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

+ + + + +

ADVISORY BOARD ON RADIATION AND
WORKER HEALTH

+ + + + +

DOSE RECONSTRUCTION SUBCOMMITTEE

+ + + + +

THURSDAY,
NOVEMBER 5, 2009

+ + + + +

The Dose Reconstruction Subcommittee meeting convened in the Zurich Room of the Cincinnati Airport Marriott Hotel, 2395 Progress Drive, Hebron, Kentucky at 9:30 a.m., Mark Griffon, Chairman, presiding.

PRESENT:

MARK GRIFFON, Chairman
BRADLEY P. CLAWSON, Member
MICHAEL H. GIBSON, Member*
WANDA I. MUNN, Member

ALSO PRESENT:

TED KATZ, Designated Federal Official
NANCY ADAMS, NIOSH Contractor*
ISAF AL-NABULSI, DOE*
HANS BEHLING, SC&A*
KATHY BEHLING, SC&A*
RON BUCHANAN, SC&A*
HARRY CHMELYNSKI, SC&A*
DOUG FARVER, SC&A
STU HINNEFELD, NIOSH OCAS
EMILY HOWELL, HHS
JENNY LIN, HHS*
JOHN MAURO, SC&A*
SCOTT SIEBERT, NIOSH OCAS*
BRANT ULSH, NIOSH OCAS

*Present via telephone

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

M-O-R-N-I-N-G S-E-S-S-I-O-N

(9:38 a.m.)

MR. KATZ: On the record. Why don't we begin with roll call?

ROLL CALL

CHAIRMAN GRIFFON: Mark Griffon, chairing the Dose Reconstruction Subcommittee.

MEMBER CLAWSON: Brad Clawson, Work Group member.

MEMBER MUNN: Wanda Munn, Subcommittee member.

MR. KATZ: And on the telephone.

MEMBER GIBSON: Mike Gibson, Subcommittee member.

MR. KATZ: Hi, Mike.

Okay, and then in the room, NIOSH ORAU team.

MR. HINNEFELD: Stu Hinnefeld, Interim Director for OCAS.

MR. ULSH: Brant Ulsh with OCAS.

MR. KATZ: And on the telephone, NIOSH ORAU.

MR. SIEBERT: Scott Siebert with the OCAS team.

MR. KATZ: Hi, Scott.

MR. SIEBERT: Howdy.

MR. KATZ: Okay. And then we have SC&A in the room.

MR. FARVER: Doug Farver, SC&A.

MR. KATZ: And no one else is going to be here?

Okay, and on the telephone for SC&A.

DR. MAURO: John Mauro, SC&A.

MR. KATZ: Hi, John.

MR. FARVER: Hi.

(Simultaneous speakers.)

MR. KATZ: I'm sorry. You guys trampled each other.

MR. BUCHANAN: Ron Buchanan, SC&A.

MR. KATZ: Hi, Ron.

MR. BUCHANAN: Hi.

MS. BEHLING: Kathy Behling, SC&A.

MR. KATZ: Hi, Kathy.

DR. BEHLING: Hans Behling, SC&A.

MR. KATZ: Welcome, Hans.

MR. CHMELYNSKI: Harry Chmelynski, SC&A.

MR. KATZ: Welcome, Harry.

Okay, and then now federal officials and contractors in the room.

MS. HOWELL: Emily Howell, HHS.

MR. KATZ: And on the line.

MS. LIN: Jenny Lin with HHS.

MR. KATZ: Can you say that again?

MS. LIN: Jenny Lin. I'm a new attorney to the Radiation Compensation.

MR. KATZ: Oh, welcome. Alright.

MS. AL-NABULSI: Isaf Al-Nabulsi, DOE.

MR. KATZ: Hello, Isaf.

MS. AL-NABULSI: Hi.

MR. KATZ: And this is Ted Katz. I'm the Designated Federal Official for the Advisory Board of Radiation and Worker Health and Mark, the Chair, you can get going.

CHAIRMAN GRIFFON: Okay. Welcome, everyone. This tends to be a small turnout for this one, mostly staff, SC&A, NIOSH, et cetera. But we're continuing where we left off on the Dose Reconstruction Subcommittee.

A quick agenda just to give us a frame of reference here. I wanted to start with the sixth set of cases. We only have a few outstanding findings. I was hoping to close them out. I'm not sure we're going to quite be able to, but at least we can get an update and it shouldn't take very long. The same thing with the seventh set of cases.

And then the eighth set of cases we have; I'm not sure exactly where we stand with that, but we'll continue on our matrix and John Mauro has -- Kathy actually forwarded the documents. I think we definitely want to focus on Harshaw and Bridgeport Brass. These are the sort of mini site profiles as I've been calling them, part of the eighth set of cases.

And I heard Kathy and Hans are on this morning. So if it's okay, Kathy and Hans, we'll probably get to those this morning before lunch and that way, you may or may not have to come back on the call in the afternoon. But we can do those portions of the eighth set and back to the regular findings, if that's okay.

And then one other item on the agenda is to go back to this, to revisit the first 100 cases findings and the Board had tasked the Subcommittee to looking further at those findings and looking to see whether there were sort of categories of deficiencies and whether these, you know -- which ones we considered I think the word was critical -- which ones we considered critical for the Dose Reconstruction Program and what else we can say about those findings, you know, what changes came about in the Dose Reconstruction Program as a result of the first 100 cases of audits.

I drafted something and I just did it, just finished it yesterday and actually was editing on the plane this morning. So I just circulated it now and this morning amongst the folks here. Actually I might have missed some. John, I should probably forward SC&A a copy. I don't think I did that yet, but I will.

DR. MAURO: Okay.

CHAIRMAN GRIFFON: But I plan on discussing that after lunch. It's only a short sort of -- some brief points. It's certainly not structured in any kind of final letter format, nowhere near that kind of structure. But I wanted to get some thoughts out and have some further discussion on that.

To that end, I also asked Stu to forward his presentation from a previous Advisory Board meeting where he went over some of these sort of categories of findings and I thought I'd ask Stu to sort of kick off the thing early this afternoon with that, you

know, refresh our memory on that presentation and on the quality control issues. He circulated a document, too, as well, describing sort of what some of the quality controls in the current NIOSH ORAU program. That will be early afternoon.

SIXTH SET 20 CASE MATRIX

CHAIRMAN GRIFFON: But this morning we'll start on the sixth set and plunge into our normal matrix activities. I circulated the -- I did send out revised versions of the matrix this time. So I'm working with a file that's titled Sixth 20-Case Matrix September 3, 2009 and these were all updated as of the last Dose Reconstruction Subcommittee meeting. You should have the same kind of file for the Seventh Set and the Eighth Set. I hope everyone received those. Let me know if you need a copy of that.

MEMBER MUNN: You sent them out on the 15th, right?

CHAIRMAN GRIFFON: I guess. I

don't know.

Yes, and if we look down them I left the same kind of format. So theoretically, anyway, the yellow highlighted ones in the Resolution column should be the ones with open action items. So if you scan down, the first one I find is 104.7. The number even sounds familiar now. So I think that is the -- and there was a NIOSH action to provide a basis for the -- it's a transuranic question, yes.

MR. HINNEFELD: Well, a little bit ago I saw we had done something on this and I'm trying to recover where I saw it. Essentially what we said, though, was that these ratios, this is in a particular type profile, are the same ratios that are in TBD-6000/6001 which has been reviewed and as I understand it -- and there's additional supporting information associated with that, you know, in the 6000/6001. And my understanding is that the review of 6000/6001

didn't find any deficiencies having looked at that additional supporting information.

DR. MAURO: Yes, this is John Mauro. That's correct. We recently went over a number of items and that's one of the issues that are resolved. It's resolved. In fact, there are -- as we proceed, you'll see that there are a number of issues related that come out of the TBD-6000 Work Group that have broad applicability to many cases.

As they emerge, you know, I'll point out where I believe that there is consensus by the Work Group, the TBD-6000 Work Group, that that issue has been resolved. We have resolved I think there were six or seven issues and two of them have been resolved and this is one of them. At least, two of them have been resolved. So, yes, I agree. And certainly you could check with Paul, the Chairperson for TBD-6000, to confirm that that in fact is the case.

CHAIRMAN GRIFFON: Yes, because I

was just going to ask that, John. I don't remember discussing the transuranic question on the TBD-6000.

DR. MAURO: Yes, we basically --

CHAIRMAN GRIFFON: I'm on that Work Group, too. Yes.

DR. MAURO: Yes, we reviewed the ratios, the 10 parts per billion, and the other numbers and, as you'll see we have issues as they apply, for example, to Fernald. But we don't have any issues with the ratios as they apply to AWE facilities for a variety of reasons. But if you want to discuss that a little further here, fine. But it is something that has been and I believe that we have, SC&A has, reviewed. I think you might be correct.

CHAIRMAN GRIFFON: Yes, I believe SC&A has reviewed it.

DR. MAURO: We reviewed it.

CHAIRMAN GRIFFON: You may have come to that conclusion, but I'm not sure we

closed it at the Work Group.

DR. MAURO: You know what? I think you're right. I may have been premature in saying that we did discuss it. I recall coming to our position on it. But you're right. I can't say for certain whether or not that's an issue that was officially discussed and resolved with Paul.

CHAIRMAN GRIFFON: I mean I'm certainly willing to put -- I get a little leery of this because -- we've talked about this issue before -- if I put in here that it's a TBD-6000, you know, then I guess I need to keep track. You know we have to cross reference.

DR. MAURO: Yes. In fact, I sort of would like just to clarify. Yes. This is an issue that's before TBD-6000. It's an issue that SC&A has made certain findings and recommendations regarding it, which is in favor of it. However, I think you'd best reserve that to get a formal feedback from

Paul and the rest of the Work Group on that matter.

CHAIRMAN GRIFFON: Okay. So I'm not sure what to do here. I mean I could say currently being discussed by the TBD-6000 Work Group.

MR. HINNEFELD: Needs to be referred to the TBD-6000.

CHAIRMAN GRIFFON: Yes, or I could just --

MR. HINNEFELD: Because the same issue is going to apply to a few others --

CHAIRMAN GRIFFON: Right. I agree.

MR. HINNEFELD: -- AWE site profile.

CHAIRMAN GRIFFON: Yes, I agree.

MR. HINNEFELD: Okay.

CHAIRMAN GRIFFON: I'm tempted to -- because I want to close this set out and I think we only have a few --

MR. HINNEFELD: That would be a

technique for doing it.

MEMBER MUNN: That would be a logical thing to do.

CHAIRMAN GRIFFON: Yes. I just don't want to lose track of it. That's my point.

MR. HINNEFELD: Yes, we're trying to develop that database that links all these, gets all these into one place.

CHAIRMAN GRIFFON: Right. Okay. I think that's fine if we want to put that as our resolution that it's being considered under the TBD-6000.

MR. HINNEFELD: That would be my preference.

CHAIRMAN GRIFFON: Alright.

MR. HINNEFELD: Like I said, if it could be --

CHAIRMAN GRIFFON: Yes, let's do that. I think that makes sense.

MR. HINNEFELD: This is a metal forming. So it would be --

CHAIRMAN GRIFFON: And I'm just going to -- bear with me because I'm going to do the same thing is update live so I don't have to try to recreate this later.

MR. KATZ: So, Mark, are you going to write a note to the TBD-6000 Work Group?

CHAIRMAN GRIFFON: Yes. I guess I'll have to that same kind of thing.

MR. KATZ: I think it would be good to have a paper trail.

CHAIRMAN GRIFFON: Yes.

MEMBER MUNN: Now that we have the format, that's easy.

CHAIRMAN GRIFFON: Right. Alright. So that's one down.

MEMBER MUNN: Is that 107.4?

CHAIRMAN GRIFFON: Yes, 107.4 is correct. Not to examine whether chronic is bounding in this case. I think we had a pretty strong, general indication that it would be, but I think that you were going to look at the case-specific data.

MR. HINNEFELD: Yes, I said. In fact, my note was sort of an examination of acute versus chronic in this case. You know, why chronic was selected.

CHAIRMAN GRIFFON: Yes. So I think we kind of agreed generically. But in this case we asked specifically to see the --

MR. HINNEFELD: I haven't been able to prepare for the meeting very well.

Scott, you're on the phone. Do you know? Did you guys submit something to us on this particular issue?

DR. MAURO: You're talking 107.4?

MR. HINNEFELD: Yes. I was talking -- yes.

DR. MAURO: What --

CHAIRMAN GRIFFON: No.

MR. HINNEFELD: I was asking Scott Siebert from ORAU.

