. Okay, add that one on, 146.

On page seven, I had none on page seven. I had one originally, but I took it off, the Medina facility. I think we've got one from there so --

MS. MUNN: What about 134?

MR. GRIFFON: Yeah, it's got the three sites and an underestimate. Yeah, I guess that's worth adding on.

Then on page six I'm deleting a few because I had some Y-12 ones, and I think we've got probably --

MS. MUNN: A jillion.

MR. GRIFFON: The only one I have left is 104. It's Los Alamos, but it also it's a later period of Los Alamos, 1980s start date so I don't think we've looked at that very much, or 1980 decade started, whatever. So

104 on that page. Any others on that page?

MS. MUNN: No, we have only one Weldon Springs, 120? We have one other from that site.

MR. GRIFFON: We only have one other from Weldon Spring?

MS. MUNN: Correct.

MR. GRIFFON: Okay, I mean, yeah, it's an overestimate for internal and external but add it on for now, 120.

And I used the same sort of cut-off so I only had two more left. One on page five was 93, 0-9-3, Pinellas Plant. And the one on page four was 82, Pantex. And that's all I had left.

MS. MUNN: Well, we might consider 0-8-9. That's another one of those very recent --

MR. GRIFFON: Oh, yeah, 1980s? Okay, 089.

MS. MUNN: And your last one was what before?

MR. GRIFFON: I had 082 on page four, and then I sort of stopped looking after the 12/30/04 date of approval.

MS. MUNN: So how many are --

DR. WADE: Fifty-six.

MR. GRIFFON: How many from the random was that? That was --

DR. WADE: Eighteen.

MR. GRIFFON: -- 18 and --

DR. WADE: Thirty-eight.

MR. GRIFFON: -- and 38. I think that's a good set to --

MS. MUNN: Are we covered?

MR. GRIFFON: I think it's good to go quite a bit over because I think we overlapped with the ninth set a little bit.

MS. MUNN: So we'll lose one or two at least.

MR. GRIFFON: Yeah. Okay, anything more on the tenth set?

(no response)

DR. WADE: So our plan will be to have Stu provide information that will be then considered during the Board meeting, the Subcommittee report leading to a Subcommittee sense and a Board vote on another 20 or so. And then, John, we'll have you.

DR. MAURO: I have one suggestion in the process of going through this list. I notice from tracking what's going on on TBD-6000,

they keep adding new AWE appendices similar to Hooker and General Steel. And I noticed recently there's always another one coming in, and these are all relatively recent work products put out on the web if there are cases that go along with that.

The reason I bring it up is that these are TBDs and very often when we do a case review, we give quite a thorough review of the TBD so we may kill two birds with one stone. We get a site profile review, and we get a case review at the same time. So when you do it, you may want to cross-check the list you have against the new list of TBD-6000 appendices.

MR. HINNEFELD: Okay, I'd just mention that there's often a presentient lag between those publications and the actual adjudication of the case.

DR. MAURO: In many cases? Oh, many cases. Sure.

MR. HINNEFELD: Because we have to prepare them. That takes awhile with the claimant has a certain amount of time for OCAS One. And then from the time we send it to Labor, the

actual adjudication of the case to make it available for review, is out of our hands.

DR. MAURO: It could be six months, yeah.

MR. HINNEFELD: I don't really know the time, but it's out of our hands.

DR. WADE: Stu, at this point do you have a number for the number of adjudicated cases? I know in the memo this morning we were at 8,000 or so.

MR. HINNEFELD: I did not generate that number for today, no. Something else about that number, as cases are reopened, for instance, a lot of cases have been reopened for a PER, for instance, the Super-S plutonium PER. That actually reduces the number of adjudicated cases. So that number kind of counter-intuitively does not continually rise.

DR. WADE: But again, if you think of the end point of 20,000 cases, two-and-a-half percent is 500. So you're approaching the halfway point in terms of your stated goal which is a good place to be.

MR. GRIFFON: I've got a request for a short break, five or ten minutes, and then we'll come back, find your papers for the sixth set

of cases. And I think what we're going to end up doing with the sixth set of cases is refreshing our memories a lot. I think we did have some things that NIOSH was going to follow up on.

Stu was talking to me at the lunch break, and I think this is mostly an update of where are we at. Maybe we can check some of them off as we go through that we've resolved them but some of it may be who owes what on this item and go through it that way and sort of get an update.

MR. HINNEFELD: To me if we can come to an agreement, if certain items have been resolved, for instance, the printed matrix still remains as it was with our initial responses that were originally sent. And so I think a number of things were resolved by initial responses. I could be mistaken. But if we could just make sure we --

MR. GRIFFON: Yeah, try to check some off if we can.

MR. HINNEFELD: -- get those off and make sure that the ones we know where additional information is owed that we can line those up

so we're clear on what additional information. Because I know there are several that we owe additional, more information on.

MR. GRIFFON: Okay, so we'll take five or ten and reconvene. You going to keep them on the line?

DR. WADE: Yeah, we're going to keep you on the line. Back in five or ten. Thank you.

(Whereupon, a break was taken from 2:10 p.m. until 2:20 p.m.)

DR. WADE: Okay, we're back in session.

SIXTH SET OF CASES WRAP-UP

MR. GRIFFON: I think we're ready to start a discussion on the sixth set of case reviews. And we went through this matrix awhile back. I don't have the date offhand. But I think what we're going to do is step through the findings one at a time and sort of get an update on where we are, whether there's an action for NIOSH or for SC&A.

I don't have -- oh, yeah, I have NIOSH responses. We just don't have any resolution written in the current matrix. The date of the matrix I have is May 2nd, '07, and that's the latest one. And I have that document

marked up from the meeting we had, the one, initial meeting, but nothing, I didn't put those comments in an electronic version at this point. So I'll try to get through my handwritten comments, and others can do the same. And we'll go through these one at a time and kind of get an update of where we're at. The first one's, I guess, pretty easy. It's Bridgeport Brass. It's Finding 101, yeah, case 101, and there's no findings.

Then we go on, the next one's a Harshaw case, and it's 102.1. So I am asking SC&A and NIOSH already where we stand on this one.

MR. HINNEFELD: Well, on 102.2, I'm just now I'm looking at the matrix. It appears that we essentially agreed with the finding that there's an internal dose here that didn't include progeny. We essentially agreed with the finding, but the case was compensable anyway. So essentially an underestimating the approach, we'd have to include the progeny dose in the outcome. So that's number 102.2.

MS. MUNN: It's already closed.

MR. GRIFFON: Yeah.

MR. HINNEFELD: 102.1, as far as I know we haven't both jointly done the same fitting and arrived at the same intake from fitting.

Doug, do you have anything on that?

MR. FARVER: No, I believe the problem here was just that we didn't really understand what you did. And then you explained it, and this is what I was getting at earlier, you went from an equal weighting fit to a square root fit. And there's no real objective way to determine which is better other than a visual.

MR. HINNEFELD: Right.

MR. FARVER: I think you run into problems down the road with that when you try to defend it because what looks good to you may not look good to someone else. I don't think it'd be off by very much in most cases, but, and this is just an example of that.

MR. GRIFFON: And this was a compensable run nonetheless, right?

MR. HINNEFELD: Yeah.

MS. BEHLING (by Telephone): Excuse me, this is Kathy Behling. I think during our last conversation on this issue I also wrote down DR records retention. And we had some

discussion as to the types of records that NIOSH may want to in the future include in the case file that may help to resolve some of these types of issues for us.

MR. GRIFFON: Yeah, that's the note I had, too, talking about DR files, records retention. And it says NIOSH agrees that it should have saved the old files. I guess the original runs weren't saved.

MR. HINNEFELD: Apparently, they weren't in the DR submitted which they should have been.

MR. GRIFFON: So I think to sum up those -- well, I don't know. Are we at a position where we can close this one out or I think we have agreement on the records retention. How about on the other part? I mean, there's, I guess, a question of the subjective nature of the fitting approach.

MR. HINNEFELD: Well, I'd have to go back and see if there's something we can put together on that. I don't know if we can or not.

MR. GRIFFON: So I'm going to at least capture the question about the records retention issue as having agreement between

the two of you. And then I'll say, at least for now, NIOSH is going to follow up on the --

MR. FARVER: Right, and really that's just a more generic concern because we're seeing it more and more in these best estimate cases where sometimes they'll go to a visual fit, and it's not always clear in the report how they arrived at their best fit.

DR. BEHLING: I talked to Kathy on a couple of these issues, and I guess I'm not sure if she was able to answer me. Does IMBA make allowance for determining an input for bioassay whether it was at the end of a shift or a Monday morning bioassay? Because clearly, the two are not the same. And obviously, an end of the shift bioassay will possibly give you a false high urine excretion value that would on the next Monday morning be very different based on the two-day hiatus.

Is there any attempt to segregate the bioassay data based on whether or not there was a time interval that would allow, especially when you talk about the six intakes that would purge that up front and then give you a better estimate as to what the long-term

body burdens of uraniums are that are at this point more or less representative of long-term storage compartments, the liver and bone.

MR. SHARFI: You're talking IMBA specifically?

DR. BEHLING: Yes, yes.

MR. SHARFI: IMBA is going to allow you to enter the data as you see fit, and that would be, I guess, up to the DR to choose whether or not that data's valid to be used. So you can either exclude data or include it. You can obviously put different weights to different values, but the IMBA itself, if you choose to accept the value of the bioassay, it's going to apply it as a non-biased result.

DR. BEHLING: And you wouldn't know, however, if it was a Monday morning or --

MR. GRIFFON: Oh, you could see on a calendar.

DR. MAURO: Yeah, you could look at a calendar.

But IMBA, when you put in the input, let's say it's in Becquerels per day. You did determine that's the Becquerels you're going to use. You put that in. It assumes that

Becquerels per day is every day, every day, every day, every day, right through Saturday and Sunday.

MR. SHARFI: You're talking about the intake rate.

DR. MAURO: The intake rate. And then you take a sample on Monday, whatever day they take it doesn't really matter because it's assumed it's continuous, but if the reality is --

MR. SHARFI: On a chronic, yes.

DR. MAURO: -- yeah, on a chronic. But if you assume that in reality what really happened is, yeah, you've got a Becquerel per day Monday through Friday, and then you get a two-day break and you pull your sample on Monday, then what's going to happen is you're going to get a different result.

MR. SHARFI: Assuming someone's working a five-day workweek, yes.

DR. BEHLING: The back thing doesn't have much to do with that.

DR. MAURO: Would it affect that?

DR. BEHLING: No.

MR. HINNEFELD: Not too much, not for a long

exposure period.

MR. SHARFI: Not for long-term exposures.

DR. BEHLING: But what will have a strong effect is the issue of when you take the bioassay, that is, end of the shift, at mid-shift, or I mean, what you would love to see is a seven-day hiatus between the last exposure and your bioassay. This would clearly give you especially for a very soluble material like UF-6, would give you a much better clue as to what is truly your body burden that reflects bone and liver. That's what it comes down to.

MR. HINNEFELD: Well, to answer your question, IMBA doesn't allow you to say this was a mid-shift sample or an end-of-shift sample and choose appropriately. It doesn't allow you to do that. Like Mutty said, the dose reconstructor can make some judgments about that. I mean, for instance, if you had, for instance, a contamination event. Everybody got sampled right after the contamination event or at the end of the shift after the contamination event.

DR. BEHLING: I'm always (multiple speakers

interrupt) series of bioassays that are spaced weekly, monthly and the bioassay should actually creep up. When I see this up and down you sort of say what am I looking at here. In principle, if you're talking about a legitimate bioassay that avoids this pitfall of yesterday's intake in your urine, what you should see is a steady increase in an upward direction.

MR. HINNEFELD: Well, in a truly chronic exposure situation, but if you have an episodic exposure situation where you're not exposed every day, but many days during the course of the year you are exposed, then at that point you would still see an upward and downward movement in the bioassay in some likelihood you would.

DR. BEHLING: Well, you would see a spike upward, but again, if you avoid this surge that involves a highly soluble material entering the bloodstream which is then subject to either partitioning in the kidney or in the bone, if you allow that hiatus to occur, you should never see this down. You should see a spike and then maybe on that spike riding the

next spike, but you shouldn't really see this constant fluctuation up and down, in principle.

MR. HINNEFELD: Well, I don't necessarily agree with that. I think with a series of episodic exposures that actually we mimic with a chronic.

MR. SHARFI: Exactly.

MR. HINNEFELD: That you could see some upward and downward movement, but I don't think that that's really particularly relevant. The key discussion is does the chronic exposure essentially model that we choose to depict this exposure situation which more than likely is not chronic because more than likely giving you exactly the same exposure every day, is that a suitable approach? And based on our calculations it is. That is a favorable to the claimant approach to treating these bioassay results.

DR. MAURO: So let's say it turns out that out of a dozen bioassays you might collect over the course of a year, say once a month, and some of them are relatively high and some are low. Is it possible that the ones that

are relatively high just happened to be taken on a day in which he received this exposure or the day after he received this exposure and it would give you a false, in other words, it will give you a false overestimate. That's what would happen if, in fact --

MR. SHARFI: It could bias a chronic high.

DR. MAURO: It'd bias a high. So that inherent makeup of IMBA and how it functions when used in that capacity will tend to overstate the intake.

MR. HINNEFELD: In that situation it would.

MR. GRIFFON: We're just going to, I think we'll leave that remaining on the table, the 102.1, the question of about the best fit selected and the consistency of the approach selected. I mean that's sort of the question is how can, you know, there's a question about the subjective nature of that and how NIOSH is dealing with it across the program.

Then I went on to say no effect on this case since it was a compensable claim. I think that's probably accurate. And then I said, additionally, SC&A noted that the IMBA runs were not included in the DR file. NIOSH

agrees that the IMBA runs should have been retained in the DR file. So there's agreement on that part of it. And the other part, I've left that other part open for a NIOSH response I guess.

MR. HINNEFELD: I'll put down here we are going to put something out.

MR. GRIFFON: I'm on to 103.1 then.

MS. BEHLING (by Telephone): This is Kathy Behling. In 103.1 and I'm probably going to ask Hans to assist me with this one, and John, too. I believe you worked on this case.

This goes back to our procedures and to OTIB-0018 and OTIB-0033. Now I guess there's been some confusion as to how these procedures are being used, but at the time that we reviewed this dose reconstruction, we were under the impression that the OTIB-0018 procedure was used for overestimating doses.

And when it was combined with the OTIB-0033 procedure, these all have to do with air sampling programs at the various facilities. Once it's combined with an OTIB-0033, which actually tries to bound the OTIB-0018 doses using the MPC values, then we were

under the impression that that combination could be used to compensate cases if in fact this was one such case.

Our first finding here, this 103.1, it's going to sound strange, but our first finding indicates does OTIB-0018 really in all cases overestimate a facility's dose using air sampling programs. And, Hans, I'm going to let you explain that a little bit further if you recall. I'm sure you do because you had looked at the NUMEC study. Do you recall that?

DR. BEHLING: Are we talking about general air sampling tests?

MS. BEHLING (by Telephone): Yes.

DR. BEHLING: If you look at, for instance -- and we'll probably briefly touch on that again possibly tomorrow when we're talking about Fernald -- in one classic study that was conducted at a time when general air sampling was, in fact, and BZA sampling was, in fact, done routinely as a surrogate for bioassays.

And they compared, and I think it was NUMEC that was the target facility for this study, and you looked at the actual, and it's

not a static relationship between the ratio between BZA air sampling and general air sampling. But the critical point occurs at the maximum permissible air concentration, and at that point the difference on average was a 70-fold difference that would potentially underestimate the real air concentration a person would be subjected to and inhale when the air monitoring data relied on general air sampling.

And that's reasonable, and it does, in fact, reflect obviously site-specific facilities where the general air sample may be a good distance removed from a very small source term that a person's standing next to. And, of course, monitoring the air at 25 feet from a point source like a glovebox with a pinhole as opposed to something that is more generically distributed in the air.

In some instances obviously when you compare air sampling done by general air versus BZA, that difference can be a very, very vast difference, up to 70-fold on average. And I think that's what Kathy's point is in her raising that up. Because it's

quite obvious that you need to understand what type of air sampling were used when you use that as a surrogate for bioassay data.

DR. MAURO: Let me add a little more. When I was looking at this the philosophy that's embraced by OTIB-0018 said, okay, there's probably a time beginning in the '60s where DOE instituted a fairly comprehensive Health Physics control programs where access to radioactive areas was controlled, airborne radioactive areas was controlled.

And it was controlled in a manner that a person's not going to be allowed to go in without respiratory protection to an area that was above some, an MPC. The idea being, okay, let's say we have a person that worked at a facility. We don't have any bioassay data, but we do know that he worked at the facility at a time when there was a comprehensive Health Physics program to control access to areas with high airborne activity.

So the way I understand OTIB-0018 is that, okay, if we know that to be true that there was this monitoring program and controls, a monitoring program of the type

Hans just described where there was a continuous air sampler. And we could say with a degree of certainty that no one working there was exposed continuously, 2,000 hours per year, to an MPC of the limiting radionuclides.

And that's sort of like you establish a base. You say, okay, everyone could reasonably say it's unlikely that anyone who worked there at that time was exposed to more than one MPC continuously the whole time he was there. Now, that's sort of like your first level of premise.

And I think Hans just describes, well, that may not be true because of the big difference there could be between general air samples and breathing zone samples. And so that was our first level of concern about whether or not this strategy, which on first principle sounds reasonable, but when you realize the disparity between breathing zone and general air samples, all of a sudden that erodes.

Then superimposed on that is this OTIB-0033 that says, you know something? I

think this OTIB-0018 might be a little too conservative. It's kind of strange. It's just not going to be where you're always right at an MPC for the limiting radionuclide. It usually helps Strontium-90 by the way. You know what we're going to do is we're going to write OTIB-0033 that says, well, we're going to leave it up to the judgment of the dose reconstructor to say, well, at this facility for this time period, let's say in 1970s, the practice was to control exposures at one-half or one-fifth.

In other words people aren't going to go into an area without respiratory protection, and so that you actually add an adjustment factor to bring down the exposure to make it more realistic. So what we had here is sort of like a layered set of concerns which address both.

Not only are we talking OTIB-0018, but it is very much related to OTIB-0033 whereby one is the point that Hans made is that can you really say with some confidence that just because you have an air sampling program with controls of access controls, that you could

say with a high degree of confidence that no one's ever going to be exposed chronically to levels above one MPC.

And the second thing is what fraction of that, in other words given the time period, it's probably unlikely that it was even at a tenth of an MPC. And we saw that as being a lot of judgment. I could see one person coming in and saying, well, for this time period this facility, we think it's reasonable to use one-tenth of an MPC as being the max he could have possibly been exposed to. And I'm trying to recollect this.

And, Kathy, please, you come in also. I remember when I reviewed these two documents, I walked away with this sense. That is, it seems to me that the person doing the dose reconstruction, he's going to have to use some degree of judgment as to what fraction of an MPC seems to be a bounding assumption or at least a reasonably bounding assumption. So I think this throws an umbrella over where our concerns are coming from.

MR. HINNEFELD: Well, I'd just comment

briefly on this, and I don't, this may be something where additional discussion is going to need to happen in additional exchanges. But the original position of TIB-0018 and people probably wouldn't be exposed above the MPC is not just strictly that the general area air sampling program would prevent that, but rather that a program that took the steps of having a general area air sampling program, a pretty comprehensive one, so they were really interested in what the conditions were in their workplace and interested in monitoring the exposures to the workers would take other steps in addition.

And whether we have the specific bioassay data and a coworker bioassay dataset built or not, it doesn't matter. We can say we believe with some confidence that once they have imposed that kind of a somewhat rigorous radiation control program, that the radiation workers will not be chronically exposed every day above the MPC.

Which is not to say there might not be episodes above the MPC, but their chronic exposure for the year won't be higher than the

MPC because the site is designing its radiation safety program to do that. And a reason that we feel confident that they do have a designed fairly rigorous radiation protection program is that we know that they had a comprehensive air sampling program.

So that is the basis, and the actual results of the air sampling program don't enter into this. So it's not like we look at what were the air sampling results from Savannah River in 1956, and based on that, that's what we're going to give them. That's not it. We're just going to say if they were -- I just made those dates up -- we're just saying that they had a comprehensive, rigorous radiation protection program which would have, in combination with all the things they were doing, which would have prevented them from being overexposed routinely.

And then I believe the fractional people, the people who at some point are judged to, would only be exposed to a fraction, I believe that is a job assignment selection, isn't it, Mutty?

MR. SHARFI: Yeah, like an admin.

MR. HINNEFELD: So this is for secretaries. This is for people who are intermittently in a radiological area as opposed to someone who works in, you know, part-time in the administrator and part-time in a process area as opposed to a chemical operator who spends his day in the production area.

So the fractional part is not based on the specific controls that a site adopted while they were controlling at 50 percent or ten percent, but rather upon this person didn't spend much time in the process area so the people there all the time were maybe being exposed at the MPC, these people may be there 50 percent of the time. Or if they almost have no, as far as you can tell they have no reason to go in the process area, maybe only ten percent of the time. So that was the fractionation.

MR. GRIFFON: Is the fractionation an individual DR judgment or is it in the site specific guidance?

MR. HINNEFELD: Well, it starts with an individual DR and then it's peer reviewed, and it's reviewed by us. So there are at least

three health physicists' judgments that would have to concur that this is an acceptable choice in that case.

MR. SIEBERT (by Telephone): Hey, Stu, this is Scott Siebert. I just wanted to do a clarification here. For OTIB-0033 there are specified levels. We don't just, even using professional judgment, pick what levels are to be used. Just like you say it's based on job title and the type of work, but then we use the Table 1 in OTIB-0033 which states for intermittent use 50 percent of OTIB-0018, for routine you use full. You don't just pick an arbitrary percentage. I just wanted to clarify that.

MR. GRIFFON: That's what I was getting at. So that at least addresses the consistency question.

MR. SHARFI: And how OTIB-0018 assigns dose isn't just the most conservative radionuclide for the intake. It's every year's intake is looked at independently as the year goes. So you might be assigning Type-M in the first couple years, Type-S, then change nuclides. And this is all just for the first year, then

you go back every year and do these. So it's not just applying, every year is looked --

DR. MAURO: Oh, no, I'm familiar with the workbook. I looked at the workbook, and I got the sense that you really made it the worst it could possibly ever be.

But what I find very important though is something you said. So you're saying it's not just a matter of that they had an air sampling program that had to meet the DOE order, X-Y-Z, 5280, whatever number it was, you're saying that there's another layer of protection here is that because they had such a program, they also had some degree, in other words, if there was the possibility that anyone could have gotten more than an MPC chronic exposure, they would have picked it up on some bioassay program?

MR. HINNEFELD: They would have had other things.

DR. MAURO: Other things would wash out.

MR. HINNEFELD: They would have had a radiation protection program, and they would not solely have relied on a general area air sampling program. They would have had a

radiation protection program that was sufficiently rigorous to put in a general area air sampling program, which is not a minor undertaking, and therefore, they would have done other things as well.

And they would have had bioassay programs. They would have had survey, contamination survey programs, probably standards for when they had to clean the plant. So these things would have been in place in addition. So we just use the air sampling program as an indicator of a mature radiation protection program.

DR. MAURO: So let's say the situation that Hans just described did exist. That is, that there was an air sampling program, but reality, and let's say there was no, and they were managing in accordance with the DOE orders in terms of MPCs for accessible areas. But let's say the situation existed that Hans just described where, yeah, there might be some real workers at real locations where they could have been 70 times higher and what they were experience --

MR. HINNEFELD: Than what the GA said, which

probably didn't say that. It probably didn't say MPC.

DR. MAURO: But it was 70 times higher than what the GA was seeing. Now under those circumstances you're saying that -- and I don't recall this being in the write up, but you're saying that there are other provisions in the DOE orders which would capture that, almost like a defense in death. That is, if that situation did arise, it wouldn't go unnoticed.

MR. HINNEFELD: I wouldn't necessarily rely on the DOE orders, but I would comment that based on, yeah, there were other things that would have been associated with that.

DR. BEHLING: Kathy, let me speak first, and then you go.

I'm always using Fernald as a reference point, and obviously, we do know that --

MR. HINNEFELD: I'm familiar with Fernald.

DR. BEHLING: -- up to 1968 people were exposed to thorium, and there was no bioassay backup data. So we have to, at this moment in time, rely pretty much for that period up to

’68 on the air monitoring data. And we know that for all the data that is available a large part is general air sampling. And, of course, there are spot sampling for breathing zones, but we also know it fluctuates.

We have instances where we have 1,800 MAC levels. We don’t know what the duration is, and on the sideline the person was now wearing a respirator. So it leaves the door wide open in trying to understand what an exposure might have been when you have such limited air data.

MR. HINNEFELD: Well, I don’t think we’d ever use Fernald in TIB-0018.

DR. MAURO: So you’re saying that that would --

DR. BEHLING: No, but I’m using that as an example. You may not have the defense in death that John was mentioning.

MR. HINNEFELD: Well, I would never hold up Fernald as an example of a regulatory protection program, certainly not after 1970.

DR. BEHLING: Kathy, did you want to say something?

MS. BEHLING (by Telephone): Yeah, this is

Kathy Behling. Let me talk a little bit about this particular case. First of all, I do think that the resolution to a lot of these issues we're discussing will have to come in the procedures review of these two, TIB-0018 and --

MR. GRIFFON: Yeah, and we said that before.

MS. BEHLING (by Telephone): The only thing I want to make mention of is, this is a Santa Susana case, and, in fact, this is the sixth set. And I see that in our summary we did put in information as to when the dose reconstruction report was completed, and I have December 2005 for this particular case. At that time there was no site profile for the Santa Susana facility.

And so I guess my question was how did a dose reconstructor know that this particular facility had an appropriate air monitoring program in place? I would think, now there is an attachment in OTIB-0018 that does give some guidance to the dose reconstructor, but for this particular case I would have expected that a dose reconstructor would look at a site profile document to come to the conclusion

that perhaps he could use this particular procedure for this particular case.

So that is just a comment I wanted to make on this particular case. Now the case was compensated, and again, to go further, in our next finding, in fact, addresses the fact that the OTIB-0018 workbook as was just described, can be very, very conservative because what they do is to let the highest radionuclides for each year based on the highest solubility, and that is what is assigned for each individual year throughout the employment.