MR. SIEBERT: Yes, that goes back to -- I haven't prepared anything specifically, but I believe this all went back

to -- from an acute point of view the intake was so unbelievably large as to be unrealistic. If I remember correctly, it was larger than any of the top five that we used in OTIB-0001 for Savannah River.

MR. HINNEFELD: Okay. But we haven't really prepared anything to submit --

MR. SIEBERT: Not specifically.

MR. HINNEFELD: -- show that in other words.

MR. SIEBERT: Well, I'll have to go back through the old things that we've submitted to see if that was actually specified earlier or not.

MR. HINNEFELD: Okay. Well, then today we won't be able to do anything with it.

CHAIRMAN GRIFFON: No.

MR. HINNEFELD: But we probably will need something like that. If you submitted it previously, then you'll just need to remind me where it was or resubmit it because I haven't kept track of it I guess.

MR. SIEBERT: You got it.

CHAIRMAN GRIFFON: I don't think this is a lengthy one, but it would be nice to close this stuff out.

MR. SIEBERT: Yes.

CHAIRMAN GRIFFON: Okay.

MR. FARVER: Yes. I don't believe we're going to get anything case specific on that. It would more be a will be a general --

MR. HINNEFELD: You would be saying with this bioassay if he had a series of acutes.

MR. FARVER: Yes.

MR. HINNEFELD: The acute would have to be so big because the bioassay is pretty far -- stays pretty far apart.

MR. FARVER: Doesn't this come back to the general question of how do you choose between multiple acutes or single chronic?

MR. HINNEFELD: Well, multiple acutes though if you're really talking lots of

multiple acutes.

MR. FARVER: No, I mean in this case.

MR. HINNEFELD: You're talking about a few.

MR. FARVER: Yes because for this specific case --

MR. HINNEFELD: This was --

MR. FARVER: -- we're not going to hear anymore.

MR. HINNEFELD: Yes, we're not going to get anymore.

MR. FARVER: A security officer --

MR. HINNEFELD: Yes, we're not going to get any more specific on this case --

MR. FARVER: -- with two bioassays results, we're not going to get anything specific for this case. Alright. I don't know that I'd spend a lot of time on it.

CHAIRMAN GRIFFON: I thought that that's what we had asked for in the last --

MR. FARVER: You want something

general?

CHAIRMAN GRIFFON: Well I thought -- my note says bounding in this case. The approach used was bounding in this case.

MR. FARVER: Yes, that could be.

CHAIRMAN GRIFFON: Yes. I mean I'd ask, you know -- the transcript should have exactly what we -- you know.

MR. HINNEFELD: It's probably -- okay, we can see what we put together --

CHAIRMAN GRIFFON: Yes.

MR. HINNEFELD: -- now what we thought that might be general and how this case applies to it.

CHAIRMAN GRIFFON: Yes.

MR. HINNEFELD: It might be something like that. But remember, you know, Doug's point was a security officer likely has episodes -- if he has experienced episodes of acute exposure.

CHAIRMAN GRIFFON: Right, and I do remember the rebuttal by Scott about the --

MR. FARVER: Being too high, yes.

CHAIRMAN GRIFFON: Being too high, the one acute, and yes. It would have been one of the highest ones ever reported on Savannah.

MR. HINNEFELD: So I guess a general question. What criteria do you use to decide that a chronic exposure is okay or that this should really be looked at as a series of several acutes?

CHAIRMAN GRIFFON: Right.

MR. HINNEFELD: Okay. That's essentially where we ended up.

MR. FARVER: I believe so.

CHAIRMAN GRIFFON: Yes. So. Alright, we'll just leave it, yes.

MR. HINNEFELD: Yes, it could be a work on how many acutes you're going to count because that will affect what your intake is if you --

MR. SIEBERT: Yes that's -- I've been looking back and we actually did some

minutes, a reply that quotes that the acute intakes would have been that large. The file name back then -- it was back in November of 2008.

MR. FARVER: Yes, I remember that. The acute intakes were large.

MR. HINNEFELD: So then there's a general question though, Scott, of how -- under what conditions in a case would we consider that maybe a chronic isn't the appropriate one for this person and we should look maybe at something else. Are there any conditions when we would do that? I guess is that where we're going with this?

CHAIRMAN GRIFFON: Well, in this case, the chronic wasn't necessarily bounding of the acute, right? But you're saying that since the acute was larger than any intake ever reported at Savannah or one of the highest --

MR. HINNEFELD: Yes --

CHAIRMAN GRIFFON: -- that it was

really unlikely that this person, you know, could've received --

MR. HINNEFELD: I think that was essentially what this argument was.

CHAIRMAN GRIFFON: So it was implausible basically, I think, is the argument.

MR. HINNEFELD: Yes.

CHAIRMAN GRIFFON: So it's a little different than your usual argument which is it's chronic --

MR. FARVER: How do you know it wasn't something in between?

CHAIRMAN GRIFFON: Yes?

MR. HINNEFELD: See and this case is a little bit different because it was a long period of time between bioassays. Very few bioassays --

CHAIRMAN GRIFFON: That's right, that's right --

MR. HINNEFELD: -- over the career in a long period of time.

CHAIRMAN GRIFFON: Yes.

MR. HINNEFELD: But that was sort what was different about this than what we normally see.

CHAIRMAN GRIFFON: Right. But I'd just ask if you could follow up on the last transcript. I mean it should be easy to find if you search by finding number.

MR. HINNEFELD: Search by the -- yes.

CHAIRMAN GRIFFON: Yes. It should be fairly easy to find and just see what we had specifically asked for because I know we had the same discussion we're having now. But obviously there was some --

MR. HINNEFELD: Yes --

CHAIRMAN GRIFFON: -- request for a little follow-up.

MR. FARVER: Yes, it might have come down to where the acute is so large it's implausible.

CHAIRMAN GRIFFON: That's what I

think they were saying, yes.

MR. FARVER: In my view, there's not some combination between the two.

CHAIRMAN GRIFFON: Yes, right.

MR. FARVER: That's more accurate and --

CHAIRMAN GRIFFON: Yes.

MR. SIEBERT: I don't know. I think that still goes back to the response that we gave back in April that is the discussion in OTIB-00060, the Internal Dose Reconstruction, that there's really no -- I believe it goes back to there's no driver for us to pick and choose like 14,000 different types of intake scenarios. It goes into, you know, there were two urine samples. They were slightly increasing over time and there's no indication of this large of an intake -- an acute intake. So by the thought process that's in Procedure 60, there's nothing to drive us to anything other than chronic.

MR. HINNEFELD: Okay. Well, I

guess the question though it will be underpinning procedure 60, then. Should there be something in situations like this? Some sort of comment? Is that where we're going with that? I don't know.

CHAIRMAN GRIFFON: I don't know. I'm not sure.

MR. HINNEFELD: This is -- I mean realistically we may come up with some words, but there's nothing -- there's not going to be any slam-dunk sort of thing that's going to clear this up. It's a fact that we expect people who work at these facilities to have some level of chronic exposure. I mean that's pretty much what we assume in almost all our dose reconstructions --

CHAIRMAN GRIFFON: Right.

MR. HINNEFELD: -- unless the person was clearly in an area, a non-radiological area, is going to get even then chronic environmental. So we expect there to be some sort of chronic exposure for these

things.

CHAIRMAN GRIFFON: Right.

MR. HINNEFELD: And in the absence of some indication that there was an acute -- you know, a reason to do acute -- that's generally what we do, is there's chronic, and I can understand --

CHAIRMAN GRIFFON: Except for the mixture of the --

MR. HINNEFELD: -- all the special aspects of this case -- the special aspects of this case.

CHAIRMAN GRIFFON: Yes.

MR. HINNEFELD: So I don't know that we're going to get anything really there's not going to be a slam-dunk or something, but we might have to cogitate. We might be able to do something --

CHAIRMAN GRIFFON: Yes. Well, I don't want to waste a lot of your resources on it either. If you -- all I'd ask is that you look back at the last transcript.

MR. HINNEFELD: Okay.

CHAIRMAN GRIFFON: And if it's the same response, Scott, you can just say, you know, we refer back to our previous response and we think it's, you know, this is how it is. This is our final answer.

MS. BEHLING: This is Kathy Behling. It was my recollection that we were going to try and strengthen the OTIB-0060 at some point in time with regard to this issue. But again, I guess looking at the transcript would answer it.

CHAIRMAN GRIFFON: Yes, and strengthen with regard to, sort of the --

MS. BEHLING: The issue of chronic versus acute and look at better guidance maybe for the dose reconstructor.

CHAIRMAN GRIFFON: Right, right, right. Yes.

MEMBER MUNN: Ultimately, it's still going to come down to the kind of work and the circumstances.

CHAIRMAN GRIFFON: It's going to be some judgment, professional judgment.

MEMBER MUNN: There will be judgment calls.

CHAIRMAN GRIFFON: Right.

MR. HINNEFELD: Yes, I mean there undoubtedly will be. But I mean you could -- you can identify the category of claims where you have to. If you're going to think about identifying the category, you would have to think about it because that would be the ones where you have really wide, you know, long periods of time between bioassay samples. Because if you have quite a number of bioassay samples, at that point the chronic will bound the series of acutes because each acute has to get progressively somewhat smaller in order to hit the next bioassay sample.

CHAIRMAN GRIFFON: Right.

MR. HINNEFELD: So the chronic will bound the acutes if you have a long stream of bioassay data. But in this case

where you have a long period of time with no bioassay --

CHAIRMAN GRIFFON: Right.

MR. HINNEFELD: -- that would be the kind of case that you would look for, and I don't know if we can write anything or not, to be honest. We'll see. We'll go back and see what the transcript says.

DR. MAURO: Mark, this is John. In listening to this, is this a matter where there's agreement that in this particular case that this issue may be moot because the acute that would have to take place to give the result is just implausible? Is it possible to close this issue, and, however, again and to boot this to Wanda and transfer it over to Procedure? So it sounds like more concern that there could be better clarification in, I guess it's OTIB-0060.

CHAIRMAN GRIFFON: OTIB-0060 yes.

DR. MAURO: Yes, as opposed to -- unless, as long as there is agreement around

the table that in this particular application the approach is appropriate because the acute approach would have been implausible. I'm just looking for ways to get things closed on this one.

CHAIRMAN GRIFFON: Yes, I know. I agree. But I just think we asked for a response at the last meeting. It seemed to make sense last meeting. I don't have the transcript in front of me.

MR. HINNEFELD: We'll work on it.

DR. MAURO: Okay.

MR. HINNEFELD: It's just a matter of -- being able to focus on --

CHAIRMAN GRIFFON: Yes. I mean the other and I have to look back at the -- I think Scott said in October there was a risk. Or maybe it was earlier than that.

MR. HINNEFELD: Well he said the original was in November of '08 and then there was some more.

CHAIRMAN GRIFFON: November of

'08, yes.

MR. HINNEFELD: What was the second date you gave us there, Scott?

MR. SIEBERT: The discussion about OTIB-0060 was in April of this year. The final item --

CHAIRMAN GRIFFON: Yes. The question of -- it was characterized as implausible. I remember that discussion, but it's -- you know, it's implausible. I think the basis was that because there weren't many other recorded incidents of this magnitude at the site and --

MR. ULSH: Well, I mean --

CHAIRMAN GRIFFON: It's sort of a little backwards defense, like, oh, you know. I mean --

MR. ULSH: Well, Scott was it higher than the high five?

MR. HINNEFELD: Higher than the high five.

CHAIRMAN GRIFFON: Higher than the

high five.

MR. HINNEFELD: Yes. Wherever recorded. Right.

MR. ULSH: So I have as an action item to look back over the last transcripts and make sure --

CHAIRMAN GRIFFON: Yes.

MR. ULSH: -- that folks agreed there --

CHAIRMAN GRIFFON: Right, right.

MR. HINNEFELD: Particularly for April '09 and probably our last meeting, too, which was --

CHAIRMAN GRIFFON: Yes, the last September 3rd meeting I know we tasked you with doing some follow-up.

MR. HINNEFELD: Yes.

CHAIRMAN GRIFFON: And if you come back and say the discussion on the transcript was around OTIB-0060 then we can probably defer it to the Procedures Work Group.

MR. HINNEFELD: I think it's

actually Procedure 60 rather than OTIB-0060.

CHAIRMAN GRIFFON: I mean Procedure 60, yes. Okay.

MR. SIEBERT: No, it is actually OTIB-0060.

MR. HINNEFELD: Oh, it's OTIB-0060. Okay. Thanks.

MR. SIEBERT: Sure. I can't imagine we get confused on those.

MR. ULSH: So we're talking about the transcripts in the meeting of this committee in April.

CHAIRMAN GRIFFON: Yes.