However, again, in this particular case, I know OTIB-0033 does give guidance to the dose reconstructor, but I specifically indicated in here that this case, how they applied OTIB-0033 is they used 63 percent of the employment period. They used 14 out of the 22 years of employment that he actually received the MPC level.

I don’t think that that’s described in OTIB-0033 in that fashion. So I agree that all of these things are in place right now, but for this particular case, they weren’t

applied.

MR. SHARFI: The percents are locked in in 33. Now if they chose to give them for a shorter period of time, OTIB-0033 doesn't say whether you have to give it for the full employment or partial part of the employment or, that's not what's covered in OTIB-0033, it's what percent of OTIB-0018 you give. What percent of the air concentration are you assuming, not how long are you assuming it.

MS. BEHLING (by Telephone): All I'm saying is that for this case the dose reconstructor, that's how he ratchets down the OTIB-0018 dose. He decided that he was going to assume that the individual was exposed at the MPC level for 14 years rather than the full 22 years. That's how he assumed to try and bound this OTIB-0018 dose, use 63 percent of the employment period.

MR. HINNEFELD: I think that if it's a compensable case, he wasn't trying to bound it. He was just saying that, well, with that much it's in so --

MR. SHARFI: The full employment, I mean, I can do a partial part of the employment --

MR. HINNEFELD: -- I don’t know why he chose to do that.

MR. GRIFFON: But why would they, yeah, that seems a little --

MR. HINNEFELD: Don’t know why they chose to do that.

MR. GRIFFON: -- wouldn’t it be just as easy to do a hundred percent or would it be more work? Is that what you’re saying?

MR. HINNEFELD: Don’t know.

MR. GRIFFON: Yeah, I don’t know.

MR. SHARFI: Maybe the numbers just seemed so big they looked ridiculous big.

MR. GRIFFON: Yeah, that could be.

MR. SHARFI: I mean, some of these you can get some, you can end up assigning 3,000 rem and at what point is enough enough?

DR. WADE: Brad?

MR. CLAWSON: Well, I was just wondering, we covered this a little bit in this morning in the letter we were writing and so forth, but one of the things is, is the dose reconstructor, what you’re telling me is that if they’re hitting to this point you’re saying that there’s no use of going on any further,

that that's compensable and --

MR. SHARFI: Yeah, you know, once a claim's compensable, there's no point in doing more to the claim. At that point it's a partial so why they chose partial years versus -- I mean, I don't know if the person's job title changed and halfway through their employment -- I don't know enough about the details of the claim to say --

DR. MAURO: Let me go -- I thought OTIB-0018 was really, in my mind except for the reasons Hans brought up, off the charts upper bound. I mean, you're operating at the MPCs all the time under the worst possible conditions, and you're compensated, right? I mean, this guy was compensated. But you brought it down a little bit because of this percentage.

In other words you brought a little bit of reality into it by saying we're going to make it 63 percent rather than 100 percent of the time that he's at this level. And I could see this for denial. In other words I'm giving a guy an off the chart exposure, and so now I'm picturing another circumstance where you have another person, maybe even working at

a same facility, but you have some bioassay data, and you're going to reconstruct his doses based on bioassay data, and in his case you've denied.

So you have two guys, you see where I'm going?

MR. GRIFFON: Yeah, it's a fairness question.

DR. MAURO: So I mean, and the way I would say OTIB-0018 seems to be reasonable.

And, Kathy, I think that's how it's represented. OTIB-0018 is for the purpose of denial, and then you bring in 33 to try to bring some reality to the situation. I don't know if that was done here.

MR. SHARFI: In this particular case I don't know this is -- what site?

MR. HINNEFELD: Well, it's Santa Susana.

According to our initial response -- are we on 103.2? That's the case we're on?

MR. GRIFFON: One and two, I think we're looking at both of them kind of them, kind of.

MS. MUNN: We started off with one --

MR. HINNEFELD: Our response to 103.2 wraps up into the same situation they had us in

doing OTIB-0004 cases and doing compensable OTIB-0004 cases. Because if you read our initial response on 103.2, it speaks to the letter from the contracting officer to ORAU telling them for any case in house two years or more, use, consider research done, go do the cases using whatever you have and scientific assumptions that are favorable. And so it's the same instruction --

MR. SHARFI: At that time that is the best estimate you could do at the time.

MR. HINNEFELD: -- at the time. So it's the same instruction that led to the OTIB-0004 being used for compensable cases. This case was used in that fashion. Suffice it to say that remember that happened for just a relatively brief period of time. I forget what it was, a couple months or something like that. And so then we changed direction and said don't do that any more. But this falls into that same kind of bin as the TIB-0004 compensables.

MR. SHARFI: That makes sense.

MR. GRIFFON: Can I try to summarize? I think where we're at with 103.1 and 103.2, I

think the TIB-0018 and TIB-0033 obviously are going to go to procedures review, the general question. But I think there's still a question of follow up, at least for NIOSH, to explain in the first part -- I'm a bit confused about Finding 1 and Finding 2. Finding 1 seems to say not conservative enough. Finding 2 seems to say too conservative.

MS. BEHLING (by Telephone): That's true. We were trying to point out those --

MR. GRIFFON: Anyway, having said that, I think we, you know, for NIOSH to follow up on 103.1, I had just to justify the rationale as it applies to this case. And I think you're going to say one thing is it's compensable, but I mean, you know, because the question on 103.1 is, is it consistently overestimating.

So for this site for this case, I guess I was trying to separate it as a general procedures question of 18 and 33. But I want to know, at least see in the response, does NIOSH believe TIB-0018 to be overestimating for this site for this particular case. I think we should answer that in this matrix and

then say generally we have those concerns for TIB-0018 and -0033 that can go to the procedures review.

MS. MUNN: All be worked in Procedures.

MR. GRIFFON: And then on the second, 103.2 --

MS. MUNN: -- this specific site, however.

MR. GRIFFON: -- yeah, 103.2 as a follow up for NIOSH that I think at least deserves an explanation is that why did they stop at 63 percent of, you know, and there might be a simple explanation like, you know, the dose was high enough, the job title changed, and it was already a compensable claim.

I mean, I think we just need something to sort of understand that. But then other than that I think the rest is, goes to procedures review and we don't have to go through the rest of those details again.

So I'm on to 104-point -- I lost my page here on the, 104.1, 104.1.

MS. BEHLING (by Telephone): This is a Superior Steel case I believe you did, and it has to do with using what we thought was an incorrect DCF, the isotropic exposure geometry

for submersion and contamination dose values.

MR. GRIFFON: I have for this that SC&A agrees and no further action. Is that?

MS. BEHLING (by Telephone): That's what I have written down, too.

MR. GRIFFON: Okay, so that one's done.

104.2, I have NIOSH agrees that no further action required.

DR. BEHLING: Does anybody know was an ambient dose equivalent really used?

MR. HINNEFELD: Tim Talbe might.

MS. MUNN: Does anybody know what?

DR. BEHLING: Whether an ambient dose -- I've been in this business for 30-some-odd years, and I have to look it up, and I still don't understand.

MR. SHARFI: The derivation of the DCF for the ambient dose?

DR. BEHLING: Yeah.

MR. SHARFI: The ambient dose equivalent?

DR. MAURO: What is it?

MR. SHARFI: I'd hate to speculate.

MS. MUNN: So our action on 104.2?

MR. GRIFFON: Is this a generic question that has to go elsewhere? I mean, I don't

think it has an impact on this case.

DR. BEHLING: No, it doesn't.

MR. GRIFFON: Yeah, I don't think, okay. I figured you were, but I mean it was a finding, Hans.

MS. MUNN: But it does not go to Procedures.

MR. CLAWSON: Not yet anyway.

MR. GRIFFON: It's not going to Procedures.

MS. MUNN: Global Issues?

MR. HINNEFELD: But is there at least an issue here? Is there even an issue here?

MR. GRIFFON: I know. I guess there's not an issue. I have NIOSH agrees but no action required, right?

DR. MAURO: We'll remember to bring it up.

MR. HINNEFELD: The issue is that IG-001 has a set of DCFs for ambient dose equivalent and has a different set of DCFs, very slightly different, for HP-10, which is dose of ten millimeters. So that's the question and what is ambient dose as opposed to HP-10. So we'd have to get somebody to explain that. I don't know that it's worth a lot.

MR. GRIFFON: No.

DR. MAURO: It's just academic.

MR. HINNEFELD: Yeah.

MR. GRIFFON: So we're not, there's no need to follow up anywhere, right?

MR. HINNEFELD: I don't know where we'd go.

MR. GRIFFON: I'm on to 104.3. Now we have, is NIOSH developing -- oh, no, that's for 104, five and six. This is the white paper questions I think, right? NIOSH has developed -- this is a generic issue on resuspension on, I don't have anything on 104.3 though.

DR. MAURO: We got different numbers than you did for the slab and the plates. We ran MCNP, and we came up with different numbers, and we weren't sure why.

MR. HINNEFELD: Let's see, well, you commented apparently on routine 106.

DR. MAURO: But that was also --

MR. HINNEFELD: 104.3? In our initial response we talked about that.

MR. GRIFFON: I don't see a NIOSH response for this. There is no NIOSH response.

MS. MUNN: I don't see a response for 104, five and six.

MR. HINNEFELD: Really?

MR. GRIFFON: Yeah, it's not on the matrix.

MS. MUNN: No, it's not on my matrix --

MR. GRIFFON: Not on the one we're looking at.

MS. MUNN: -- unless I missed something.

MR. GRIFFON: Nope, you didn't miss anything, Wanda.

MR. HINNEFELD: Well, let's send the response then.

MR. GRIFFON: Do you have one in the matrix though, Stu?

MR. HINNEFELD: I have one in mine.

MR. CLAWSON: 104.3?

MR. GRIFFON: We must not have -- you must not have sent us that updated.

MR. SHARFI: It was updated as of September 25th, '07.

MS. MUNN: I don't have any responses at all on page five.

MR. HINNEFELD: Well, I thought it was sent, I had sent it. I will go back and check my out mail, and if I did send it, I will let you know, but either way I will re-send it. I'll send you an updated matrix --

MR. GRIFFON: Yeah, I have OCAS response to Subcommittee, September 7th, '07, is the one

I've been working from.

MR. HINNEFELD: This was updated later. And apparently could be I didn't submit it. I don't know, but either way I'll send it because it contains initial responses, until the initial response is shared.

MR. GRIFFON: I've been editing on this one, but I can cross the two --

MR. HINNEFELD: Well, I'll just clip that one out, you know, the finding all the way across and send it to you so you can see where it fits.

MR. GRIFFON: That's fine, but if there's more of these --

DR. MAURO: So you folks did revisit that number and you come away with different numbers or --

MR. HINNEFELD: No, I think where our point is has to do with the overall dose assigned is because of the assumptions about proximity to the source and time spent near the source because those are so generous that the variations in dose rate is probably minimized or is accommodated for by those generous assumptions. I believe that's where we're

coming from.

DR. MAURO: Just as a general point in many circumstances we find ourselves, you know, we will parse out the analysis, run our calculations, come up with numbers different. But in the end the point you're making is, well, when you roll them all up, all the assumptions that come together, you're really okay. It's important that the working group understand. And we're not going to disagree with that.

The question becomes does that mean that, well, but there might be something about the way you're running, I'm not sure whether you use MCNP or you use Attila, whether or not there's some fundamental analysis where you're looking at the slabs or the plates where maybe there's a problem. Now the problem doesn't surface as a real problem because of all the other conservatisms built into proximity and time, but there might be some scientific issues that under other circumstances could be a problem.

So I would recommend or suggest that if we are coming up with differences, I think

it might be a factor of two, between when we do a slab, and you do a slab, I'd sure like to know what the reasons are.

MR. HINNEFELD: Yeah, okay.

MR. GRIFFON: So NIOSH and SC&A to, or NIOSH to share calculations with SC&A? Is that fair? Is that what we're going to do here?

MR. HINNEFELD: I can get them out I think.

MS. MUNN: Your current responses don't include that information.

MR. HINNEFELD: Well, it won't include the MCNP run.

MR. GRIFFON: The details, yeah.

MR. HINNEFELD: We can get them out.

MR. GRIFFON: For the next three, 104.4, .5 and .6, I have this is the white paper on the generic issues question. And this comes up several times I think. It's under resuspension, ingestion. I think they all fall into the category. Am I right on that?

MR. HINNEFELD: Well, two of them are resuspension and one is ingestion.

MR. GRIFFON: Right.

DR. MAURO: My recollection is when it comes to ingestion, the new method that you guys,

and presented by Jim Neton at one of our last meetings, put that issue to bed demonstrating that it works. However, the resuspension factor issue --

MR. GRIFFON: Did SC&A review that method or I don't know because I wasn't at the last meeting.

DR. MAURO: Well, yeah, we actually ended up reviewing that method as part in the work venue, had to do with a site profile review. It might have been Linde. So my recollection is that that particular issue on ingestion has recently been dealt with on a global basis, presentation given by Jim and also contained as part of the Linde, latest version. And we looked at it, and I recall found favorably. Now, I think that that's, so I think it's worthwhile us confirming that.

MR. GRIFFON: Yeah, I think you should confirm that.

DR. MAURO: Please, because I'm saying this from memory. But the issue on the resuspension factor still is very much on the table as a global issue. So I think we might be okay on ingestion, but we have to do our

homework. And the resuspension factor, I think that it's still something that NIOSH is still looking at generically and globally.

MR. GRIFFON: 104.7, I don't have anything in my notes on this one.

MR. HINNEFELD: Well, this is a recycled uranium OTIB.

MR. GRIFFON: Oh, yeah, this is an RRU, yeah. And where does that stand, Stu, just to --

MR. HINNEFELD: We expect to see it this week from the contractor.

MR. GRIFFON: So there's a white paper or a TBD or what's --

MR. HINNEFELD: It's OTIB.

MR. GRIFFON: OTIB, all right. It's a TIB. Do we have a number?

MR. HINNEFELD: I'm sure it has one. I don't know what it is.

MR. GRIFFON: You don't know what it is. Just so we can track it easier it would be nice to put that in.

Going on to the next one, 105.1.

MR. FARVER: 105.1, two and four have to do with dose conversion factors and the

triangular distributions and that was from an earlier finding.

MR. GRIFFON: Yeah, so this is a question of NIOSH agrees and the case is being re-evaluated and a PER is going to be provided, right? This is a similar finding as we've had before?

MR. FARVER: Right, and they've updated the EDCW tool. It was the max/min.

MR. HINNEFELD: Okay, this used max/min and the entire range of all the DCFs?

DR. BEHLING: And it's most important when you have the low energy photons for that extreme difference exists between AP geometry as a min versus ISO or location.

MR. FARVER: And it concerns the recorded photon dose, the missed photon dose and the neutron dose.

MR. GRIFFON: So NIOSH agrees the case is being re-evaluated as part of the PER review. Is that fair to say it that way?

MR. HINNEFELD: Yeah, and, well, the EDCW tool has been revised to reflect the external dose something.

MR. GRIFFON: NIOSH agrees workbook has been

revised, right? Is that what you --

MR. HINNEFELD: Yeah.

MR. GRIFFON: Okay, so that's for 105.1.3 -- what did you say?

MR. FARVER: One-point-one, 1.2 and 1.4.

MR. GRIFFON: Right. Or 5.1, 5.2 and 5.4. What about 5.3?

MR. FARVER: Five-point-three is the LOD over two in the workbook. We revised the workbook.

MR. GRIFFON: Again, I have case being re-evaluated. Are you re-assessing all those LOD over two ones as well?

MR. HINNEFELD: Yeah, well, these cases would be done together.

MR. GRIFFON: Yeah, yeah, that's right.

MR. FARVER: Yeah, it looks like the whole case is being reworked.

MR. SHARFI: This is probably being redone for Super-S, too.

MR. HINNEFELD: Probably being done for Super-S plutonium as well.

MR. GRIFFON: Okay, 105.5.

MR. FARVER: 105.5, that was medical dose where they chose the lung dose instead of the

esophagus dose, and I imagine since they're going to rework the whole case, it's just a matter of going back and verifying that the correct occupational medical dose was --

MR. HINNEFELD: Yeah, we've never submitted an initial response on that.

MR. GRIFFON: I was going to say, all right, I was going to ask.

MR. HINNEFELD: This one you have not seen so when I have one I like, I'll send it over.

MR. GRIFFON: Okay, but it's like the case is going to be re-evaluated. I'll note that, that you're going to provide a response.

MR. SIEBERT (by Telephone): This is Scott Siebert. The case was returned to us for Super-S just about a month ago so we are reworking it.

MR. GRIFFON: 105.6, this is a fission product question. Do we have --

MR. FARVER: Yes, this was one that was in the documents that Kathy sent out last week, one of the responses in the first response. And NIOSH gave their response, that they went back and reworked it and included the Ruthinium-106, and that's fine. We're okay

with that.

MR. GRIFFON: So the case was reworked to include, right?

MR. FARVER: Yes, they recalculated the dose.

MR. GRIFFON: So the initial finding stands, right?

MR. FARVER: Right, it didn't change the POC.

MR. GRIFFON: Okay, so this is a NIOSH agrees, recalculated the dose, no affect on POC, right?

MR. FARVER: Yep.

MR. HINNEFELD: Mark, the residual OTIB is 70, number 70.

MR. GRIFFON: Okay, the recycled U?

MR. HINNEFELD: Recycled U. Is that recycled U?

MR. SHARFI: That's the residual.

MR. HINNEFELD: Oh, I'm sorry. They're looking for recycled U.

MR. SIEBERT (by Telephone): Recycled is OTIB-0053.

MR. GRIFFON: Bear with me for a second. If I do this now then I'll be able to turn it

around to you guys quicker. Where was that RU? What finding was that? Here it is, okay. And it's OTIB-0053?

MR. SHARFI: Yes.

MR. GRIFFON: Why don't we, let's take five. We've got some climate issues in the room here. Wanda has to go get a parka, so we're going to take a five minute break, five minute stretch break --

DR. WADE: We'll be back in five.

(Whereupon, a break was taken from 3:15 p.m. until 3:25 p.m.)

DR. WADE: We're back in session. This is the home stretch now so stay with us. Keep your eyes open. Caffeine is recommended.

MR. GRIFFON: I'm on 106.1 actually.

MR. FARVER: This is going to be very similar. 106.1 and 106.2 are the DCFs again which we've done twice now.

MR. GRIFFON: I have NIOSH agrees, no effect on the case since it's compensable. Is that accurate, Stu?

MR. HINNEFELD: Yeah.

MR. GRIFFON: Okay.

MR. FARVER: 106.3 is the LOD over two just

like before.

MR. GRIFFON: And that's sort of the same thing. You agree but no effect on the case, right?

MR. FARVER: Correct.

MR. GRIFFON: 106.4, a fission product question.

MR. HINNEFELD: 106.4, I guess there were a couple whole body counts that were over the fallout level for cesium and a few other things. I contend with their response. They went back and basically they say the dose reconstruction was stopped because it exceeded POC of 50 percent. I think this was a compensable case so maybe you get to a point then you stop.

MR. HINNEFELD: I believe that's what happened.

MR. GRIFFON: The only question I would have on this is, well, I mean, it's a compensable case and everything, but if it's a matter of a workbook, it seems to me, it's that question of are you saving any work by not including them all or is it just as easy to just include it and make a run or no?

MR. SHARFI: The cesium would have required its own independent --

MR. GRIFFON: It would have required more, okay. In this case it would have required, okay. I'm just catching up on the notes, 106.5.

107.1.

MR. FARVER: 107.1 and two are the same as DCFs, from photons and missed dose.

MR. GRIFFON: So this one's going to be reworked, right? Okay, that's 107.1 and two, right for that?

MR. FARVER: Correct.

MR. GRIFFON: Moving on.

MR. FARVER: 107.3 is LOD over two.

MR. GRIFFON: Same response?

MR. FARVER: Right.

MR. GRIFFON: NIOSH agrees. The case is being re-evaluated? Jump in any time, Stu, if you don't agree with these.

MR. HINNEFELD: No, I agree with them.

MR. GRIFFON: 107.4.

MR. FARVER: This is where we had a little disagreement in the assumptions regarding the internal dose from uranium exposure. I went

back and looked at the data, the whole case basically, and although I don't necessarily agree with what they did, they used a chronic intake, and yeah, there's some discrepancies; is it chronic? is it acute? This is one of those cases where it really doesn't matter dose-wise, and chronic is going to give you the higher dose. So it may not, it's claimant favorable in this case.

MR. GRIFFON: So SC&A agrees that the chronic model selected was claimant favorable.

MR. FARVER: This is one of those cases where there's only two bioassay points, so it's a little difficult.

MR. GRIFFON: But are you saying that you agree with --

MR. FARVER: Yeah, I agree.

MS. MUNN: For our purposes now it's closed, right?

MR. GRIFFON: Yeah.

MR. SHARFI: That's 107.4?

MR. HINNEFELD: That's 107.4, right?

MR. GRIFFON: Is that right?

MR. HINNEFELD: That's where I am.

MR. GRIFFON: Okay, 107.5.

MR. FARVER: NIOSH has no response, and basically when they went back it looks like it was a data entry error that resulted in a, there should have been electrons greater than 15 keV, and I believe it was either entered as photons or --

MR. HINNEFELD: I think it was less than, it was entered as less than 15. It was supposed to be entered as greater than.

MR. GRIFFON: So NIOSH agrees, but no effect on the case. Is that fair to conclude?

MR. HINNEFELD: Well, the effect is there's a minimal effect.

MR. GRIFFON: Or minimal effect, no effect on the outcome of the case.

MS. MUNN: Just reduce the POC.

MR. SHARFI: It'll reduce the POC if you change it.

MR. GRIFFON: Right.

DR. BEHLING: Was this a tritium exposure?

MR. HINNEFELD: It's probably a skin dose, isn't it?

MR. SHARFI: Probably a fission product.

MR. HINNEFELD: Or a fission product intake internal?

MR. SHARFI: I would imagine. I'm trying to find it in the --

MR. FARVER: Fission products, plutonium and tritium, bunch.

MR. HINNEFELD: Yes, if it was incorrectly, if we incorrectly put it in as less than 15 keV, then it was probably a fission product intake.

MR. GRIFFON: 107.6.

MR. HINNEFELD: Based on their 11/19 information to us, I believe we have additional information to provide.

MR. FARVER: Yes, okay, I'll explain this. This has to do with the PU-238 environmental internal dose. It was not included. NIOSH's initial response was it wasn't included, but it was less than one millirem and didn't need to be included. And we came back with it's fine that it's less than one millirem, but you don't know that unless you calculate it. So in other words our belief is it should have been included first in the calculation workbook and then you can delete in the final IREP.

MR. HINNEFELD: Well, we'll provide a

response. I suspect the calculation has been done.

MR. FARVER: If it was done, then it wasn't included in the record.

MR. HINNEFELD: It may have been done. It was less than one millirem, then it could have been removed from the workbook just to remove the calculational steps.

MR. GRIFFON: So then it's a question of the DR file including all the records maybe. It might be one of those.

MR. HINNEFELD: Could be. It's always, when you have a technical kind of a document that describes PU-238 as environmental exposure, and your tool doesn't have it, it certainly prompts the question why didn't the tool have it. So for completeness of explanation I don't know what impact it would have on the speed that the tool would run at, but that would be really, I guess, the only downside if it slowed down the tool for some reason and he didn't necessarily do it every time. But for a completeness of explanation it would be better, I guess, if they were there. We'll come up with something.

MR. GRIFFON: A response, okay.

MR. HINNEFELD: Yeah, we haven't responded to the most recent information provided.

MR. GRIFFON: 108.1.

MR. FARVER: 108.1, the DR did not include a 1945 recorded photon dose. It was 20 millirem. It looks like it was just an oops and didn't get included. The question always becomes why it didn't get included. But it was not included in the dose reconstruction.

MR. GRIFFON: Stu.

MR. HINNEFELD: I'll have to go back and refresh my memory. If I've got to say more than once in the initial response, I've got to go back and refresh my memory.

DR. BEHLING: Was this a film dosimeter dose? I mean, it's strange that 20 millirem is half of LOD for that period of time so --

MR. FARVER: That's one in the dosimetry records, but it was not in the workbook or the final calculations.

DR. BEHLING: Did they use as a missed dose which would have been the same value?

MR. HINNEFELD: Actually, our last statement says, actually you guys noted that if we had

used it using today's practices it would have resulted in the same result, the 20. It would have been considered a zero, so it would have gotten one.

MR. FARVER: It's not so much that it's a dose concern, it's more of a data verification. It's in the records, but it doesn't affect the dose reconstruction.

MR. HINNEFELD: So I'll have to go back and --

MS. MUNN: So we're going to expect still another response from NISOH?

MR. GRIFFON: I don't know that we even need a further response.

MS. MUNN: I don't know that we do either.

MR. HINNEFELD: Yeah, I don't either.

MR. FARVER: I would put this back under your data verification question.

MR. GRIFFON: Yeah.

MR. HINNEFELD: I mean, our response talks about some range, it's outside the range of the Monte Carlo tool.

MR. SIEBERT (by Telephone): Yeah, that's it. It actually was there, and it was correctly entered in the tool. It's just the

tool will automatically give you an error that you have to deal with if the dosimeter error was outside the pre-run Monte Carlo distribution in which case then we'd run it separately and include it.

However, in this case it did not make a difference in compensability. It was very small, so it was determined not to correct the error. It was claimant favorable to use the slightly larger error that was involved. So from a data point of view it was actually in there, considered. It just didn't need to be corrected.

MR. HINNEFELD: Let me see if I understand this, Scott. So it was entered in the tool. That caused an error in the tool, and so the correct thing to do would have been to do some other manual entry of this dose number for 1945 which apparently was left out through oversight. Is that right or that --

MR. SHARFI: It was left out by choice.

MR. SIEBERT (by Telephone): Well, it didn't need to be done because the error -- my understanding of this one if I remember correctly is the error, the tool tells you,

the dosimeter error was too small to fit into the range of pre-run Monte Carlo distributions. And to just ignore the error that the tool is telling us would let us use a slightly larger error value in a Monte Carlo calculation which would have been claimant favorable so we didn't have to correct that and run it separately. I can't imagine why this is confusing.