MR. ULSH: And also on September 3rd.

CHAIRMAN GRIFFON: Yes. September 3rd. Yes. And is that it on this?

MR. FARVER: On what?

CHAIRMAN GRIFFON: On down --

MR. FARVER: 118.1

CHAIRMAN GRIFFON: Yes, 118.1. Then I have no further action for this case.

MEMBER MUNN: Just a remaining question regarding when the linearity of responses.

CHAIRMAN GRIFFON: Right.

MEMBER MUNN: But it doesn't --

CHAIRMAN GRIFFON: Doug, do you have any note on this, on 118.1?

MR. FARVER: I thought it was closed.

CHAIRMAN GRIFFON: So no further action for this case. But then there's one part I seem to leave open.

MR. HINNEFELD: I thought we provided some additional comment on that.

MR. FARVER: I thought you did, too.

MR. HINNEFELD: I have -- my note is 118.1 is closed.

CHAIRMAN GRIFFON: Closed.

MR. HINNEFELD: That's my note from the last meeting.

MR. FARVER: I thought you

provided --

MR. HINNEFELD: Because I thought we provided sort of a fairly extensive description of that badge. It's linear badge in the range that the dose was and I thought we provided sort of a fuller description.

CHAIRMAN GRIFFON: Okay. That's fine because I do say no further action on this case. So that usually means closed. So it's closed. And that's it. That's it. We finished the sixth survey. So we just have that one thing to follow up on, 107.4.

MR. HINNEFELD: Yes.

CHAIRMAN GRIFFON: 118.1 was closed and 104.7 was transferred to TBD-6000. Alright.

Now we can look at the seventh set of cases, and it's titled the same thing with seventh set, 28 case matrix September 3, 2009. Does everybody have the document?

And the first one seems to be highlighted, 121.1.

DR. MAURO: Yes, that's Anaconda, an AWE case, I believe.

CHAIRMAN GRIFFON: Okay.

DR. MAURO: Yes. Maybe I should -

MR. SIEBERT: Aliquippa Forge actually.

DR. MAURO: Let me see, what do I have here. Give me a second and I'll open up my -- I have the actual big fat book in front of me. I'm sorry. Not Anaconda. Aliquippa. You're right. My mistake.

CHAIRMAN GRIFFON: Aliquippa Forge, yes.

DR. MAURO: Yes, Aliquippa Forge, and let me see if I could just help out a little bit regarding the issue. I'm looking at my -- this is -- this is C.1.1 and I think I'm familiar with this one. Hold on.

CHAIRMAN GRIFFON: Yes, it's supposed to be NIOSH will evaluate the use of TBD -- or TIB-0070 and I think it's TBD-6000 -

DR. MAURO: Yes, yes. The problem

was using data from I guess the FUSRAP time period in the late '70s, 1978 as a basis for reconstructing doses, in this case, external doses to a worker that worked at this Aliquippa Forge between 1950 to '64. And I think you're right. The discussion was had -- the way we looked at it -- had OTIB, I guess it's 70, been available I think the strategy would have been used. And the way we left things according to the yellow marker -- yes, it's all here nice and clear now -- we're coming back -- I think NIOSH was going to look into whether or not it would have been more appropriate to use the OTIB-0070 approach or TBD-6000. The approach used here --

CHAIRMAN GRIFFON: Or at least -- this approach was before those were available.

DR. MAURO: Yes, that's correct.

CHAIRMAN GRIFFON: At least I think we were concerned that the approach used was consistent with or, you know, more claimant favorable than --

DR. MAURO: Well, this one clearly is not because using the data for 1978. This was our concern. The data for 1978 to apply to -- I think this is all residual period now.

CHAIRMAN GRIFFON: Yes.

DR. MAURO: We're going to -- we have a worker here that worked at Aliquippa Forge during the residual period, and the way to estimate his external exposure from residual radioactivity which occurred between apparently in the '50s and '60s was to use data from the FUSRAP program which was in 1978, and we were concerned with that.

I think that basically captures this issue, and I'm not quite sure whether -- and, you know, it clears that if you were to use a OTIB-0070 type approach, you would come up with something higher. Because the way OTIB-0070 would work is you would look at what kind of residual activity were on surfaces at the end of the operations period and then use that as your starting point and then you'd

look at what your FUSRAP data is, let's say, at your ending point, and you'd get a slope. So therefore you would get a higher exposure if you tried to apply the OTIB-0070 philosophy here.

MR. HINNEFELD: Yes. I don't have anything to provide today. I was --

CHAIRMAN GRIFFON: I was going to say it's a NIOSH action, John. So we kind of have your position here.

DR. MAURO: I just wanted to make sure everybody understood what it was.

CHAIRMAN GRIFFON: Yes. Thank you.

MR. HINNEFELD: There were I think a couple findings. I don't know if this is one or not that related to residual and I know I started working on one related to the residual of AWE, and I don't know if it was this one or not, but I think that -- John, do you recall? Is this the one where we didn't have any 1950 measurements, or did we have

1950 measurements about public contamination?

DR. MAURO: I'd have to check. I don't recall. It's not apparent right now from what I'm looking at whether you have some data there or not. Or you could have gone to TBD-6000.

See. Right now, we have two protocols that have been developed subsequent to this dose this particular audit. One is TBD-6000 and we have OTIB-0070 both of which deal with AWE type exposures and provide a vehicle for doing dose reconstruction which SC&A has found favorable on and then we run across a case like this which predates all that where it seems -- I don't know whether or not this would affect a reversal. I doubt it. We're talking a residual period. Probably I would have to look at the actual numbers. The doses are probably pretty small anyway. Yes, his PoC is 12 percent. So what I'm getting at is with discussing an issue that's more of a scientific matter, what do we do when we run

across a case that's pretty old? It predates lots more good work that was done subsequent to it such as OTIB-0070 and TBD-6000. Clearly, the dose would go up in my mind if you were to apply this new philosophy and approach.

But certainly, and this is a judgment call, we're at a dose of 3 rem with a PoC of 12. I can't imagine that going to the new protocol would really have a large effect on this. But you know we never really had this conversation before.

CHAIRMAN GRIFFON: Yes.

DR. MAURO: What do we do when we run into a circumstance like that? Because we're going to see more and more of these kinds of situations arise.

CHAIRMAN GRIFFON: Yes, I mean I guess the issue here though is it's Aliquippa Forge, is that the -- Aliquippa Forge. It's likely the only case we're going to review for Aliquippa Forge.

DR. MAURO: Yes.

CHAIRMAN GRIFFON: So the question here for me is if there were many, you know, several cases done prior to these procedures in place you're not only looking at this plan. You're looking at --

DR. MAURO: You're looking at PER.

CHAIRMAN GRIFFON: And then you would say it probably doesn't have a big impact on this PoC. However, NIOSH may want to check other cases done in this type --

MR. HINNEFELD: The action here is pretty clear. It's just that we can get somebody free to do it and that is to evaluate the residual method here versus an approved method from either TBD-6000 or OTIB-0070 and determine if this is in fact lower then this site profile should be modified to adopt one of the currently reviewed and approved methods. And then once you do that you evaluate all the cases.

CHAIRMAN GRIFFON: Yes, as needed.

MR. HINNEFELD: And decide whether it affects them or not. It may not. The residual period it may not affect, but you've got to look at them all.

CHAIRMAN GRIFFON: Right.

DR. MAURO: In a way this almost falls into the world of PERs.

CHAIRMAN GRIFFON: Well, it may or may not.

MR. HINNEFELD: It would trigger one theoretically. I mean it would trigger the PER. Now it could be that no cases will be reworked as a result of that PER because what we do. But they will all be reevaluated.

CHAIRMAN GRIFFON: Yes. My point is that that's SC&A's position on this. I'm not sure NIOSH ever said we agree, this would have under estimated the --

MR. HINNEFELD: Well, that's just it. We have to run through it.

CHAIRMAN GRIFFON: Yes.

MR. HINNEFELD: And what answer do

we get -- what answer would we get with these other techniques?

CHAIRMAN GRIFFON: Exactly.

MR. HINNEFELD: So we have to do that first. If Aliquippa Forge is higher, frankly we wouldn't change anything --

CHAIRMAN GRIFFON: Right.

DR. MAURO: There is a second issue associated with this. I guess that's the next item.

CHAIRMAN GRIFFON: The next item probably, yes.

DR. MAURO: I'm jumping ahead. I have it in front of me.

CHAIRMAN GRIFFON: I just left this as a remaining action then, and we can go on to 121.2.

DR. MAURO: Yes.

CHAIRMAN GRIFFON: Go ahead, John.

DR. MAURO: Yes. That has simply to do with when do you use the median. In other words think of it like this. What we

have at a site where we have data during the FUSRAP time period and you know trying to reconstruct this person's dose based on his job category do you use the median or do you use some higher end value?

I believe this guy had a job category which -- he was a furnace operator which puts him in a place where he has a potential for much higher exposures. As we all know, furnace operators at AWE facilities is probably as bad a spot as you can get in terms of being exposed to residue. The question becomes --

CHAIRMAN GRIFFON: Yes.

DR. MAURO: Now bear in mind that he's a furnace operator, but he wasn't working with uranium. You know, it was post -- so he was working with metal, but he's still in an area where if there's going to be residual uranium around, this is the place where you're going to find it.

And we raised the question whether

automatically applying the median dose to a person like this for the residual period is appropriate. These are one of these case-by-case things that we have been discussing in the past in other venues, and I believe the general philosophy that's emerging from other discussions and other venues is that not to just automatically apply the full distribution or the median whether it's external or internal. But let's take a look at the case and on a case-by-case basis based on the best information we have, you know, if it's clear that there was low potential for exposure, using the full distribution would certainly be reasonable. But if there's a reason to believe that a person might have been at a job where he experienced the higher end, it would not be appropriate. So this second issue has to do with what do you -- this is probably the person that should have been assigned a 90 for percentile for example.

CHAIRMAN GRIFFON: Got it. Yes.

I think we know the issue. I don't know --

DR. MAURO: Now coupling this with the first item is an interesting -- I guess I haven't given too much thought to what do you do when you marry this issue specific to this worker to the issue of OTIB-0070 and TBD-6000. But I do think they do converge. So they have to be looked at together.

MR. HINNEFELD: Well, yes, John. They would -- as part of the process that I would see here is that we would make all the changes necessary to the site profile, you know, to align to address these technical concerns.

DR. MAURO: Yes.

MR. HINNEFELD: And once those changes are made is when you would look at each of the claims. So at the point where you have a claim that is going to get a 95th percent or maybe we feel like we don't always know enough about where people work. Give everybody a 95th percent or whatever we knew,

that would be part of that reevaluation of the claim.

DR. MAURO: Yes.

MR. HINNEFELD: So the logical way to do this or at least the manageable way to do this is to make all the changes warranted to the site profile and then reevaluate the claims that were done with the old site profile once all the changes have been made. I mean that's just a logical way to do it or the manageable way to do it.

DR. MAURO: For this worker if you were to shift into the mode of using TBD-6000 and/or OTIB-0070, the machinery exists. In other words, you have all of the data and the protocols to take this person and apply the protocols because the protocols written up in TBD-6000 and in OTIB-0070 provide for taking into consideration job category and when do you assume, you know, where -- because the lookup tables break it down by different job categories.

So I think that in this case this is not an issue that requires any reconsideration of either TBD-6000 or OTIB-0070. What this case requires is what happens if you revisit this case within the context of those two guidelines and how much would his dose change. I think that's really what the issue emerges from this.

CHAIRMAN GRIFFON: And are there other -- yes, I think we got it.

DR. MAURO: You got it. Okay.

CHAIRMAN GRIFFON: Yes. 121.3 I think is similar. It's not a TBD-6000 issue as much, but I think it's the same question of was the approach used, you know, bounding for this case and it --

MEMBER MUNN: Inhalation.

CHAIRMAN GRIFFON: Yes, it's inhalation ingestion.

DR. MAURO: Hold on. Let me just get there. 121.3.

CHAIRMAN GRIFFON: Yes.

MR. ULSH: While John is looking, Mark, on 121.2 the status is that's a remaining NIOSH action item.

CHAIRMAN GRIFFON: Yes.

MR. ULSH: Thanks.

CHAIRMAN GRIFFON: I'm assuming unless -- that's true. Yes.

DR. MAURO: Yes, this is the same issue again using data from 1992 to go back and calculate inhalation. We're looking at 121.F3. Yes, I got it. Same problem as before, just like the external, this is for internal, you know.

CHAIRMAN GRIFFON: Right.

DR. MAURO: You're right. It's the same type of issue.

CHAIRMAN GRIFFON: I think this one may be more. It's not so much TBD-6000 specific because there is site data, I think, that they were working with. Right? So it's this question of back extrapolating data.

DR. MAURO: Yes. What I'm reading

here is the intakes that were used for this person for both inhalation and ingestion were derived from residual contamination collected in 1992 and 1993.

CHAIRMAN GRIFFON: Right.

DR. MAURO: And the person, of course, worked there from 1950 to 1978. So there's the issue. You know, how do you deal with that? And by the way that's the purpose of OTIB-0070 to deal with just this situation.

CHAIRMAN GRIFFON: That's right. So that's why in the Resolution column you'll see Reconsider OTIB-0070 there, not TBD-6000.

DR. MAURO: Yes. That's another place you can go because TBD-6000 also addresses exposures during residual period. But 0070 gives even more guidance.

CHAIRMAN GRIFFON: Yes. I thought this one was more relevant to TIB-0070.

DR. MAURO: And I agree with that.

CHAIRMAN GRIFFON: Anyway, the three are similar.

DR. MAURO: Yes, they're very much related.

CHAIRMAN GRIFFON: I don't think, unless I hear from Scott, I'll assume NIOSH doesn't have any response yet.

MR. HINNEFELD: Well, this, we don't have a response yet. I believe this is in fact a NIOSH site profile. I'm not sure that ORAU --

CHAIRMAN GRIFFON: Okay.

MR. HINNEFELD: -- participated in its preparation.

CHAIRMAN GRIFFON: Alright. So that remains a NIOSH action as well.

I think I'm down to 122.1. 122.1, John?

DR. MAURO: That's Simonds Saw. Yes.

CHAIRMAN GRIFFON: Simonds Saw.

DR. MAURO: Yes. Give me one second and I'm flipping through it to get oriented. 122.1. Give me a second.

CHAIRMAN GRIFFON: Validating this approach for the job in question. It seems like a job specific thing, too.

DR. MAURO: Yes. Yes, it was a -- let's see what this guy's job was. Furnace operator, same thing. What we have here, now we're dealing with a fellow that was a furnace operator, and basically they used the data that was -- oh, this is Simonds Saw and what was done. This is an interesting problem. What was done is for external exposure is there was film badge. There were 20 film badge hanging in the room, and they've got data on the external field based on that film badges that were there and given that -- the standard approach in Simonds Saw is site profile -- they have a site profile -- was to take advantage of that data for determined external exposure from submersion in airborne activity and from surface contamination. And you would take the full distribution or the median.

But again, our concern was this guy, again -- he's a furnace operator. You know, if there's a place where you think a guy might get the high end, that's the place he'd get it, well, one of the places. So that's the issue here.

CHAIRMAN GRIFFON: We got you.

DR. MAURO: Okay.

CHAIRMAN GRIFFON: The same thing, a similar thing, is for 122.3. It's similar. You know, does the approach proposed bound it for this particular type of job?

DR. MAURO: Well, yes. This is -- yes, it's a good thing to -- it's actually a visual thing.

CHAIRMAN GRIFFON: Yes.

DR. MAURO: The way they handled external -- the first one we just talked about is the external exposure because he's surrounded, you know, he's immersed in this cloud of airborne activity and surface contamination.

The second issue which I believe is 122.3 --

CHAIRMAN GRIFFON: Right.

DR. MAURO: -- is the fact that the generic approach used in Simonds Saw is in one respect extremely conservative. They're placing everybody up close and personal to spend half his time close to a billet and half his time close to a rod, a billet being the thing that goes into the furnace and the rod being the thing that comes out of the -- the rod being the thing that comes out after you roll it.

CHAIRMAN GRIFFON: Right.

DR. MAURO: Okay. This guy worked in the furnace. He only worked with billets. It turns out that if you're only working with billets, your potential for exposure is greater than it is when you're working with billets and rods.

So the generic approach that's adopted in Simonds Saw is very good. They're

saying we're going to assume that every worker that works at Simonds Saw is going to spend half his time one foot away from the billet and the other half of his time one foot away from a rod, and what happens is -- and that's great. So you really can't be much more conservative than that for external exposure.

But in this guy's case he's a furnace operator. The only thing he works with is billets in theory because he's loading the billets up to heat them up so that they can be rolled. So he has the potential to be up close and personal to only billets and perhaps more than one billet.

So the generic approach in Simonds Saw certainly in this respect is very good except as applied to this guy, and that's our concern.

CHAIRMAN GRIFFON: And NIOSH was going to reexamine that, and I think I was -- I was just about to cut you off, John, again, because it was sort of déjà vu, but then I

thought, well, Brant is taking, stepping into this role. So it's probably good what you're doing, John. I think it's good to go over these and refresh our memories on them anyway.

DR. MAURO: I have to say. When we have these meetings --

CHAIRMAN GRIFFON: Yes.

DR. MAURO: -- I have to go back and get the picture in my head again of what happened.

CHAIRMAN GRIFFON: Yes, I agree.

DR. MAURO: And I realize it sort of brings back, but we haven't talked about it in six months. So I got to do this.

CHAIRMAN GRIFFON: Well, for me as soon as I saw billet/rod 50/50 split, I knew exactly.

DR. MAURO: You knew where we were. Right.

CHAIRMAN GRIFFON: It's good to go over these because Brant is going to step into this role now.

DR. MAURO: Yes. Okay.

CHAIRMAN GRIFFON: Alright.

MEMBER MUNN: John, do we have any feel at all for how great the difference in exposure?

DR. MAURO: It was small. It was about 40 percent, I think. The difference is less than a factor of two difference.

MEMBER MUNN: Okay.

DR. MAURO: So it wasn't a big difference, but you know factors of two that's sort of the place where I start to get concerned. Now for this guy let's see where he comes in. He comes in -- you see he comes in at 28.57 as his PoC. This particular issue is not going to flip it.

CHAIRMAN GRIFFON: It's unlikely.

MEMBER MUNN: No.

DR. MAURO: Yes, it's not going to flip it.

CHAIRMAN GRIFFON: Right.

MEMBER MUNN: And there's a

question of reasonableness with respect to the fact that the original assumption is extremely claimant favorable, the one foot for eight hours --

CHAIRMAN GRIFFON: That's what I think we're asking NIOSH to defend that because I think you can defend it.

MEMBER MUNN: Right.

CHAIRMAN GRIFFON: I would say that you probably can.

MEMBER MUNN: It sounds defensible.

CHAIRMAN GRIFFON: Yes.

MR. HINNEFELD: We'll do what we can on that. My take on this is that that number by putting a person one foot away from these two sources for the entire work day --

CHAIRMAN GRIFFON: Two thousand hours a year.

MR. HINNEFELD: It's so high anyway that perhaps a different model not so aggressive there where you would give a 95th

percentile to the furnace operator might be the appropriate approach.

CHAIRMAN GRIFFON: We just ask that this be documented and provided.

MR. HINNEFELD: Yes.

DR. MAURO: We had this conversation last time.

CHAIRMAN GRIFFON: Yes.

DR. MAURO: Again, it's a philosophy. You know, you adopt a generic approach which universally everyone would agree 2,000 hours per year, one foot away from these billets and rods is certainly a generic conservative approach. And what we talked about last time was well, maybe that's good enough even though we can make an argument that this worker probably did something a little different.

But the very fact that this fundamental approach and this is, again, a philosophical issue, you're not going to worry about it. It covers all ills, so to speak,

because it's such a conservative strategy that notwithstanding individual differences such as this one, it really doesn't matter. And I think that that really went to the heart. I think it's an important question. It's almost like coming at the problem in this way. So maybe it can go away on that basis.

CHAIRMAN GRIFFON: It's funny that you just used that phrase covers all ills because I think I used that in the little White Paper I circulated but in a derogatory sense.

(Laughter.)

DR. MAURO: And I understand that.

CHAIRMAN GRIFFON: Yes.

DR. MAURO: But it's an interesting problem.

CHAIRMAN GRIFFON: But I think this is why we asked for documentation. I think it's important to document that because it says that our subcommittee looked at this and we didn't just give it a short shrift. We

considered this.

MR. HINNEFELD: If you think for a minute about the change in distance from that one foot that you have --

CHAIRMAN GRIFFON: I know.

MR. HINNEFELD: -- for the 2,000 hours in order to go increase -- the total dose is going to be increased and if you have half of this and 50 percent of that, you want them to go -- I think we're about a factor of two apart if I'm not mistaken.

CHAIRMAN GRIFFON: Yes.

DR. MAURO: Yes.

MR. HINNEFELD: So you're double this 100 percent of the time. So you're going to go to a -- that's about a -- you're going to go from 75 percent to 100 percent. So it's about a one-third increase in dose. I'm just talking off the top of my head.

DR. MAURO: Yes, it's small.

MR. HINNEFELD: Thank about how much distance you have to add to go to get

your dose down by a third. That's not very far.

CHAIRMAN GRIFFON: Yes. And I don't think we're -- I mean all we're asking that just a little piece written on that.

MR. HINNEFELD: Something like that would say okay --

CHAIRMAN GRIFFON: Yes, we've got it and we have a record of it, too.

MR. HINNEFELD: Alright.

CHAIRMAN GRIFFON: We did it with numbers.

MR. HINNEFELD: Yes.

CHAIRMAN GRIFFON: We didn't just do it, oh, it seems conservative. We've got it documented. That's what I was looking for.

MR. HINNEFELD: Yes.

CHAIRMAN GRIFFON: Alright. That was 122.3, correct?

DR. MAURO: Yes.

CHAIRMAN GRIFFON: Yes. And then 122.7.

MEMBER MUNN: That's SC&A's --

CHAIRMAN GRIFFON: This is thorium. Yes, SC&A's tasked with an action here.

DR. MAURO: Let's see.

CHAIRMAN GRIFFON: I think NIOSH provided the response.

MR. HINNEFELD: We provided the wording in blue in April, I think if I'm not mistaken.

CHAIRMAN GRIFFON: Right. I think you're correct. Yes.

MR. HINNEFELD: I guess that's blue. I don't know if that's blue.

CHAIRMAN GRIFFON: So, SC&A, I'm not sure. John, this probably would be you.

DR. MAURO: Again I'm checking to see what we did here. Give me one minute. Okay. Oh, here it is. I'm looking at the main report again. It's the only way I can get this down is -- here we have a situation where thorium was also rolled at Simonds Saw.

But the thorium data that's available for reconstructing inhalation dose in thorium is for only one day. There were 36 days when thorium was rolled, and they have data for one day.

And the data that they have is -- they used, I believe, the geometric mean of the data. I don't know how many air sampling data. I don't have that much precision here. But it seems to me what you've got here is a situation where here you've got a guy, you want to reconstruct his thorium inhalation exposures. We know that there were 36 days worth of exposures, but only one day's worth of data, and I believe they use the geometric mean of that one day exposure of data to apply to the full time period he was exposed.

And as a result our argument was, well, maybe in a case like this you'd be better off going with the upper 95th for percentile of the data because it's so limited and even then it's of course in question. But

you know what do you do when you're in a situation where you really have very limited data and you're trying to stretch it and apply it to 36 days worth of exposure.

CHAIRMAN GRIFFON: Yes, and it's not -- I guess --

DR. MAURO: It's almost like taking such limited data. Now I believe they only assumed he was exposed for 36 days and used that one day of data to do that. And that was our concern.

CHAIRMAN GRIFFON: Let me ask, well, both SC&A and NIOSH. NIOSH, in this response did you provide us or SC&A with the data in question and the actual model or is it just this -- because I see there's -- obvious questions jumped out at me. This is similar to Bethlehem Steel except it's thorium not uranium. But there's breathing zone and general air. I wonder if you used all the data, if you used only breathing zone, you know. I don't know.

MR. HINNEFELD: I don't know.

DR. MAURO: The blue, you know, there's a lot of information in the blue write-up.

CHAIRMAN GRIFFON: Right. That's what I was reading.

DR. MAURO: Yes, I'm reading that again. You know, if you give me just one second, let me just take a quick read of the blue again because in effect the blue was the case that was made. So listen, it's okay in spite of the fact that we raised this concern. The argument is made that the one day's worth of data is pretty good stuff. Give me a minute here.

CHAIRMAN GRIFFON: I'm not sure there's enough in the blue, but go ahead and read it, John.

DR. MAURO: Alright. It will take me just a few minutes. I'm in it.

CHAIRMAN GRIFFON: I mean I have questions. While John is reading, I would

have questions about can we get the actual data and see the model that was used and, secondly, when was the sampling done or it says -- I think it does say when the sampling was done.

MEMBER CLAWSON: It does.

DR. MAURO: Okay.