MR. SHARFI: This Hanford tool is based on pre-ran crystal ball runs.

MR. SIEBERT (by Telephone): Correct, thank you, Mutty.

MR. FARVER: So it did not show up in the IREP as a, under the recorded doses.

MR. SIEBERT (by Telephone): Right, because it was a small enough number that didn't --

MR. SHARFI: The tool considered it in its iteration it became outside the error. It doesn't show up in the measured numbers for that year.

MR. HINNEFELD: Is there a missed number, missed dose number for that year in the dose reconstruction?

MR. SHARFI: I would have to actually look

at the particular details of the claim.

MR. GRIFFON: Because that's sort of what I would question is if --

MR. HINNEFELD: Well, one action here is that Scott's got to explain this to me.

MR. GRIFFON: But if, I mean the other side of this is that in the DR report, assuming someone's looking at this report close enough, they may say I've got my husband's records here, whatever, and I know he had a dose in '45, and there's nothing on the sheet. And then the whole credibility issue comes up.

MR. SHARFI: There is a missed dose assigned in '45. According to the IREP --

MR. GRIFFON: So there is that side of it, you know.

MR. SHARFI: -- there is a missed dose assigned in '45.

MR. HINNEFELD: Okay, so there's a missed dose assigned.

MR. GRIFFON: Oh, the missed dose is assigned? Okay.

MR. SHARFI: There is a missed dose assigned in '45.

MR. GRIFFON: That's reassuring.

MR. CLAWSON: Mark, something I -- and this is a little off the record so bear with me here, but I --

MR. GRIFFON: It's on the record.

MR. CLAWSON: -- well, it is on the record. Ray, can you hear me? One of my questions is, I see them go through these and, okay, they're all of a sudden compensable, so we no longer do anything any more. We stop. It's okay. But we've heard from several people that have come in that one day they get a letter and all of a sudden were compensable. And then all of a sudden they change something, and now they're not compensable.

What is in the process for them to go back and say, okay, now we need to run this whole thing out or is it all of a sudden just lost? Or do they look at the thing and say, well, it's finished, but really it wasn't finished because they never continued to work the process out? They hit to where it was 50 percent compensable or more.

MR. GRIFFON: Yeah, I know what you're getting at because of the confusion on the public's end with this, you know, cases where

they've been --

MR. HINNEFELD: Yeah, I don't know the circumstances when someone would --

MR. GRIFFON: -- the POC changes on them, and it goes down when they a second cancer and things like that.

MR. HINNEFELD: Well, I can explain that. I can explain that.

MR. GRIFFON: We can explain it, but it's --

MR. HINNEFELD: I don't know the --

MR. GRIFFON: -- but from a PR standpoint I'm saying it's difficult to explain.

MR. HINNEFELD: Yeah. I don't know the circumstances when someone would get an initial letter that said they were going to compensated and a second letter that says they're not. And we never send those letters. We never send a letter to a claimant saying anything about their compensation. So if they're getting a letter from the Department of Labor that essentially changes their mind, the reason would be specific to the case, and I don't know what it would be.

The things I could envision would not be, this kind of issue would not cause that to

be incorrect. If, in fact, the Department of Labor decides, which they will do on review after we've sent a dose reconstruction to them, when their final adjudication branch looks at the case and determines it was developed incorrectly.

For instance, says the cancer diagnosis was wrong, they'll return that case to us and say the cancer diagnosis was wrong, that was originally developed incorrectly, was wrong. Please rework this dose reconstruction in order to correct, to use the correct diagnosis. To which case we would use the dose reconstruction that, we would do the dose reconstruction with the procedures that are up to date today when we get it back to be reworked.

If in this case, if we have a case where originally we had a POC of above 50 percent, and it met with a different diagnosis, it is no longer above 50 percent, we'll make sure that there is no shortcut taken in that dose reconstruction, and all the dose we can put in there is in there.

So from the situation you're

describing where a person is told first it's compensable and later on it's not compensable, while I can't speak about the specifics, the specifics of the case, what I can say with some confidence I don't think there would ever be a case where a dose reconstruction that was a partial dose reconstruction because it resulted in a POC above 50 percent, would actually remain in effect in that situation. If something changed such that it was no longer going to be that way, I'm pretty confident any mechanism by which that might occur, that case will come back to us for DOL rework.

MR. CLAWSON: And then you'd just --

MR. HINNEFELD: And then we would do it. We would do it with the procedures in place today and just like everything else, if it's going to be, if we can't get it to 50 percent, it's not going to be a partial.

MR. CLAWSON: Okay, I just wanted to make sure of that.

MR. HINNEFELD: I can't imagine any case when that would be a factor.

MS. MUNN: There are a lot of people who

have had their POC reduced --

MR. HINNEFELD: That happens a lot.

MS. MUNN: -- and that arises often. And one can understand that, but --

MR. CLAWSON: I just want to make --

MR. GRIFFON: It's legitimate, but it's hard to explain sometimes to the public.

I mean, I think that quite frankly, Stu, I think 108.1, I have NIOSH agrees; however, no effect on compensability. I don't think this gets at the data question because I think from what I'm hearing, the 40 millirem actually was in the tool. So it wasn't a matter of not looking for the dose record.

MR. HINNEFELD: It was 20.

MR. SHARFI: Twenty.

MR. GRIFFON: Or 20, I'm sorry, 20.

MR. SHARFI: It was identified by the DR.

MR. GRIFFON: And the other concern I had was alleviated because you said there was a missed dose put in that year. So I think, yeah, you could argue that there was a possible, you know, you could have done it out a different way and added that in, but it didn't affect compensability. So I'm just

going to say NIOSH agrees no effect on compensability. I don't think we need any more follow up on this. I don't think we need to spend our resources that way.

DR. WADE: Could I just ask a clarifying question? It goes to the presentation that Larry's supposed to make on QA/QC. We've had a whole bunch of things this afternoon, and we say a mistake was made. It didn't affect compensability. What do we do to see that mistakes aren't made? How does that work into the future?

MR. HINNEFELD: Well, do you want me to give Larry's presentation now?

DR. WADE: No, I think that's something that this group needs to consider. So, okay, so if Larry's going to speak to that, that's fine.

MR. HINNEFELD: I don't know. There's a meeting tomorrow, I think, for Larry to get together what he's going to speak about. I don't know that I can come here and give you a description.

DR. WADE: But see, I'm just uncomfortable as a citizen with a mistake was made. It didn't affect compensability. We move on.

There needs to be some process in place to see that we minimize the number of mistakes that are made. There needs to be some learning that's going on.

DR. BEHLING: I think we addressed that early on when we talked about some of these errors. Now you have to separate root cause. If it was a guidance document that was perfectly correct but misinterpreted by a single dose reconstructor, there's not much you can do.

If, on the other hand, the guidance document is ambiguous as was the case with TIB-0008 and -0010 because consistently the people were misinterpreting, then the corrective action is to rewrite the guidance document. So it's really a question of what is --

MR. GRIFFON: But in your first example there is something you can do to --

DR. WADE: Because you did it --

DR. BEHLING: Fire the guy who did the dose reconstruction.

MR. GRIFFON: No, but also you can try to minimize those by a certain peer review, I

mean certain processes.

DR. BEHLING: Yeah, internal QA.

DR. WADE: That's the issue.

MR. GRIFFON: That's the question. How much of that is there. Describe that to us.

MR. HINNEFELD: I think we should be careful about our expectation of no mistake, because I don't know that that has ever been our expectation in review of a dose reconstruction. If we had a 20 millirem, even if it were a mistake, in a case that was nowhere near compensability because we want to have a dose reconstruction done and out to that person, we may not even comment on that.

And I think it's important to have, when you look at, well, a mistake was made but it didn't matter. Or, for instance, there have been a number of findings where cases were overestimated more than the procedure would have implied that they should have been. And we pass those on because it was not our expectation that we would do it in a, you know, that that was something that was wrong. It was an answer that got the compensability decision correct.

DR. WADE: Right, see, there was a situation we just discussed where a mistake was made. Your internal system caught the mistake and made the judgment that there was going to be no corrective action. That's much more comforting to me than some of them where it was a mistake was made. It was found by this auditor. There's a difference there in terms of --

MR. HINNEFELD: What I'm telling you is, our internal system won't necessarily try to fix those mistakes.

DR. WADE: But how do we know the mistakes were made, and how do we eliminate mistakes?

MR. GRIFFON: Or minimize.

DR. WADE: Or minimize mistakes, that's --

MR. SIEBERT (by Telephone): This is Scott. I just want to point one thing out. We're still talking about 108.1, right?

DR. WADE: Well, we're talking generally.

MR. GRIFFON: Yeah, we're talking --

MR. SIEBERT (by Telephone): I know you're talking generally, but didn't 108.1 --

MR. HINNEFELD: It precipitated the discussion.

MR. SIEBERT (by Telephone): I maintain that there was no mistake made in this case. The dose was put into the tool. The tool indicated that you have to do something else with that dose. To be 100 percent accurate with it, the dose reconstructor made a clear and conscience decision because this ended up being a compensable case, not to do the additional work on that because there was no point. It would have only increased the dose slightly. So I don't maintain an error was made. I maintain a professional judgment that it was going to make no difference in the compensability decision was made.

DR. WADE: Right, I go back to the earlier one that I was going to comment on and didn't, but now that I have where it was supposed to be greater than, and we put in less than.

MR. SIEBERT (by Telephone): Okay, I agree wholeheartedly.

DR. WADE: A mistake was made. You know, do we say mistakes are going to be made, that's life? Or are we learning to see that fewer mistakes are made? And that's what Larry needs to --

MR. SHARFI: We're always updating our procedures trying to do clarifications.

MR. FARVER: Or are you tracking the mistakes so that you find out are there recurring mistakes? Is a certain dose reconstructor making the same mistake? How many times has this mistake occurred so that you can correct recurring mistakes?

MR. SHARFI: I think that's always our goal to provide a better product.

DR. WADE: I hope that that's what Larry's going to talk about, an active QA/QC program that learns from its mistakes to do better.

I'm sorry. I didn't mean to get into that.

MR. GRIFFON: Okay, 110.1. One-oh-nine had no findings, 110.1.

MR. FARVER: Does not account for all the missed photon dose. This has to do with the exchange period that was assumed.

MR. HINNEFELD: Yeah, and there's also, I believe, a question here of whether a blank is a read zero or a blank means not monitored. Isn't that part of this as well?

MR. FARVER: Well, let's go to the case

here. I know that's come up before if not here.

MR. GRIFFON: You know, for 110 I had NIOSH to provide a response on --

MR. FARVER: That wasn't the case in this one, but I know that's come up before, blanks and zeros.

MR. GRIFFON: Yeah.

MR. HINNEFELD: One of the things that we have indicated we needed to provide -- well, the note I made -- was that there seems to be inconsistent treatment of exposure records that don't have a value, you know, they're blank. In other words is it a read badge that was zero or was it a not monitored cycle.

MR. FARVER: I know that's come up. I'm not sure if that's this case or not.

MR. HINNEFELD: I know that's my note on this one. And that we owe a statement about in what situation or what information base do we use. When do we decide a blank is unmonitored? When do we decide a blank is a zero? So that's something that we are expected to provide based on our earlier discussion.

MR. GRIFFON: That's consistent with my notes, too.

MR. HINNEFELD: That's the note I made.

MR. GRIFFON: I had something to the effect of why, yeah, basically what you said.

MR. FARVER: Yeah, I'm not thinking that has anything to do with --

MR. GRIFFON: Why LOD over two? Why not consider coworker model or other approach to fill in the gaps? Yes, that's the same kind of. So the net result here is NIOSH is going to provide us with more follow up on this.

DR. MAURO: You have procedures for dealing with when it's zero, and when it's blank. And if it's blank, what process you go through to determine whether that blank is something that needs a coworker --

MR. HINNEFELD: There's probably, it's probably a site profile issue.

DR. MAURO: And you do have that.

MR. GRIFFON: Yeah, I think it's a site specific issue, John, right, because different sites print out things differently or record things.

DR. MAURO: So, yeah, it exists. And then

when you encounter it in a real case, it's not always apparent whether or not that was just an oversight and wasn't dealt with explicitly and consciously or, you know, because it might have been. In other words it might have been done correctly.

But one of the problems I think we run into very often is that we're not always quite sure of the rationale behind what was done. And after the fact you could come back and say, oh, no, we had a good rationale. It just wasn't written down. Or as it was pointed out by Lew, well, yeah, we did make a mistake; however, the mistake had no bearing on the outcome.

So, I mean, I think that's where we are. We need to be able to parse these two kinds of things. And regarding to the latter, I guess it is important to say what controls are in place to corrective actions that these mistakes are made even though in this particular instance it wasn't important.

MR. FARVER: Yeah, apparently for a certain time period the doses and zero were entered into the worksheet. But after 1966,

apparently, it was doses or blanks.

MR. GRIFFON: Right.

MR. FARVER: And the program didn't count the blanks. It counted zeros. So no missed dose was assessed because there were no zeros to count.