CHAIRMAN GRIFFON: Was it like the first day of thorium or was it in the middle or was it, you know, subsequent to the other rollings, I guess, would be my question.

MEMBER CLAWSON: Does it say how much -- this is Brad. Does it say how much data they -- or was it just bits and pieces?

CHAIRMAN GRIFFON: It's one day of sampling.

MR. HINNEFELD: One day of sampling by HASL.

CHAIRMAN GRIFFON: How many samples.

MR. HINNEFELD: What HASL would do on these surveys, you see them a number of

places. They would come, and they would try to assess the exposure of worker by job title or workers by job titles. If you say you have machinists, they've got some samples and they won't sample every machinist. But they'll take some they think are representative. They'll take some breathing zones, and they'll also take what they -- are general area samples.

CHAIRMAN GRIFFON: But also sometimes they'll take like what they call process.

MR. HINNEFELD: Sometime they will take process.

CHAIRMAN GRIFFON: Which are really elevated compared to.

MR. HINNEFELD: Yes.

CHAIRMAN GRIFFON: So I just wanted to look --

MR. HINNEFELD: And the way HASL would do this -- I don't know that this is the way we did it -- HASL derived a time-weighted

average by also doing time motion studies of machinists. How long was a machinist actually at the machining point when the breathing zone sample would be representative and then for the rest of his work day he was given the general area sample? So I don't know if they give the average or if they had a sample or --

CHAIRMAN GRIFFON: I guess that's why I asked for the background.

MR. HINNEFELD: So I don't know if there's a lot to how they did the model, but it would appear to be one sampling -- complete study of that --

DR. MAURO: Yes.

MR. HINNEFELD: It would be a complete study of the site and it would probably take most of the day.

DR. MAURO: This is John. Let me say something. I think the ball was in our court, and we did not act on it.

CHAIRMAN GRIFFON: It was. Yes. It was your action, yes.

DR. MAURO: Yes, it was our action. You know, the argument was made in blue that, now wait a minute. This was not some simple study. They did a very thorough study of the breathing zone, a daily weighted average and that one day's worth of data. That was just one day. It was a very thorough investigation that can be used to represent all 36 days, and the action item as I'm looking at it was that we were supposed to look at that. I have to say we didn't do that.

CHAIRMAN GRIFFON: I guess -- yes.

DR. MAURO: Yes.

CHAIRMAN GRIFFON: That's fine.

DR. MAURO: And if we could write that down. This is something that we certainly could look at and probably very quickly get back, maybe write a quick White Paper. If, Doug, you could just record as an action item for us I believe --

CHAIRMAN GRIFFON: I'm recording

them all. Yes.

DR. MAURO: We didn't do it. I apologize. If I had the presence of mind because this is something we can usually do pretty quickly.

MR. HINNEFELD: If you have any trouble finding that study in SRDB let me know.

CHAIRMAN GRIFFON: That's what I was going to ask.

MR. HINNEFELD: I'll find somebody who has it.

CHAIRMAN GRIFFON: Can you post it in our usual --

MR. HINNEFELD: Yes, we could post it. Do you want a folder?

CHAIRMAN GRIFFON: Restart the other process, you know, we can --

MR. HINNEFELD: Well, I mean we can post it in a folder for the -- seventh set.

CHAIRMAN GRIFFON: Yes.

MR. HINNEFELD: We can put the folders on. We could put a --

CHAIRMAN GRIFFON: Why don't we start --

MR. HINNEFELD: -- Dose Reconstruction Subcommittee folder under -- so you'll see it. It will be one of the folders that appears under --

CHAIRMAN GRIFFON: Why don't we start doing that? I update the matrices. I'll give them to you and you can post them as well.

MR. HINNEFELD: And then for lack of a better place right now we'll put this in, like, a seventh set subfolder.

CHAIRMAN GRIFFON: That's fine.

MR. HINNEFELD: So that rather than lump them altogether because that folder will get --

CHAIRMAN GRIFFON: So what I asked for was SC&A's action to review it. But what I would ask for is the study, the HASL study

itself, the document, be posted there and also the NIOSH model, your analysis of the data. Because I would expect that you might have excluded some data when you did the distribution or whatever for good reasons probably. But I just want to see the data, how much did they do the time motions, you know, whatever.

MEMBER CLAWSON: Well, I think -- this is Brad. I think you also brought up another point we need to take a look at, and that's that this was done at the very beginning or midway through or whatever. I think that --

CHAIRMAN GRIFFON: Yes, and I think we may be able to figure that out based on the HASL report.

MR. HINNEFELD: And I'm not sure what other measurements we have. There's a parenthetical statement here saying based on subsequent measurements which would mean later probably. It could mean earlier, but it

probably means later in this case. And so I don't know what that means.

CHAIRMAN GRIFFON: Yes.

DR. MAURO: Simonds Saw is an interesting site because it was so fundamental to the Bethlehem Steel work.

CHAIRMAN GRIFFON: Right.

DR. MAURO: We did do a lot of -- there was a lot of work done on Simonds Saw and reviewing its data.

CHAIRMAN GRIFFON: For the uranium site anyway.

DR. MAURO: Oh, yes, the uranium site, and it was done because of Bethlehem Steel.

CHAIRMAN GRIFFON: Yes.

DR. MAURO: If you remember. So I mean I think there's a lot of history here, and we would do well to go back and look at this case.

I have to say Simonds Saw, I don't know if there are a lot of cases there, but we

never reviewed that site profile.

CHAIRMAN GRIFFON: Well, I would think that this is kind of a mini site profile.

DR. MAURO: Oh no. It would be. There's no doubt.

CHAIRMAN GRIFFON: Yes.

DR. MAURO: But this looks like -- I don't know how many cases there are at Simonds Saw, but we certainly will look at this one issue.

CHAIRMAN GRIFFON: And that's the other reason I'm asking for the drill down here is, you know, it's probably the one case we'll see from Simonds Saw.

DR. MAURO: Yes.

CHAIRMAN GRIFFON: Okay. So that remains an SC&A action, and NIOSH will post those few documents. Right?

MR. HINNEFELD: Yes.

CHAIRMAN GRIFFON: Okay. Well, I don't see any yellow. Here we go.

MEMBER MUNN: 125.9.

CHAIRMAN GRIFFON: 125.9. Thank you. You have to keep me on the ball. 125.9 is the next open item. John, I think you're off the hook on this one.

DR. MAURO: Yes.

CHAIRMAN GRIFFON: Yes.

DR. MAURO: That's great.

CHAIRMAN GRIFFON: We're up to Doug.

DR. MAURO: Okay.

CHAIRMAN GRIFFON: Alright.

MR. FARVER: 125.9, is that correct?

CHAIRMAN GRIFFON: And it was actually left with NIOSH.

MR. FARVER: Just to recap, this person had some -- was involved in four incidents, and in the file there were -- recall slips of paper with the dates, description of the incident, and little notes saying bioassay requested. But those dates do

not match up to the bioassay data that was provided, and that is the basis for the findings.

MR. HINNEFELD: Well, I mean, we can provide some additional things back. As a general rule, you know a re-request to DOE for that incident bioassay data doesn't get us anything. But we can look into it. I'm just saying I don't even know what site this is from or what the --

MR. FARVER: Hanford.

MR. SIEBERT: It's a Hanford claim.

MR. HINNEFELD: Well, Hanford is usually pretty good about giving us what they've got.

MR. SIEBERT: Yes. I believe this is just a case where the dose reconstructor determined there was no additional data. I mean, I don't know where there was really much more that could be done. I mean, it could be re-requested, but if it doesn't exist -- just

because bioassay data was requested does not necessarily mean bioassay samples were collected.

MR. FARVER: So it was common for them to request it and not get the sample.

MR. SIEBERT: I'm not going to say that's common, but there -- the dose reconstructor was working under the assumption that they had all the available data. That's what I'll say.

MR. FARVER: I'm sure they were, but how do you know you had all the data? Right here we have an incident of three cases where they say they requested the data. It's not common that when they requested it that they don't get the bioassay sample. So I've got three missing results involved with incidents.

MR. HINNEFELD: Do we have bioassay after those?

CHAIRMAN GRIFFON: That was the question I was thinking, too. Would the

chronic bound? I think it's in the top. If you look back at 128.08 assuming these things happened --

MR. HINNEFELD: Even if the chronic doesn't bound, if you have incidents and you could assume some sort of intake of that incident, you know, you've got bioassay later.

CHAIRMAN GRIFFON: Yes.

MR. HINNEFELD: You could say, well, let's just say there was --

CHAIRMAN GRIFFON: Let's assume there was an incident.

MR. HINNEFELD: -- a chronic -- acute intake on that.

(Simultaneous speakers.)

MR. HINNEFELD: What that will do: that then decreases the chronic that you give them. Because if you build a chronic exposure to fit the data, but then you start fitting an acute exposure in these places and you fit those data points, your chronic level then

drops. So you have a lower chronic in order to still fit the data points if you put those acutes in. So the chronics might still bound.

CHAIRMAN GRIFFON: Well, that's the question. I think that's what we asked you to look at.

MR. HINNEFELD: Okay. I don't think I've got -- or I haven't been provided anything on this.

CHAIRMAN GRIFFON: If you came back and said we are not convinced that any incidents happened, but in the event that they did, we modeled it this way and we still found our approach to be bounding of this whatever.

MR. HINNEFELD: Yes.

CHAIRMAN GRIFFON: Yes. I think that's what we were asking for: follow-up.

MR. HINNEFELD: Okay.

CHAIRMAN GRIFFON: Is that right, Doug? I mean I'm --

MR. FARVER: That I don't know if that's what we were asking.

CHAIRMAN GRIFFON: It was initially, anyway, in 128.08. Part of it was, is the chronic bounding. I mean the other question, why wasn't this noticed in peer review. I mean that was a quality control kind of question.

MR. ULSH: 930.09 still indicates SC&A's concern about the issue that Doug described.

CHAIRMAN GRIFFON: Yes.

MR. ULSH: NIOSH will follow up on bioassay data associated with incidents.

CHAIRMAN GRIFFON: Yes.

MR. ULSH: So it sounds -- not coming in with any history here -- to me like the action item is for us to see if there's any bioassay data.

CHAIRMAN GRIFFON: Yes.

MR. ULSH: But you just described and Stu just described perhaps a second or related action item to --

CHAIRMAN GRIFFON: It might be.

Yes. It might be secondary.

MEMBER CLAWSON: If you can't find that data, then you're going to have to be able to address it somehow. That's what Stu came up with.

CHAIRMAN GRIFFON: Exactly. I think that's the question.

MR. HINNEFELD: You've got the data of the incident. So you could say, okay. They have acute exposure on that date.

MR. FARVER: I guess my concern is, if I were a dose reconstructor and I came across this where I had this information. It does not match my bioassay data. What do you do?

MR. HINNEFELD: Well, again, I'll have to get a description for that because I don't know.

MR. FARVER: I mean if this comes up again where we -- it does come up occasionally where we see these little notes of bioassay requested.

CHAIRMAN GRIFFON: Yes.

MR. FARVER: They don't always match with the bioassay data. I would think that would raise a flag somewhere.

CHAIRMAN GRIFFON: Yes, and it didn't get caught in peer review either. That's what is noted in the beginning was that.

MR. HINNEFELD: Well, I mean part of this would be that this might be broader than an incident sample, you know, an incident with a request for bioassay and bioassay data. I mean there may be other circumstances as well where there are certain inconsistencies in the file.

CHAIRMAN GRIFFON: Right.

MR. HINNEFELD: So it's kind of a broad question. But we can address this specific one.

MR. FARVER: Well, I mean I would think that we could raise a flag and then what would you do when that flag is raised?

MR. HINNEFELD: Well, we'll have to find out. I don't know. Sitting here, I don't know.

MEMBER CLAWSON: I think that's what the whole question comes down to.

MR. FARVER: Yes.

CHAIRMAN GRIFFON: Alright.

MEMBER CLAWSON: Correct me if I'm wrong, but I know that we just found a bunch of more data, Nevada Test Site. But didn't we come across some more Hanford, too? It sticks in my mind that they found -- I think I remember reading that they had just found some more data at Hanford and that's why --

MR. HINNEFELD: Oh gosh. I don't know. They find -- Hanford's got tons.

MEMBER CLAWSON: I know, but Nevada Test Site has 250,000.

MR. HINNEFELD: Well, we found, yes, the databases. We've got those. Hanford has periodically found stuff. But I don't know that -- I don't know if the bioassay data

was put in there either. I really don't know.

MEMBER CLAWSON: Well, I just wondered. I know it's come into the neutron and a bunch of other stuff like that. But this is one of the questions from people looking outside and this is kind of my idea of why we're doing some of these. Are we finding all the data that really is out there? And I know that it's an ongoing thing. We find it in a lot of different places.

MR. HINNEFELD: Well, there are circumstances where we didn't, but yes. Or that we're not confident we did.

MEMBER CLAWSON: Well, I was just --

MR. HINNEFELD: This is Brookhaven.

MEMBER CLAWSON: Right.

MR. HINNEFELD: We just concluded we're not confident we got all the exposure data for Brookhaven before like '79 or something.

MEMBER CLAWSON: Right.

MR. HINNEFELD: So I mean, there may be situations like that.

MEMBER CLAWSON: Right. I just remember seeing and I was just wondering if maybe bioassay was involved in that.

MR. HINNEFELD: To my knowledge except maybe -- well, to my knowledge, there hasn't been a discovery of bioassay data at Hanford, you know, during this data capture stuff that we're not getting in the exposure to my knowledge. Okay. I don't -- I'm not completely up-to-date on what's being discovered down there.

MEMBER CLAWSON: Right.

CHAIRMAN GRIFFON: Okay. Let's move on to 126.2. Doug, we're looking to close one. What can you do for us?

MR. FARVER: I think we should close this one. I did look at their findings.

CHAIRMAN GRIFFON: I thought so. I had a good feeling about this one.

MR. FARVER: Yes.

CHAIRMAN GRIFFON: So maybe expand on that. You looked at the files.

MR. FARVER: Yes, they sent a plethora of files. A whole folder full of files and I looked at -- I won't say I looked at all -- I looked at most of them and it was -- I believe we were trying to show that it was bounding with some final questions.

CHAIRMAN GRIFFON: Yes.

MR. FARVER: What the basis was they used to OTIB-0002? The workbook associated with OTIB-0002? This is one you select uranium or non-uranium facilities by clicking on a button.

CHAIRMAN GRIFFON: Click a button. Yes.

MR. FARVER: And we thought it should have been uranium. They clicked on uranium. Made a difference in dose of about 8.5 rem and then from that discussion, we got a question of set boundaries.

CHAIRMAN GRIFFON: The dose was just higher, the dose they used.

MR. FARVER: The dose they used was lower.

CHAIRMAN GRIFFON: Lower.

MR. FARVER: For non-uranium.

CHAIRMAN GRIFFON: Non-uranium, okay.

MR. FARVER: Uranium, it's higher. So they went back and did that and it's in their statement that it was an increase by 8.4 rem. And then the question came up to, well, is that bounding? And that's when they sent the files showing that. That's gone. Closed. Finished.

CHAIRMAN GRIFFON: Anybody have any follow-up on that? We closed one. This is good.

MEMBER MUNN: This is very good.

CHAIRMAN GRIFFON: Alright.

MEMBER MUNN: There's another one. 127.8.

CHAIRMAN GRIFFON: No, we're not going to close two. Not in a row.

MEMBER MUNN: Well, maybe.

CHAIRMAN GRIFFON: Alright.

MR. FARVER: I might ask Kathy for her input on this one. Kathy, have you looked at this?

CHAIRMAN GRIFFON: 127.8.

MS. BEHLING: Yes, I have. We're on 127.8?

CHAIRMAN GRIFFON: Yes.

MS. BEHLING: Okay. This is this reoccurring issue on the fission products and the fact that NIOSH selects the highest -- when there is a whole body count done and there are no positives, NIOSH selects the highest fission activation product and this particular case it was cerium-144 or barium-144. And although we agree that that's good that they've calculated a missed dose for it, those fission products, what about the other fission products that are listed on the whole

body counts that are listed. I guess for Hanford there's actually a table that they list the MDA levels for all those various fission products associated with whole body count, and I know that we've had many discussions on this issue and I thought that NIOSH was going to be looking at this issue and writing something.

Go ahead, Hans.

DR. BEHLING: Yes, this is Hans. I think we've gone through this issue many, many times and I think the consensus is the following. If we, for instance, had instead of a whole body count we had a gross beta or gross alpha urine sample, it would be very prudent and very claimant-favorable to assume that all beta activity or all alpha activity from a gross alpha or gross beta count when you don't know the mixture of radionuclides is to select that radionuclide and assign it the total activity for that urine sample and that selection process would be based on the

particular cancer in question.

So, for instance, if you had a thyroid cancer you would clearly assign all gross alpha or I mean gross beta to iodine-131 and we agree with that. But when you have a whole body count and you have basically an MDA value for each and every single one of the fission products that a person may have in his body as well as activation products selecting the highest radionuclide that could potentially contribute to dose is only just one of many.

So therefore cesium-144: it should in essence be -- if cesium-144 was in fact available for inhalation for that individual based on his work environment, yes, half of the MDA should be assigned to cesium, but so should half of the cesium-137, half of the cobalt-60, half of iodine-131 and so on and so on.

So in essence, we are not necessarily being claimant-favorable by

selecting a single value of single isotope and assigning half of the MDA because we're missing all the other ones. And I thought we had resolved that issue with NIOSH on a number of occasions prior to this date.

MR. HINNEFELD: You thought that we had -- you said resolved it or brought it up?

DR. BEHLING: I think we brought it up and I think everyone acknowledged that that should have been the appropriate approach to assigning missed internal exposure when there is a whole body count and we know that -- let's say a person worked in a production reactor at Hanford or Savannah River that you obviously always have a whole mixture of fission products as well as activation products that can usually be established based on smear samples or air sampling and we have a fair understanding of what the dose rate of the radionuclide mixes may be.

But we also know -- when I worked

at a utility, we always knew what the MDA levels were for each of the radionuclides that a person could have potentially been exposed to and there's a fixed value, and I think NIOSH acknowledges this. But this default value of only selecting the highest radionuclides and assigning half of the MDA is only part of the solution to assigning missed internal exposure from patient activation products.

MR. HINNEFELD: Okay. Well, this is familiar to me. I don't recall we ever resolved it, but it is familiar to me.

CHAIRMAN GRIFFON: Very familiar.

MR. HINNEFELD: Yes.

CHAIRMAN GRIFFON: Scott, do you have a response to Hans?

MR. SIEBERT: Well, I believe we know that it's something that needs to be discussed about OTIB-0054 versus whole body counts. I mean I think we've all agreed that it does not make sense to assume that missed

dose is based on everything that a whole body could potentially see because that's unlikely and also, as a mixture, if you saw something at the MDA many things would be well above the MDA. So the thought process of using OTIB-0054 along with whole body counts is something we've discussed.

I just don't believe that it's gotten to the point of us being able to use it because of the complexities involved of comparing. You assume it's on one whole body count: the MDA, and then you have to deal with this whole suite of other radionuclides that go along with it and then compare that with the MDA of that whole body count to see if it could be seen. There's a lot of complexity involved and I just don't know if that's gone anywhere at the moment.

DR. BEHLING: And let me just add something that's also very definitely a question of timing, too, as we very well know. A whole body count that's done on a routine

basis once a year or some interval is probably not going to capture necessarily all the radionuclides that you may be exposed to especially if you're dealing with short-lived radionuclides such as iodine. So we don't really have an understanding of what potential exposures could have occurred that are obviously not necessarily obvious in a whole body count even when such exposures exceed the MDA unless the timing is correct.

And I would still say that as a default approach one should look at the spectrum of radionuclides based on air sampling data or contamination surveys in a given facility and understanding a reactor does produce fission products and also activation products and the blind assumption or default assumption would be to assign half of MDA for a dose rate in radionuclides that are routinely observed in the environment of a worker where your air sampling data is available or spectral data is available.

MR. HINNEFELD: Well, we'll have to do some work to prepare for this discussion.

DR. MAURO: This is John. From a perspective -- this issue of first talking about bioassay data where you have, let's say, gross beta-gamma and then assigning the worst possible radionuclide, now you do have OTIB-0054 which says that, no, you don't have to do that and there's a mix of radionuclides you can assume and we reviewed that where, if you're working at a different -- depending on the type of reactor -- this is reactors now -- you know that if you get a gross beta-gamma reading from a bioassay sample, a urine sample, right now you have a protocol that says we're going to assign this mix to that count in the urine.

So there is precedent for you not to use the worst-case scenario as we just discussed where you pick the worst radionuclide. But there's also precedent at

least when you know that they are working within a given kind of reactor facility that you would use an assumed mix. So that approach of selecting a mix for bioassay, you know that precedent has been established.

Now it sounds like we're walking into the arena of what about when you have a chest count. It seems to me that you have a similar circumstance. If you could somehow and you don't have -- I do not believe you have an OTIB that addresses chest counts. I don't believe 0054 talks about it. I'm not sure, but it might. What do you do when you have a chest count and you perhaps don't get a result back or I guess if you do get a result back and you see one particular radionuclide that that means there are not other radionuclides there also.

So I just wanted to give a broader perspective on this particular issue.

MS. BEHLING: Currently, OTIB-0054 does not address chest counts and whole body

counts. It's for air sampling and urinalysis.

DR. MAURO: And urinalysis, okay.

MR. HINNEFELD: Yes, I think the issue here is pretty clear, what kind of basis do you have for doing a missed dose calculation or any kind of internal dose calculation off of an in vivo count where you have this little suite of radionuclides each with its own MDA. Probably more radionuclides on the whole body count than any particular person had in their exposure environment.

CHAIRMAN GRIFFON: Right.

MR. HINNEFELD: So, how do you do that is the question. Right?

CHAIRMAN GRIFFON: Right.

MR. HINNEFELD: We just need to prepare for this discussion. That will be -- and we can't do it today.

MR. FARVER: And what I've seen done in the past is if you can document like a waste stream.

MR. HINNEFELD: Yes.

MR. FARVER: What the ratios are. You may have 1,000 times more cesium than you do other nuclides. So you would just key off the cesium or you'd ratio it all out.

MR. HINNEFELD: Yes. You pick a marker radionuclide and then you just scale your intake, basically, on that marker intake.

MR. FARVER: And you would do the same thing even if it's at MDA.

MR. HINNEFELD: So that requires some sort of judgment, then, about the suite.

MR. FARVER: Yes.

MR. HINNEFELD: The person -- the suite of radionuclides that the person may have been exposed.

CHAIRMAN GRIFFON: Yes, and I'm not -- I think we'll leave it here. I'd say something, but I thought I'd get more discussion.

MR. HINNEFELD: It's a knotty issue.

CHAIRMAN GRIFFON: Yes.

MR. HINNEFELD: We need a --

CHAIRMAN GRIFFON: I'll drop it off. Yes.

MR. FARVER: And really I'm not sure that that would result in any higher dose than what you're doing.

MR. HINNEFELD: It may not.

MR. FARVER: It may not.

MR. HINNEFELD: May not. It's hard to say.

MR. FARVER: And it may in some cases and not in other cases.

MR. HINNEFELD: That's usually what happens. Nothing ever works easily.

CHAIRMAN GRIFFON: Alright. 127.10. Then we'll leave that in the NIOSH.

MR. HINNEFELD: Yes.

CHAIRMAN GRIFFON: Or put it back in the NIOSH.

MR. HINNEFELD: That is probably going to be a lengthy discussion and when we get ready we may give that a call kind of

thing. We'll just think about that later.

CHAIRMAN GRIFFON: There are several that fall in that category, although maybe not all with the in vivo question or the whole body data counting question.

CHAIRMAN GRIFFON: Yes.

MR. HINNEFELD: A lot of them were OTIB-0054 questions more directly.

CHAIRMAN GRIFFON: Okay. Anyway, 127.10.

MR. FARVER: Kathy, is this similar?

CHAIRMAN GRIFFON: Yes, I was going to say.

MS. BEHLING: Let's see. I'm not there yet.

CHAIRMAN GRIFFON: It seems very similar to the last one.

MR. HINNEFELD: Well, this just speaks to that in vitro bioassay.

CHAIRMAN GRIFFON: Yes.

MR. HINNEFELD: As opposed to in

vivo.

CHAIRMAN GRIFFON: In vivo, right. So I think it needs to be probably looked at together. Yes.

MS. BEHLING: Yes. Okay. We're at 127.10?

MEMBER MUNN: Yes.

CHAIRMAN GRIFFON: Yes.

MS. BEHLING: Okay. I think here we're talking about areas that this employee worked and we were questioning why NIOSH didn't assess doses associated with and monitor radionuclides just based on work location, and information provided in the TBD I believe we felt that this person may have been exposed to --

CHAIRMAN GRIFFON: Because of the different work areas?

MS. BEHLING: Yes. Building 108F there may have been a radon generator there and --

MEMBER MUNN: 108 what?

MS. BEHLING: 108F.

MEMBER MUNN: F?

MS. BEHLING: F as in Frank.