MR. GRIFFON: Let's leave it at, you know, you're going to provide follow up on this, right? It might turn out that it's more of a site profile issue. I don't know, but I think at this point I'd like to keep it on this action here.

110.2, is that, this is now neutron, missed dose for neutrons, right? But this might be a work location issue more than a --

MR. FARVER: I believe, yeah, this is --

MR. GRIFFON: I have SC&A-slash-NIOSH to further investigate. I guess this is getting down to the work, where the individual worked, work history versus --

MR. HINNEFELD: Yeah, and SC&A provided additional information in November in response to our initial response, a fairly extensive list of information and the reasons why they believe this person could very well have been

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MR. FARVER: At least partially.

MR. HINNEFELD: So we owe a response. Either say, yeah, I guess you're right or our reasoning why --

MR. GRIFFON: So it's back in your court?

MR. HINNEFELD: Yeah, back in our court.

MR. GRIFFON: And 110.3?

MR. HINNEFELD: We've never provided an initial response on that one yet. We still owe an initial response on that one.

DR. BEHLING: Stu, is this associated with a whole body count?

MR. GRIFFON: 110.3, I'm not sure what that, it's talking about fission products.

MS. BEHLING (by Telephone): I believe that's the issue of the missed fission products and only assuming the most, the radionuclide that gives the highest dose for missed fission but ignoring all of the other radionuclides that could have been considered missed also. And I believe, if I'm not mistaken, NIOSH was going to develop a workbook to take care of this.

MR. GRIFFON: Yeah, is this, now that you've

developed a fission product tool to --

MR. SHARFI: There is now, OTIB-0054 covers fission products. We're in the process of resolving whether or not this is, it's a general feeling that this still overestimates what we'd get if we used OTIB-0054. I think we're in the process of providing documentation to show that. This is the process. It's in the TBD. It's the same thing that's done at Savannah River. You choose the highest. You choose the radionuclide for missed dose. I would give the most dose to the organ and assume it's all packed. When you start applying these ratios we tend to find that really, it really starts bringing down your dose, not increasing your dose.

MR. GRIFFON: Okay, but you'll provide more of a response for this particular case.

MR. HINNEFELD: We'll do a response on this.

MR. GRIFFON: 111.1, photon dose uncertainty.

MR. HINNEFELD: I think I know what, I think this is that the dose was entered as a constant.

MR. GRIFFON: I have SC&A agrees with your response. So I think we're okay with that one unless SC&A has rethought their position?

MR. FARVER: No, that's fine.

MR. GRIFFON: 111.2, and I have NIOSH agrees approach has been modified.

MR. SHARFI: That's the use of colon.

MR. HINNEFELD: That was the colon, not the internal dose.

MR. GRIFFON: Oh, yeah, this is an old one.

MR. SHARFI: Colon, OTIB-0002.

MR. GRIFFON: This is OTIB-0002?

MR. SHARFI: It's using the colon for the OTIB-0002 even though the organ of interest isn't the colon. But the colon gives the largest dose not using the organ specific. This is back when the tools were just fitted for what I call a dose.

MR. GRIFFON: Approach has been modified and it's fair to say this claim was assessed prior. It's fair to say this is overestimating, right?

MS. MUNN: Closed?

MR. GRIFFON: Yes. Approach has been modified, no further action.

112.1, OTIB-0018.

MR. HINNEFELD: Oh, is this the same as we ran into earlier where they used OTIB-0018 in a case where because we had told them get it done.

MR. SHARFI: This is a comp case with OTIB-0018.

MR. GRIFFON: So this was, does anyone remember the first case we had on that? Was it number -- I just want to reference back so I can copy the finding. 103.1, right? 103.1?

MR. FARVER: 103.1.

MR. GRIFFON: Is the next one, the next one's the same, right? See 103.2 or whatever? I think that's the same, right?

113.1?

MR. HINNEFELD: It looks like an OTIB-0008, right? 113.1 and 113.2 are OTIB-0008 that show that procedure's been revised?

MR. GRIFFON: 113.1, oh, yeah, revised OTIB-0008, right. I have NIOSH agrees. OTIB-0008 has been revised. And is there, has OTIB-0008 been reviewed by SC&A or is that --

DR. BEHLING: I looked at it informally.

MS. BEHLING (by Telephone): We looked at

it, but we haven't been asked to look formally at OTIB-0008 and OTIB-0010. We talked about this earlier.

MR. GRIFFON: So procedures review might consider that. I thought you said you thought you did consider it.

MS. MUNN: We've gone through eight, ten.

MR. GRIFFON: You haven't gone through eight and ten. She said they haven't been tasked with that.

MS. MUNN: No, I know they haven't been tasked with it, but we have discussed it in the contents of other related OTIBs. No, they haven't been tasked with it.

DR. BEHLING: But I have looked at it, and at this point I think the problem has been resolved. And there would be very little to do in light of that other than, unless you wanted to make it a PER something where you go back and assess subsequent cases that you would determine whether or not the new version has been basically properly interpreted. There's no other real way to do this. I looked at it, and I'm satisfied with it.

MR. GRIFFON: Oh, okay, I mean I'm just

looking for formality as opposed to informality. I'm not trying to, I'm not accusing anybody of not looking at it.

DR. BEHLING: No, the formality would probably require somebody like myself to look at it and say how did the old misinterpretation, how did that happen. And then would it be likely that the revised version would again be misinterpreted in the same fashion. And I think on an informal basis I did that. And it would be a subjective assessment on my part to do so, to say it's okay, and I think it is okay.

MR. GRIFFON: Well, I mean, I'll dial back to this morning when we were talking about conclusions from matrix four and five, and we said in one of the conclusions that TIB-0008 and -0010 resulted in several of the findings and were revised but not reviewed so now it's kind of hanging out there. Now you're saying I looked at it.

DR. BEHLING: Yeah, I looked --

MR. GRIFFON: I don't want to give a mission to --

DR. MAURO: We've never been mandated to go

back. I think we have to be formal and say, you may say just take a look --

MR. GRIFFON: Yeah, to say it to the Procedures group that it's done. Because I mean that's one of our concerns in all this is that if we refer it here to the Procedures review group, then it's, we just want to make sure it's closed out officially or whatever.

DR. BEHLING: But this process would probably require to validate that subjective interpretation would mean going backwards in time and saying, okay, when was this revised TIB-0008 and -0010 issued, and then how many maximized doses thereafter were done using this one and did anyone, in fact, make a similar mistake as they did the first go round. That's the only way I would validate --

MR. GRIFFON: Well, I don't know if it would involve that. I mean, it may just be you coming forward with best judgment is this, and then having a discussion in the Procedures work group.

DR. MAURO: Process wise what I'm hearing is, I mean it's interesting, the linkages. A

case is reviewed. It goes back to, well, there was a problem with one of the procedures. You go to the Procedures group, and let's say it makes it in as an issue that needs to be looked at. We're authorized to look at it. We come back and, yeah, it looks like it's fixed. But now your next step is, okay, the procedure is fixed and now it reads clearly, unambiguously. If, in fact, this procedure is followed everything will be fine. But what I hear you saying, but wait a minute, you're not done yet. That means that there are a bunch of cases now that may have been done incorrectly will now have to be redone. But that becomes a PER.

DR. BEHLING: No, no, no.

DR. MAURO: Now that's what I heard you say.

DR. BEHLING: That's not what I'm saying, John. The way to validate my subjective statement that says I read the first TIB-0008 and -0010, and I fully understood why it was consistently misinterpreted. There was no question in my mind, but when I looked back, I said, god, these things are, here we go again one after the other. And when I looked at the

writing and the guidance, it was obvious to me why people couldn't understand what they were supposed to do. So now it was a question of ambiguity that was now apparently addressed in the rewrite of TIB-0008 and -0010. But the question may still come up and say, well, maybe there's still a fraction of people out there who, in spite of that rewrite, will still misinterpret the intent of this guidance document. And the only way you could validate, I mean, I could think for myself, now, if I was a dose reconstructor and for the first time I saw this would I misinterpret it? Well, again, that's a subjective statement I can't support unless I go back to dose reconstructions that were done post-dated after the revision to determine whether or not they, in fact, had done --

MR. GRIFFON: Well, I think you might have just addressed it, Hans, by saying I would accept that if the Procedures work group came back and said SC&A reviewed it, and we believe that the way it was reworded; however, we recommend to the Board that you might want to select some cases --

DR. BEHLING: Yeah, a maximized case that post-dates --

MR. GRIFFON: -- beyond this point that used TIB-0008 and -0010 to verify this.

MR. SIEBERT (by Telephone): Correct me if I'm wrong, but the interpretation that was being done incorrectly would have overestimated further, correct?

MR. HINNEFELD: Scott, we had that discussion awhile ago, and we can't decide.

DR. BEHLING: I think it didn't because --

MR. HINNEFELD: Let's not get into it.

MR. GRIFFON: But my only concern here was not to lose things. So I think so far I thought what was happening this morning was that it was kind of being turned over to the Procedures work group. And that doesn't mean like turning it over there may mean a discussion in the Procedures work group and SC&A may come forward with the same, you know, we've looked at this, and, yes, this is where we stand, you know? I don't know that it means another 200-hour task to look at that. But I think we've had some before that deferred it to the Procedures work group. So

I don’t want to just like dismiss it here and lose it. Does that make any sense?

(no response)

MR. GRIFFON: I’m just going to leave it that way for now is that it’s been referred to your group, and you can handle it.

DR. MAURO: Well, where do you want to bring it after that. I mean, that’s up to the Procedures group, how far you want to go with that.

MS. MUNN: And what do you want --

MR. GRIFFON: Because what Kathy was telling me in conversations leading up to the letter was that, no, we haven’t reviewed this. And I think what she was saying is that we haven’t been officially tasked to. And now I think I want at least an official SC&A response. I think that’s just out, maybe it’s just a formality, but I think we need to do that, and that should happen in the Procedures work group I think.

MS. MUNN: So you’re going to make this happen by putting that statement in your program action.

MR. GRIFFON: Well, by just referring it to

the Procedures work group, yeah. Does that make sense?

MS. MUNN: Yeah.

DR. WADE: It doesn't mean the Procedures work group is going act upon it. If you're referring it to them, now it's within their judgment as to whether or not that warrants a look, given the other things on their plate.

MR. GRIFFON: That was a tough one.

MS. MUNN: I already have notes to check from what we were discussing earlier, TIB-0008 and TIB-0010 revisions, to make sure that the concerns that we talked about were addressed in the new procedure. Do you want more than that?

MR. GRIFFON: No, I think that's it. That's it. And if we discussed it, you know, we could have the same discussion basically, and I think if it was the opinion of the Procedures work group then it's, you know, then we're done with it.

DR. MAURO: I've got a question of Kathy. Kathy, are you on the line?

MS. BEHLING (by Telephone): I'm still here.

DR. MAURO: The conversation we're having

right now has to do with linkages between the Dose Reconstruction work group and the Procedures work group. I know that right now you're in the process of putting together a matrix, the ACCESS matrix, and loading it for the Dose Reconstruction. And one of the conversations we had is that there would be a link. I guess my question is that are we moving in a direction where the kind of interaction we just heard would be picked up in this new matrix that would be at play in some time in the future for the Dose Reconstruction work group?

MS. BEHLING (by Telephone): Yes, most definitely. That is a key component that I have Don working on to ensure that all of these databases are linked and, in fact, we talked to the Procedures work group that anything that's going to end up coming to the Procedures work group from a different venue will be marked as, in the status initially as imported, and imported from the Task Four Dose Reconstruction Subcommittee, so, yes.

And not to belabor this TIB-0008 and TIB-0010 issue, but it is a formality issue,

and that's the only thing I was addressing. What we had discussed in the past is if there was a procedure change made based on a finding from SC&A and the only thing that was changed in that procedure is to address our finding, then we didn't have to go through a formal review process again.

We would simply, the Board would have SC&A look at that again and say do you feel that this does address this particular issue. But if NIOSH published a procedure stating this is a complete rewrite of eight and ten, then the formality that we had discussed on new procedures was that NIOSH, or that the Board would assign that procedure back to us.

But Hans is correct, both Hans and I looked at both of these procedures, and we feel that the ambiguity that was built into this that caused the problem has been corrected. But it's just that those two procedures were issued as complete rewrites, and that's just the formal approach that we had discussed using in Task Three.

MR. GRIFFON: So I think we should be consistent for complete rewrites and go

through to the procedures review. It doesn't have to be an extended thing I don't think, but just for --

DR. MAURO: We're in a transition period that's very important then. The matrix that we're working from right now, and let's say once it's completed, it's going to be an important document because it's going to represent the transition from the current matrix with all of the information we're talking about. I'm assuming that it's this one that's going to be the document from which we will move into the new matrix. So this one's going to be expressly important to capture all this stuff.

MR. GRIFFON: Right, which I'm hesitating to, I hope we don't make it more complicated than it is now. I hope the database streamlines it, but so far I'm not sure of that.

Okay, 113.2 is the same. Point three I put NIOSH agrees but the procedure's been modified and no effect on this case or is that appropriate for that one?

MR. HINNEFELD: Yes, if I'm not mistaken,

this was a medical dose like of the skin or something for internal --

MR. SHARFI: Looks like some testing for the prostate which now we'd use the bladder. So it would only end up reducing the dose if we chose the correct organ. But back then we used the testes. I think OTIB-0005 has been updated to remove the testes and use the bladder now.