MEMBER MUNN: Yes. Okay.

MS. BEHLING: I think -- and I have to say, somehow I missed this one and I didn't look at this in preparation for the meeting. But I think we were going to go back also and verify some of the work locations. I believe that it was pretty specific in the CATI report. I apologize, but I'll have to go back and look at this again.

CHAIRMAN GRIFFON: I am not sure if this -- this is like, Kathy, you want time to look at this more before we -- I mean there's nothing really for NIOSH to follow up on, is there? Is the question the same on the table?

MS. BEHLING: I'm going to need to look at this again.

CHAIRMAN GRIFFON: Okay.

MS. BEHLING: And like I said, I

wanted to verify the various locations that this person worked and dig a little further.

CHAIRMAN GRIFFON: At least one question is, though Building 108F had potential for radon exposure, is that what you're --

MR. FARVER: Apparently that's what's documented in the technical basis.

CHAIRMAN GRIFFON: Okay. Yes.

MR. ULSH: Represented as a lung cancer case.

MR. FARVER: I'm not sure. Back to the beginning there.

CHAIRMAN GRIFFON: Yes.

MR. ULSH: Otherwise radon wouldn't be much of anything.

MR. SIEBERT: I think talking about radon now you're getting into 127.11 instead of .10.

CHAIRMAN GRIFFON: Oh.

MR. ULSH: Looks like it's breast.

MR. FARVER: Well, it's not just

the radon issue. It's more work location.

CHAIRMAN GRIFFON: Right. So it's other stuff.

MR. FARVER: I believe the individual is a technician possibly involved in animal experiments, C14, P32, things like that.

MS. BEHLING: That's correct.

CHAIRMAN GRIFFON: This talks about radium exposures in 127.11 where they do radon breast sampling. I'm not sure why that's not highlighted because it also says, NIOSH will also modify response.

MR. HINNEFELD: Radon breast sampling is for radium.

CHAIRMAN GRIFFON: For radium, yes.

MR. HINNEFELD: Radium -- assay.

CHAIRMAN GRIFFON: Right. I'm dropping the radon comment for now. Kathy, if you can follow up. SC&A should still follow up on 127.10.

MR. FARVER: Yes, what happened is in one of the CATI reports, it was stated that the employee submitted breast samples.

MR. HINNEFELD: Oh, from the CATI?

MR. FARVER: Yes.

CHAIRMAN GRIFFON: Alright.

MR. FARVER: And that wasn't addressed in the CATI report, but it's probably, what, number 11. It's probably under the CATI report section. Yes, failed to address breast sample. Monitoring report is in CATI.

MR. HINNEFELD: Well, my bias on reported breast sampling is that the spirometer would be a fit test. You know, people can produce activity -- well, and I think this has to be kind of period-specific because I don't know what the basis of this is whether anybody did breast-lung treatment --

MR. FARVER: They quote from the CATI report. I am sure the EE provided breast samples especially when the EE was working in

the 300 area.

CHAIRMAN GRIFFON: So you can see when he was working in an area.

MR. FARVER: Yes. That's the quote from the CATI.

CHAIRMAN GRIFFON: There may be at least a way to follow up.

MR. HINNEFELD: Yes. We might go find out.

MR. ULSH: This refers to a different case. 127.11 is not the same case as 127.10.

CHAIRMAN GRIFFON: It's the same case.

MR. HINNEFELD: 127 is still 127. Anything in the number --

CHAIRMAN GRIFFON: Yes, the first three numbers 127.

MR. HINNEFELD: -- that's all the same case and the dot is the finding number under that.

CHAIRMAN GRIFFON: Yes.

MR. ULSH: But it's a breast cancer case. Right?

MR. HINNEFELD: Well, the radium exposure is.

CHAIRMAN GRIFFON: The radium exposure.

MR. FARVER: So you have a finding number of 127.11 is --

CHAIRMAN GRIFFON: It's not radon.

MR. FARVER: -- that it was reported in the CATI report but it was not in the DR report.

CHAIRMAN GRIFFON: So 127.11 should be highlighted. I highlighted it now.

MEMBER CLAWSON: Is that B-3?

CHAIRMAN GRIFFON: Gosh, I think, Stu, you might be right. If you can determine the location and time period and track that back you may say there's no -- it may be that there was no chance or there was no radon breath being done at that time or breath monitoring could be something else for

respiratory fit test or whatever.

MEMBER MUNN: Yes, very possibly.

DR. MAURO: Or if there was reason to believe there was any radium in that building at that time.

CHAIRMAN GRIFFON: Right. There's two ways to kind of -- but we'll let you follow up on that one.

MR. FARVER: And then to clarify that the previous finding 127.10 concerned nuclides that an individual man had been exposed to like P-32 and others that were not accounted for. And since the employee was a laboratory technician --

CHAIRMAN GRIFFON: Yes.

MR. FARVER: -- and worked in different areas possibly with animal experiments, we thought that they should have been included.

MR. ULSH: Mark, what I have here is for 127.10. It's an SC&A action item that's to review the NIOSH response. 127.11

is, check out the breath monitoring issue and/or the likelihood of radium exposure in this building in time. Is that accurate?

CHAIRMAN GRIFFON: That's what I have right now unless -- so Kathy sounded like she wanted more time to look at this.

MR. FARVER: Oh, and that's fine. But I just --

CHAIRMAN GRIFFON: 127.10, I mean if --

MR. FARVER: I was just giving a general ruler for that.

CHAIRMAN GRIFFON: Yes. Thank you.

MEMBER MUNN: Are we going to highlight .11?

CHAIRMAN GRIFFON: Yes. That was me being hasty in trying to close something out.

Brad is pointing out that 127.09 also says NIOSH will follow up. But it also says, see 127.5. Let's just go up there.

SC&A agrees with NIOSH response on that.

MEMBER CLAWSON: Okay.

CHAIRMAN GRIFFON: Yes.

MEMBER CLAWSON: I didn't get that far.

CHAIRMAN GRIFFON: So I think we're okay there. Yes.

MR. ULSH: So is 127.09 closed?

CHAIRMAN GRIFFON: Yes. I'll just put a closed mark there so it's clear. You would agree with that, right, Doug? That one is closed?

MR. FARVER: Yes. Well, this is back to the -- no, that's the wrong one. Five. Yes.

CHAIRMAN GRIFFON: Okay. Let's see. Going on, if anybody catches any others that I didn't highlight, please bring them to my attention. I'm coming up to 129.5 though. That's the next one I have. 129.5.

MR. HINNEFELD: This is the issue that we just talked about.

MR. FARVER: Yes.

MR. HINNEFELD: And implying that it's to whole body.

CHAIRMAN GRIFFON: And whole body counts, yes. That remains, right?

MR. HINNEFELD: Yes.

CHAIRMAN GRIFFON: Okay. 130.6. SC&A will review NIOSH response and I think it's that April 15th blue section.

MR. HINNEFELD: That would have been the most recent.

CHAIRMAN GRIFFON: A fission product test again.

MS. BEHLING: However, this -- I don't believe it's the same issue.

CHAIRMAN GRIFFON: It's different. Yes, this is different. Go ahead, Kathy. I'm sorry.

MS. BEHLING: That's okay. Doug, this is the one that I asked you to look at.

MR. FARVER: Okay. Fine. Let's go back to see the answer.

CHAIRMAN GRIFFON: I'll tell you what. While Doug's looking at that, let's take a ten-minute, if people don't mind. A ten-minute little comfort break. I don't want to work right through to lunch. Doug is the only one that doesn't get a break.

MR. FARVER: That's okay.

CHAIRMAN GRIFFON: Back in ten. Thanks. Off the record.

(Whereupon, the above-entitled matter went off the record at 11:13 a.m. and resumed at 11:23 a.m.)

CHAIRMAN GRIFFON: On the record.

MR. KATZ: We're getting ready to get going again. The folks on the phone, do we have you? John Mauro?

DR. MAURO: I'm here.

MR. KATZ: And Hans? Kathy?

MS. BEHLING: We're here.

MR. KATZ: Great.

MEMBER GIBSON: Mike, I'm here.

MR. KATZ: Hi, Mike.

CHAIRMAN GRIFFON: Alright. Doug.

MR. FARVER: Okay. 130.6. The finding is the method underestimates fission product dose and just to recap the response. What's a good way to recap the response?

MR. HINNEFELD: Well, I'd say that the person that provides the bioassay record worked in heavy water.

MR. FARVER: Yes and it has to do with how you evaluate the whole body counts and then the other time when -- 130.46. There was a time period where the person had urine samples and then there was a time period after that when the person had whole body counts and when we assessed it we felt that they should have used the certain intakes from Table 4.97 out of the Savannah River Technical Data and that's all shown in Table 4 of our assessment.

MR. HINNEFELD: Okay.

MR. FARVER: So we come up with a number of 21.5 rem as opposed to NIOSH's 9.8 rem. So there's a difference in dose. Then

the NIOSH provides their response at the top and, Stu, I'll try to sum this up. But it looks like, for the first part of the dose which has to do with the time before the whole body counts, NIOSH says we go back and we'll calculate basically the way you say but for slightly different time periods and instead of our number they come up with one that's somewhere between theirs and ours.

MR. HINNEFELD: Okay.

MR. FARVER: So that's okay and then they calculate their whole body count a little different, but I agree. I understand what they did and I agree with their first response.

Now we go to the April 15 response and the question is about tritium apparently.

CHAIRMAN GRIFFON: Well, Doug, before you go there, they're saying at the bottom of the first response the total dose increased from 20 to 23.

MR. FARVER: Yes.

CHAIRMAN GRIFFON: It seems that you had quite a larger difference.

MR. FARVER: Well, yes. Okay. We'll get back to that 20 to 23. If you go down beyond that they'll say but this also caused -- where does it say that they decreased the tritium?

MR. HINNEFELD: The bottom of the --

MR. FARVER: Okay. This total dose also includes a reduction in the estimated tritium dose to meet 130.7. Okay. And that's when they describe what they did down there in blue in their April 15th response, I believe. Okay. And I understand what they did for their tritium number, too. That's okay.

The problem I have here or the concern I have is that little statement that says the total dose is increased from 20.450 to 23.210 because I thought the total dose on this case was somewhere around 46 rem, 46.4.

So I don't know where that 20 came from.

MR. HINNEFELD: I don't know sitting here.

MR. FARVER: I mean I agree that the overall dose will probably increase by maybe a little over three rem or something like that, about three rem. But I think it should probably go up to about 48 instead of dropping down to 23.

MR. HINNEFELD: So you essentially base it on the description of the three rem increasing to be about right. Is that right?

MR. FARVER: Yes.

MR. HINNEFELD: Those numbers don't seem to --

MR. FARVER: I don't know where the 20.450 came from.

MR. HINNEFELD: Okay.

MR. FARVER: I mean, I think our question last time was, okay, you agree that you need to increase the fission product and then you take away the tritium. How did you

do that, and you came back with April 15th response saying, this is why we did that and that's okay. Then I started looking at the total dose numbers and they didn't seem to match the case file.

MR. HINNEFELD: Okay. I don't know sitting here on that account.

CHAIRMAN GRIFFON: So it sounds like, assuming that if we can resolve that total dose question you agree with their other response to the rest of those.

MR. FARVER: Yes. Basically the total dose should go up three rem.

CHAIRMAN GRIFFON: Yes.

MR. FARVER: Or thereabout.

CHAIRMAN GRIFFON: Alright. So I have a follow-up for you, Stu, and if -- and assuming we figure out these total numbers then I think it goes away. It's closed. Right?

MR. FARVER: Yes.

MR. HINNEFELD: Yes, based on the

total.

CHAIRMAN GRIFFON: I'm assuming, Doug, as you were talking -- I'm guessing that the three rem -- assuming the three-rem increase, Doug, is not going to affect the PoC in a particular case or did you consider that or -- I don't know that --

MR. HINNEFELD: At this point a lot of factors are going to be determined; what's the cancer, what's the age, the time since the exposure and the diagnosis. There are going to be a lot of factors.

CHAIRMAN GRIFFON: Is it a closing --

MR. HINNEFELD: If it's 45 to 48, it probably will be a lot closer than if it's 20 to 23.

CHAIRMAN GRIFFON: I didn't hear the original PoC is around.

MR. HINNEFELD: No, I don't know. I don't know any of the PoCs.

CHAIRMAN GRIFFON: Oh, the total

dose you're talking about.

MR. HINNEFELD: Yes.

CHAIRMAN GRIFFON: Yes. Okay. So that's hard to answer right now. That's certainly something you'll consider when you'll follow up.

MR. HINNEFELD: If it is in fact 45 and 48, you know, that's a very marginal increase in dose and therefore the risk.