MR. GRIFFON: Just catching up. 113.4? I have overestimate and non-compensable claim.

MR. HINNEFELD: Yeah, the way I read our initial response this was, in fact, a mistake. The wrong suite of, this is what, TIB-0002? The wrong suite of TIB-0002 radionuclides was used for the site. It used reactor non-uranium which it should have been uranium non-reactor.

MR. FARVER: In the dose calculation workbook you can select boxes, whether it's reactor non-uranium or non-reactor uranium, and it looks like the incorrect box was checked which calls up the improper radionuclides.

MR. HINNEFELD: But the error resulted in a

higher dose than the correct selection would have made.

MR. FARVER: And I guess the concern here is what if it didn't.

MR. HINNEFELD: I agree. It's kind of what Lew was talking about awhile ago.

MS. MUNN: So what can we say about that?

MR. GRIFFON: Well, just NIOSH agrees. No effect on this case since it was an overestimating.

MR. FARVER: But is there some way that you would check that in, if it happened today, if someone used that workbook, is there something in your QA process that would say, oh, they checked the right facility?

MR. HINNEFELD: Well, I can't explain how this got here because it should have been caught. I think it's hard to address those kinds of things in a DR review, individual DR review. I think they're better addressed outside the individual DR review in the kind of thing that's going to be talked about and maybe follow-on discussions for that as well.

DR. WADE: That's right. All of this goes to Larry's presentation which should, when you

write the letters, for example, one of the things that comes through the letter is that there are lots of little mistakes and that needs to be addressed in sort of a holistic way. And that's what Larry's been tasked to do, but you guys will listen carefully to what he says.

MR. GRIFFON: Of course.

All right, 114.1.

MR. FARVER: Uncertainty was omitted for a year.

MR. GRIFFON: So NIOSH agrees but the approach used ended up in an overestimated dose, right? Is that right?

MS. MUNN: It looks like one offset the other.

MR. GRIFFON: Yeah, I mean, I put higher dose would have been assigned than the current OTIB-0017, right? I think that's, but still the mistake was made. I think you're acknowledging that the mistake was made.

MS. MUNN: There's no further action we can take.

MR. GRIFFON: Right.

NIOSH failed to account for all missed

photon dose, 114.2?

MR. FARVER: We haven't received a response.

MR. GRIFFON: Yeah, there's no initial response.

MR. HINNEFELD: No initial response.

MR. FARVER: But basically this comes down to counting zeros for missed dose. I think we come up with 19, and they came up with nine, so it's counting zeros.

MR. GRIFFON: But there's a blank there so NIOSH will respond on that one.

MR. HINNEFELD: Yeah, we owe an initial response on that one.

MR. GRIFFON: 114.3.

MR. HINNEFELD: Well this I believe SC&A provided a fairly extensive amount of written material on this in November, and so we have not provided any kind of response.

MR. FARVER: Part of the concern is, number one, NIOSH has in the original Report 33, talking about neutron doses at Y-12. And one of the statements in there basically says that we need to receive a neutron dose report 1962. It's unlikely they received any neutron exposure. And I believe that was primarily

the basis for this why they did not assign neutron exposure.

What has come out, and it's in our response, is depending on which document you look at you get several locations where a person could be exposed to neutrons. The site profile I think was three, and then there were other documents even like Report 33 that lists six facilities.

So it would be nice to have a combined, everything in one spot. Maybe have an update to the site profile where all the information about neutron exposure is contained in general. Now for this specific case it appeared to hinge on the Report 33 statement about prior to 1962, then they were correct in not assigning dose.

MR. GRIFFON: I put you're going to follow up on this, NIOSH is going to follow up on this, but also that this has come up before, the site profile question. And I think we already deferred it to the site profile review, which I think I chair that work group which hasn't met in probably two years.

But we have some outstanding site

profile issues on that so that question of the locations and where neutron exposures could be at Y-12 came up on other findings. I know we deferred it to site profile. But for the case specific I think NIOSH is still going to give us a further response so we'll leave it at that for now.

114.4.

MS. BEHLING (by Telephone): I believe I had provided some additional information in the November report that I wrote on this one. And I think the bottom line was that SC&A concurred with NIOSH's response.

MR. FARVER: Correct.

MR. GRIFFON: Okay, we closed it.

114.5.

MR. FARVER: NIOSH did not properly address all CATI information concerning medical x-rays and rad incidents. They did address the rad x-rays. The incidents is a different story. They replied that there were a number of bioassay results throughout the employment and uranium's long lived and would be detected in the bioassay. They also go on about the external dose for incidents will be supplied

later. We haven't received that.

MR. GRIFFON: I had SC&A to review internal. NIOSH to submit external.

MR. FARVER: Right, I have some concerns about their internal because they didn't use the person's bioassay data even though they state that there were many bioassay results they didn't use that data. They used coworker data, and that's part of also of the response that Kathy e-mailed.

MR. HINNEFELD: Yeah, we have a fairly long set of information from November that requires response in addition to the external.

MR. FARVER: The gist of it is there was a lot of bioassay data that wasn't used. Coworker data was used instead. Now, is that representative of that person's data? Is that a proper thing to do? And I guess our position was, well, it conflicts with the purpose of the coworker data, it's a misuse, and also it's not appropriate because the worker's data was not, we do not believe was consistent with the coworker data.

DR. MAURO: When you're in a situation like this where you have real data, some real data,

and you have a coworker model, if I recall, one of your procedures had you do both and the one that's limiting is the one you use. Or do you not do that?

MR. HINNEFELD: I believe our preference is to use the individual's record.

DR. BEHLING: It's part of the regulations, the higher --

MR. HINNEFELD: It's the higher queued data. It's the most relevant --

DR. BEHLING: -- you're almost forced into using the real data if it's available.

MR. HINNEFELD: There may be sites where you have a fairly limited amount of bioassay data. You build a model based on that where you essentially, for instance, if you build a dose model based on a, for a one-size-fits-all dose model for a site, and the claimant happens to be one of the people you have bioassay data for, and if you use his bioassay data and you end up lower than the one-size-fits-all, just for that case we may very well do the one-size-fits-all anyway.

I think we would do that in some of those cases because there's always this

question about do you have this person's entire bioassay records. So but normally from a DOE site, where you get a bioassay record from a DOE site and the site has a history of providing what seems to be a reliable record, then what we expect is to use the individual's record.

MR. GRIFFON: Okay, we're at, I don't know if anyone's -- go ahead, Wanda.

MS. MUNN: Well, I was -- So where are we exactly with this?

MR. HINNEFELD: Oh, we owe additional information.

MS. MUNN: More data.

MR. GRIFFON: Follow up from NIOSH.

MR. HINNEFELD: Follow up from the November write up as well as the original thing we promised about the external.

MR. GRIFFON: External, right.

I'm on 115.1. I'm looking at the clock. Do people have flights tonight? I know I'm staying tonight for a change.

DR. WADE: And Stu's here for tonight.

MR. GRIFFON: I think we can get through, I'd still like to get through in a half hour

or so if we can, at least our initial cut through, so it looks like we might be able to do that. So instead of taking a break, if that's okay, I'll just -- is that okay with everybody?

(no response)

MR. GRIFFON: The air is coming back on so we should be refreshed. All right, 115.1.

MR. HINNEFELD: This looks like a NIOSH agrees but the effect doesn't change the outcome of the case.

MR. GRIFFON: Right, but this is another error made question, you know, the QC question, right?

116.1.

MR. HINNEFELD: Sixteen-one and 16.2 are OTIB-0008s.

MR. GRIFFON: OTIB-0008s, so we just had our discussion on that.

MS. MUNN: I think it's part of --

MR. GRIFFON: Yeah, let's not do that one again.

116.3.

MR. HINNEFELD: This looks like OTIB-0002 colon, is that what this is?

DR. MAURO: It's medical.

MR. HINNEFELD: No, is it medical? This is probably just like selecting a scanner or something for a case where it didn't really, shouldn't have been scanned. It'll take me a minute. I can find it.

MR. SHARFI: What number is it?

MR. HINNEFELD: 116, 116.3.

MR. GRIFFON: And it's no effect on the case, is that --

MR. HINNEFELD: Yeah, it's overestimates and there's no need to --

MR. GRIFFON: The procedure's been revised, right? The procedure's been revised, correct?

MR. HINNEFELD: Yeah, we've instructed -- this is that issue. We've instructed ORAU that, listen, it's okay to overestimate if there's a clear efficiency, but don't just go be choosing the highest organ --

MR. GRIFFON: It's not really the procedure. It's a policy that's been revised, right?

MR. HINNEFELD: Yeah.

MR. GRIFFON: 116.4.

MR. HINNEFELD: Yeah, this is the internal. This uses the colon and OTIB-0002.

MR. GRIFFON: And that would have resulted in a higher dose, right? You selected the most conservative, yeah.

MR. HINNEFELD: The colon is the highest so had we chosen the actual target organ it would have reduced it.

MR. GRIFFON: Okay, next -- I'm trying to type as fast as I can. 117.1, TIB-0033.

MR. HINNEFELD: This looks like similar to TIB-0018 for compensable.

MR. FARVER: Yeah, basically I have that you received a letter to process some as quickly as possible, so you did so, something to that effect.

MR. GRIFFON: So this is a, this approach being used for a compensable claim? Is that the issue? Or what's the --

MR. HINNEFELD: And it's TIB-0033 is apparently not included in the references. It is a compensated case.

MR. GRIFFON: Wait a second. So the justification here is that the dose reconstruction was completed in May of 2005, and the TIB was published in April. Wouldn't that be, it should have been referenced,

shouldn’t it?

MR. HINNEFELD: Yeah.

MR. FARVER: Yeah, I have in our response that OCAS issued a letter to O-R-A-U-T to complete dose reconstructions that were referred to NIOSH by DOL for dose reconstruction two years or more from the date of letter. The letter specified O-R-A-U would use all currently available information and techniques making science-based dose estimates and where necessary and appropriate use of claimant favorable assumptions to fill in the gaps. So there’s a letter issued basically saying get these moving and use your best judgment.

MR. GRIFFON: So I mean this was a procedures mistake though. They should have used TIB-0033, right?

MR. HINNEFELD: Yeah.

MR. GRIFFON: They went and referenced fractions that weren’t consistent with TIB-0033 even though it was published.

MR. HINNEFELD: Yeah, sounds like they used fractions that weren’t consistent with TIB-0033.

MR. SHARFI: Given a person's job title you'd have ended up using OTIB-0018. So there's no grading of this person.

MR. HINNEFELD: But what did we assign though?

MR. SHARFI: He fits in the high category though, so you can't, he's someone who should have been monitored. So if he falls into that high category, there's no reduction of dose. Based on OTIB-0033 it's going to tell you to use the form in TIB-0018. So there's no grading of this particular claim. Even though it compensated the person, which was used because of that direction --

MR. GRIFFON: That's different than this tortured response here. I mean this sort of looks like explaining why, even though it was published, we didn't reference it, and you know, it doesn't say what you said.

MR. SHARFI: If there's no grading, then there's no use of, there's no reason to reference a document that's really not being implemented.

MR. HINNEFELD: Well, this I guess it looks like it was only applied for 25 percent of the

employment period so there was essentially a truncation of it to avoid this unusually, startlingly high dose but still was compensable at a time when the instruction was get these cases done by making these assumptions. If it's compensable, so be it. So it's essentially the same issue that we addressed earlier, that they truncated this.

DR. MAURO: Yeah, 63 percent in this case.

MR. HINNEFELD: This was 25 percent. So it didn't actually utilize the fractions from TIB-0033 which are 50 percent and ten percent, but he just stopped it. So he used the full TIB-0018 dose rate but only for a portion of the employment period which was --

MR. GRIFFON: And that's a savings that's efficient? I mean and that saves work?

MR. HINNEFELD: Well, what it did at the time was allow this case to move forward. There was no way to do this case with the technical documents at hand. If TIB-0018 had been restricted to non-compensable cases, there was no way to do this case.

MR. GRIFFON: That was the 25 percent employment thing.

MR. HINNEFELD: That was enough to --

MR. SHARFI: It was just enough to get--

MR. HINNEFELD: -- get him compensated so the dose reconstructor stopped it --

MR. SHARFI: -- that's where he stopped.

MR. HINNEFELD: -- like earlier but --

MR. GRIFFON: I guess it's the same version I had before.

MR. HINNEFELD: -- didn't give 63 percent.

MR. GRIFFON: That saved work how? How does that --

MR. HINNEFELD: It didn't save work so much. It allowed the case to be done in response to the letter.

MR. GRIFFON: And it made the dose look more, not out of bounds high.

MR. SHARFI: We just gave it enough just to get over the 50-something percent and that's when we called it done. But I mean, in this case even OTIB-0033 says for people with routine exposure potential you use OTIB-0018. You could, I guess, reference OTIB-0033 to argue why you default to TIB-0018, but really --

DR. MAURO: It does do that?

MR. SHARFI: Yeah.

DR. MAURO: I mean there are circumstances when 18 could go as a realistic case for the purpose of compensation.

MR. SHARFI: Back then for this two month period where we took that, trying to deposition all these old cases --

MR. GRIFFON: I guess I'm not necessarily arguing with what you're saying, Mutty, but this response here in the matrix is different than what you're saying. And I think maybe it would be better to replace what you said into this because this seems like a very convoluted explanation of why it wasn't referenced. To me anyway you said it succinctly, and if that's the case, I think you should say that in your response.

MR. HINNEFELD: Okay, I made a note that we'll provide a revised initial response.

MR. GRIFFON: Modify your response? All right, I think that would be much clearer.

Is that agreeable, John, SC&A?

DR. MAURO: Oh, yeah.

MR. GRIFFON: 118.1.

MR. HINNEFELD: We haven't provided initial

responses on any of the 118s.

MR. GRIFFON: Yeah, we're still missing those responses. I didn't know if you put something in your matrix that I didn't have. So it's all through 118.7 we're still holding up on those.

119.1, this is a Mound case. I have agreement, no effect on case is the note I have. It's a compensable underestimate, I believe.

MR. HINNEFELD: Yeah.

MR. GRIFFON: So SC&A agrees with NIOSH's response? I'll give them a second to look this over. I mean, if you want time to, you don't have to respond on the fly either. I mean, NIOSH is re-evaluating several, if you want to look at this closer or whatever.

MR. FARVER: Well, I'll agree with -- we've looked at this. I know we have.

MR. GRIFFON: I had agreement before in my notes.

MR. FARVER: And I know we've discussed this.

MR. GRIFFON: Kathy, do you have any recollection on this one?

MS. BEHLING (by Telephone): It's getting late in the day here, and I don't recall this one.

MR. GRIFFON: I mean, I have my note -- why don't I just put a hold on it because we do this at the end of our meetings sometimes. We rush through things, and we regret it. So let's just say SC&A will take a re-look at this. We think we have agreement but come back to us at the next meeting.

MS. BEHLING (by Telephone): Okay.

MR. GRIFFON: 119.2.

MR. FARVER: Looks like a typographical error. And this is where instead of 1.8 rem, it's 183 millirem that gets entered. It's a lower dose.

MR. GRIFFON: So this is again a QA question. It didn't affect this particular case, right?

MR. FARVER: Because this would have been compensable.

MR. GRIFFON: Yeah, it's compensable, yeah. And 119.3. Almost there.

MR. SHARFI: It refers you back to 19.1.

MR. HINNEFELD: What our response says is

that the origin of the comment for neutrons is the same as the origin for comment for photons that our discussion addresses.

MR. FARVER: And what that has to do is just placing a person in a building for a certain time period.

MR. HINNEFELD: Yeah, and how does that influence the --

MR. FARVER: I think the original DR said something to the effect of if you can't really place them in any place so we're going to assume such-and-such a building.

MR. GRIFFON: I'm going to let you re-evaluate that with point one, right?

DR. MAURO: As part of point one.

MR. FARVER: But that's the gist of it, a person's location.

MR. GRIFFON: 120.1, the last case. Is that right? We didn't do 121, did we? No, but this has six findings on it. So 120.1 is a best estimate Mound case. The first one I have NIOSH agrees, will review boilerplate language.

MR. FARVER: Oh, this has to do with the DCF effective; it has to do with their wording.

They say they use an effective DCF, and they didn't. And you go back and look at the original finding, and this covers 120.1 or 120.2.

MS. BEHLING (by Telephone): I believe this is a table that's included in the NIOSH dose reconstruction report in which they, as Doug has indicated, they identify an effective DCF value, but that's not the actual value that they used, correct?

MR. FARVER: Correct.

MR. GRIFFON: Well, for 120.1 I have NIOSH agrees and will review the boilerplate language, which I guess would be that language.

MR. SHARFI: We report mode DCF but this claim was crystal ball so it uses the compilation of the distribution not just the mode. But for reporting per sectum (sic) you can't report everything so we'll report the mode DCF even though it's applied as a distribution.

MR. FARVER: It's a wording.

MR. GRIFFON: It's a wording thing, yeah. So I think we have agreement, and it's just a

modification in the --

MR. HINNEFELD: We'll revisit the wording. I think most times nowadays the dose reconstruction is a little easier to understand. And some of those tables with effective DCFs. I remember seeing them, but I don't think we use them that much any more.

MR. GRIFFON: And it's the language in the DR report part.

MR. HINNEFELD: Right.

MR. GRIFFON: 120.2 I don't think is a language question. It's the other, is it? I think that's a different...

MR. FARVER: No, it's the same thing. 120.2, is that the one we're after?

MR. GRIFFON: Yeah.

MR. FARVER: It falls under the same description, the same justification.

MR. GRIFFON: Well, I have NIOSH assumes all dose in one badge and applies it. And I also have review adequacy of annual data in site profile review. Dosimeter uncertainty applied to annual summation, right? Is that what's being discussed here?

MR. HINNEFELD: There's a hint of that in

the response, but I'm really having trouble sitting here getting my head around this.

MR. GRIFFON: I know. I'd like a little clearer explanation on this one. Maybe we can revisit this one.

MR. FARVER: We can revisit that. It won't take --

MR. GRIFFON: I mean, I don't know. Do you have to, you might have it all here, Stu, but maybe we just can't discuss it at 4:45. I've got to look back at the, you know.

MR. HINNEFELD: Our response seems, shall I say, turgid. I think it could be explained a little better.

MR. FARVER: My guess is it has to do with the crystal ball where you calculate --

MR. GRIFFON: I think that's right. I have these little notes, but I can't make heads or, you know.

MR. SHARFI: I'm not sure totally how much clearer you can make this without understanding how you crystal ball and propagate errors to Monte Carlo because that's really what this is discussing.

MR. GRIFFON: Fine, it just might

necessitate us going back to the case and looking and being comfortable with it.

MR. SHARFI: Are you looking for us to provide additional response or --

MR. HINNEFELD: I'll let you know what I'm looking for.

MR. GRIFFON: Yeah, I don't necessarily --

MR. HINNEFELD: When I read it, and I'm struggling with the response, what it means, I'll let you know.

MR. GRIFFON: So NIOSH is going to just, I'll put reviewing, you know, just to review, not to provide further response but NIOSH is reviewing.

MS. MUNN: Tell us what this one means.

MR. GRIFFON: Right, right, 120.3.

MR. FARVER: That's going to be the --

MR. GRIFFON: Oh, this is a review of language --

MR. FARVER: -- forerunner to the photons.

MR. GRIFFON: -- this is the 120.1 same response I have. NIOSH will review the language in the DR report. And the other one's going to be the same as 120.2, right? Yeah.

MR. FARVER: Correct.

MR. GRIFFON: These go fast this way, which is NIOSH is just going to review 120.2 and four together. They kind of go together.

MR. SHARFI: One's photon and one's neutron.

MR. GRIFFON: And 120.5, inappropriate internal dose models.

MS. BEHLING (by Telephone): I have a note on 120.5 that NIOSH will provide IMBA runs. Does that make sense?

MR. FARVER: I believe they already did. We reviewed them.

MS. BEHLING (by Telephone): Okay.

MR. FARVER: I believe we did.

Do you know if we did or not, Stu?

MR. GRIFFON: I haven't seen a note, Kathy.

MS. MUNN: So the upshot of that is?

MR. GRIFFON: Well, to make sure we have the IMBA runs. I don't know that you've ever got them.

MR. FARVER: I think the gist of the finding was that the dose reconstructor normalized the data when he shouldn't have, the bioassay data. In other words if it's already 24 hours samples, you don't need to convert it to

activity per day because it's already in activity per day.

MR. GRIFFON: Well, have we seen that? Have the IMBA runs been -- first things first, the IMBA runs were supposed to be provided. Are we sure that they've been provided?

MR. FARVER: No.

MR. HINNEFELD: I am not sure.

MR. GRIFFON: So maybe we can just check on this a little further. And then at the bottom of the case I think you indicate basically that it would have resulted in a higher dose but not affect compensability, right, is sort of the bottom line?

MR. HINNEFELD: Yes.

MR. SHARFI: Yeah, reading the paragraph above it, I think that's what they're saying.

MR. GRIFFON: Why don't we just say NIOSH is going to provide IMBA run, and we'll go from there.

The last one I have NIOSH agrees but no further action required. So is this a question that the incidents were brought up in the CATI? Is this a question of and they were not put in the DR report? Is this one of

those?

MR. HINNEFELD: That's the way it reads, but let me see.

MR. GRIFFON: Yeah, it kind of reads like that, but I'm not sure.

MR. FARVER: That's part of it. One is they assumed a certain intake date for, let's see --

MS. MUNN: It wasn't polonium; it was plutonium.

MR. FARVER: It was for plutonium, right. I just want to make sure I've got the plutonium right. But they assumed it was for one, but the incident for the nuclide actually happened for a different, on a different day.

There was just an abundance of records that just didn't seem to be -- not a good indication that they were reviewed. In other words it was a DOE-type D investigation and 150 pages of documentation about everything that happened in this incident, and yet it was just kind of fell by the wayside.

MR. GRIFFON: This was a best estimate case. I have a note that it was a best estimate. Was it non-compensable? I don't know.

MR. HINNEFELD: I believe so.

MR. SHARFI: I believe so.

MR. GRIFFON: I mean, did you consider the polonium/plutonium incident and whether the dose assigned was bounding of those? I guess I don't remember this case so I don't know.

MR. HINNEFELD: In the earlier response it talked about, or in one of our initial responses it looks like we've done, we've run the IMBA models based on the correction of the incident intakes, and it does increase the dose but doesn't change the outcome.

MR. FARVER: Yeah, that's all part of that one finding, 120.5. Not only did they normalize data when they shouldn't have, they used the wrong dates. It's a few things.

MR. GRIFFON: Let's, I mean, 120.5, we're going to get the IMBA runs. In 120.6 what I had is NIOSH agrees, but I guess I don't know if we should yet say that it doesn't affect the outcome of the case.

MS. BEHLING (by Telephone): Well, this is a best estimate case, and the POC was over 48 percent. It was 48.2 percent.

MR. FARVER: I think I'll probably just

refer it back to finding 120.5.

MR. GRIFFON: Yeah, yeah, I agree, yeah.

MR. HINNEFELD: And then this is sort of --

MR. GRIFFON: That's the best way to do.

MR. HINNEFELD: -- plus the dose reconstruction. You said there was two fairly lengthy incident reports, one very lengthy and one fairly lengthy incident reports in the file. And the dose reconstruction makes no mention of those incident exposures.

MR. GRIFFON: And it is a 48. I don't know if any portions of it were overestimating.

MR. HINNEFELD: According to one of our initial responses there are some things. It look like there was a max zeros done on missed doses and --

MR. GRIFFON: Some built-in overestimates.

MR. HINNEFELD: -- some stuff built in there that would --

MR. GRIFFON: But if it's a 48 I think we'd better not just -- let's take a closer look and make sure.

I think that's it. We got through it and ten minutes to spare. Any further comments, questions?

DR. WADE: You're all to be commended. It was a long but productive day.

MS. MUNN: You're going to reissue --

MR. GRIFFON: Yes, I'll reissue. I think I got most of, I probably want to fine tune, you know, make my resolutions consistent. When it just says TIB-0008, sometimes I just jot it down TIB-0008, you know. So I'll cut and paste across the board and reissue this. And it shouldn't take long because I was modifying real-time here.

And I don't know, Kathy, can you tell us where TIB-0007 is? I think you submitted a matrix, right? Or no? I mean, not TIB-0007, the seventh set of cases.

MS. BEHLING (by Telephone): I have submitted them, yes. Yeah, I have submitted a matrix I believe to you. I'm not sure if it's been distributed to NIOSH yet on set seven.

MR. GRIFFON: Okay, I'll make sure I get that in the process. If I haven't got it to NIOSH, I'll start moving that along.

MR. HINNEFELD: You're talking about the seventh set?

MR. GRIFFON: Yeah.

MR. HINNEFELD: We got the seventh set. We're working on the seventh set.

MR. GRIFFON: You have the seventh set? Okay, so NIOSH is working on the seventh set.

MR. HINNEFELD: In fact, we should be able to have an initial responses back before too long.

MR. GRIFFON: So we're moving along well.

And the other thing is, are you setting up interviews for the eighth set?

MS. BEHLING (by Telephone): We're still working on completing the eighth set. I'm very close. Yes, the interviews will be scheduled in a few weeks.

MR. GRIFFON: Okay, sounds good.

All right, I think we've gotten through it, all our business today.

DR. WADE: We will adjourn. Thank you all on the telephone.

MR. GRIFFON: Thanks a lot everyone.

DR. WADE: Thank you all in the room.

(Whereupon, the meeting was adjourned at 4:50 p.m.)

CERTIFICATE OF COURT REPORTER

STATE OF GEORGIA

COUNTY OF FULTON

I, Steven Ray Green, Certified Merit Court Reporter, do hereby certify that I reported the above and foregoing on the day of March 25, 2008; and it is a true and accurate transcript of the testimony captioned herein.

I further certify that I am neither kin nor counsel to any of the parties herein, nor have any interest in the cause named herein.

WITNESS my hand and official seal this the 18th day of April, 2009.

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STEVEN RAY GREEN, CCR, CVR-CM, PNSC

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