MR. SIEBERT: The original was 42 percent.

MR. HINNEFELD: The original was?

CHAIRMAN GRIFFON: Yes.

MR. HINNEFELD: Okay. Another three rem you have 45. So that's not a very high percentage of --

CHAIRMAN GRIFFON: That's what I assumed when he was --

MR. HINNEFELD: Yes.

CHAIRMAN GRIFFON: So if we resolve the total dose question, I think that will be closed.

MR. HINNEFELD: Okay.

MR. KATZ: Did Scott just resolve it?

MR. HINNEFELD: No, he resolved the PoC question.

MR. KATZ: Oh, PoC.

MR. SIEBERT: I'm working feverishly to see if I can figure it out.

MR. HINNEFELD: Okay.

MR. SIEBERT: If I come up with it in a little while, I'll let you guys know.

MR. KATZ: Okay.

CHAIRMAN GRIFFON: That would be good. We can always go back and close that one out. That would be nice.

131.4. This is -- so I think you're supposed to provide a -- and it seems like kind of --

MR. HINNEFELD: Yes.

CHAIRMAN GRIFFON: Alright. I'm leaving that as a NIOSH action item. If any -- as we're going along bringing these up, if

the action needs to be clarified please step in because I don't want to come back to the next meeting. It seems pretty --

MR. HINNEFELD: It's straightforward.

CHAIRMAN GRIFFON: Okay.

MR. HINNEFELD: But I think that's pretty clear.

CHAIRMAN GRIFFON: Yes. Alright. 131.6 is TIB-0054. Looks familiar.

MS. BEHLING: This is the same thing in product, an issue that we discussed earlier.

CHAIRMAN GRIFFON: Right. And we have several of those and at some point I'm not sure that the TIB-0054 and the TIB-0054 related to the whole body counting issue. It may end up in a procedure, you know --

MR. HINNEFELD: Yes, a procedural thing or an overarching issue.

CHAIRMAN GRIFFON: Because that committee has been kind of idle basically.

Nothing on the table.

Wanda is motioning me that she wants that one particularly.

MEMBER MUNN: No.

CHAIRMAN GRIFFON: No, I think we'll keep it for now, but if we come back with a couple of these responses.

MR. HINNEFELD: I don't think she was beckoning with that thing.

MEMBER MUNN: No.

CHAIRMAN GRIFFON: I might have misinterpreted that. Yes. Alright. So I'll just put her name on this action plan.

Where are we at now? Our next one is --

MR. HINNEFELD: I see 135 now.

CHAIRMAN GRIFFON: Right.

MS. BEHLING: Excuse me. This is Kathy. I think this is an issue where we initially identified -- there was quarterly dosimetry data and there were missing quarters. I believe they may have been blanks

and they were interspersed with real data and we initially questioned why it wasn't considered missed data and then I believe the discussion went on to what should have been missed data or coworker data. And I think at the last meeting NIOSH indicated that they had sent us something to look at for how they were calculating these doses. I could not find that. It was a separate file. I could not find that.

I'm a little confused by -- this team to know --

CHAIRMAN GRIFFON: Yes. Me, too.

MS. BEHLING: -- that's in there. So I guess I need clarification on this.

MR. HINNEFELD: So you want to know the evidence. I mean, our statement was that the person was monitored for the entire time. And so if the person was wearing a badge by the time he used missed dose and the actual measured dose, you don't worry about the monitored dose.

Your concern is, apparently there seems to be gaps for certain quarters where there is nothing written down. And what's our evidence that that means a zero versus unmonitored? Is that where we're at?

MS. BEHLING: I think so because initially -- but initially you admitted that, no, you did not consider that missed dose and you did recalculate this. You actually had to rework this case because you went back and took out the on-site ambient then. And I just remember there being some question as to, should this have been missed or should it have been unmonitored and I believe you were going to go in and reassess the case and provide some information to us.

But, first of all, I couldn't find the data that we were supposed to be provided.

MR. HINNEFELD: I think we just have the statement. I think we didn't put the statement in there, Kathy. I don't think we said anything.

CHAIRMAN GRIFFON: That was the document. We said there was more information. That was it. Right?

MR. HINNEFELD: I think that was it. In fact, I think the original, our May 30th -- said that the missed photon dose should have included the missing quarters of dosimetry data as well as the -- so already there's a judgment there that the person was monitored the entire time. Because if they're monitored at this point, you include them as dose. So there's a judgment there. And then that -- down.

So really the question is at what point or what is the evidence we have that the person was monitored is the question.

CHAIRMAN GRIFFON: So that was the question. If you look at the original resolution --

MS. BEHLING: It was. Excuse me. That was the original question.

CHAIRMAN GRIFFON: Revised based

on missed or coworker which implies --

MR. HINNEFELD: A coworker would be if there was a person exposed but not monitored. If they were monitored at zero or if they were reporting back this was blank and instead of zero. Then it would be also they were monitored. If that's the case, then it's a missed dose. The ambient is if the person was monitored and should not have been there.

MR. FARVER: How do you know if it's a missed dose or an unmonitored dose, I think is what --

MR. HINNEFELD: Okay. So, in other words -- and we've said it's missed because he was there for the whole time. But how do we know that?

MR. FARVER: Well, I'm just throwing it out there. There must be a way to determine that.

MR. HINNEFELD: Well, it's probably from our knowledge of the records at the site. But I think that's how we would

determine that.

CHAIRMAN GRIFFON: Somehow how it was done.

MR. HINNEFELD: Somehow we had to determine that these blanks don't mean not much or they mean zero. Somehow we must have made that conclusion.

CHAIRMAN GRIFFON: Right.

MR. FARVER: But once again I'm thinking of future cases that come across. How do we resolve this in the future?

MR. HINNEFELD: Well, it should be similar for the site. It was probably a site issue. It's probably not an individual issue. It's probably a site issue and had to do with the site reporting that.

MR. FARVER: Okay.

CHAIRMAN GRIFFON: It's K-25 or Y-12. I'm not sure which because --

MR. FARVER: And if that's the case which is fine is that going to get documented somewhere?

MR. HINNEFELD: I don't know. What do you mean documented somewhere?

MR. FARVER: Well, like a statement in the TBD.

MR. HINNEFELD: Okay. I see.

MR. FARVER: So that in the future if you go back you know that, okay, if this happens again this is missed dose or monitored dose, whichever it is. You just have it written down.

CHAIRMAN GRIFFON: Right. The things that I often found in those like DR instructions, you know, that for the Hanford dosimetry records if you see this in this field we now know that that means this. This is the same kind of thing you're talking about. Right?

MR. FARVER: Yes.

CHAIRMAN GRIFFON: Yes.

MR. FARVER: And I don't mind that.

CHAIRMAN GRIFFON: The practice of

Y-12 was to do this. So if you ever see that, yes. So we just need to know. Yes.

MS. BEHLING: I think for this particular case it would be prudent for us to also if we could look at NIOSH's rework of this case. I think it might be appropriate because this PoC was 46.5 percent and I just would feel more comfortable if we went back so I could really determine how this was reworked.

CHAIRMAN GRIFFON: Well, can you get access to that case on the --

MR. HINNEFELD: Well, since it wasn't sent to the -- it won't be on NOCTS. But this would be where it would be found. So we would have to put it together.

CHAIRMAN GRIFFON: That wasn't sent yet.

MR. HINNEFELD: Yes. Since we had to rework the case it wouldn't have been sent. It would just say this has been done this way. We wouldn't send a new dosing instruction to

the claimant that's not going to change anything.

CHAIRMAN GRIFFON: Got you.

MR. HINNEFELD: So I'll see. And it won't be a complete dose reconstruction. It will be the calculation in support of those reconstructions. So you won't have a whole report.

CHAIRMAN GRIFFON: That would be great. Yes.

MR. HINNEFELD: I'll see what I can get.

MEMBER MUNN: So the action is you're going to send additional information to --

MR. HINNEFELD: Yes. I'll send it to the Board because whenever I send anything to SC&A I also send it to the Subcommittee.

CHAIRMAN GRIFFON: So you'll provide --

MR. HINNEFELD: Pretty much I do that.

CHAIRMAN GRIFFON: Stu, I want to make sure I have the right wording for this because it's not the revised Dose Reconstruction report really. It was the --

MR. HINNEFELD: The revised calculation.

CHAIRMAN GRIFFON: Revised calculation. Thank you. And I have -- the other part of the action was that NIOSH will provide the information indicated how they determined that the individual was not -- throughout the time period.

MR. HINNEFELD: Right.

CHAIRMAN GRIFFON: What's the next one, Brad?

MEMBER CLAWSON: 135.4.

CHAIRMAN GRIFFON: Thank you. Tritium exposure reported by EE. CATI not considered the DR. NIOSH is going to follow up on the potential tritium exposures of -- don't know that we've made progress since then.

MR. HINNEFELD: That's a new one to me.

CHAIRMAN GRIFFON: Yes.

MR. HINNEFELD: I guess it was first identified in the CATI that they were exposed to it.

CHAIRMAN GRIFFON: Yes. Did they -- well, I would actually hope that they didn't, but did they give building information related to that?

MR. HINNEFELD: If they didn't, there's plenty there.

CHAIRMAN GRIFFON: Yes. We'll just leave it as your action. That's fine.

MR. FARVER: I don't believe so. They just indicated that there was an exposure to tritium.

MR. HINNEFELD: In CATI.

MR. FARVER: Yes.

CHAIRMAN GRIFFON: Right. Okay. 136.3. So you were going to follow up on that.

MR. HINNEFELD: Is this Rocky

Flats?

CHAIRMAN GRIFFON: I think so. Yes, it sounds --

MR. HINNEFELD: I don't have the answer here.

CHAIRMAN GRIFFON: So you originally didn't have films, right, when you --

MR. HINNEFELD: We originally had a record of the x-rays. As it turned out, it wasn't complete. There were additional films beyond that and I believe we got them. So I should be able to give you the answer to that on Rocky Flats.

CHAIRMAN GRIFFON: So no more information today on that?

MR. HINNEFELD: Nothing today.

CHAIRMAN GRIFFON: Okay.

MR. HINNEFELD: Unless Scott has -

MR. SIEBERT: I'm trying to find the ones where we looked that up and just seeing if I have that x-rays on my computer.

I think we're going to have to get back to you on that one.

CHAIRMAN GRIFFON: Okay. It looks like a large response.

CHAIRMAN GRIFFON: What is the next one? 136.4. I see they will follow up. It looks like this large response along with some files. Runs were forwarded. And actually that is -- I have those in my file, my folder, several case 136's. Well, Doug, I'm assuming you have these. Right?

MR. FARVER: Yes, I do and --

CHAIRMAN GRIFFON: Rocky Flats.

MR. FARVER: -- I'm going to have to just take a pass on this.

CHAIRMAN GRIFFON: Okay. I'm going to really --

MR. FARVER: Unless, Kathy, did you have a chance to look at these?

MS. BEHLING: I did look at them, Doug. But I have to admit, now that I'm looking through the NIOSH response again, I

would prefer to take a second look.

MR. FARVER: Okay.

CHAIRMAN GRIFFON: For our next meeting, I mean obviously we're seeing a trend here. We'll talk about the timing of the meeting, but I really do want to close out the sixth and seventh set even if we have some of these things like the TIB-0054. There are several of those. We may have to group those and --

MR. HINNEFELD: I almost -- we may want to get to this and may not -- and no need to decide now but we may approach you about a tentative conversation. I don't know. This is going to depend again -- I guess I've said this before but I guess I could say it again -- our work, you know, being us and everyone else's work on these prevents us from working on dose reconstruction completion and investigations of sites. I mean there are only so many of us and so we're --

CHAIRMAN GRIFFON: I understand.

But having these meetings where we just -- isn't very productive.

MR. HINNEFELD: Still the same thing.

CHAIRMAN GRIFFON: -- isn't very productive.

MR. HINNEFELD: I understand. I feel bad about this. This was part of my responsibility, because I could not get to this in the last two weeks.

CHAIRMAN GRIFFON: I know. It's just --

MR. HINNEFELD: And that's why Brant is doing it. He'll be taking care of that.

CHAIRMAN GRIFFON: Right. I understand. I mean and even if we for the next meeting try to prioritize on --

MR. HINNEFELD: On six and seven.

CHAIRMAN GRIFFON: Yes.

MR. HINNEFELD: Yes.

CHAIRMAN GRIFFON: Because they've

been hanging out there for quite a while.

MR. HINNEFELD: Yes, they've been there a while.

CHAIRMAN GRIFFON: Yes. And the same for Kathy. Doug.

MR. FARVER: Yes.

MR. KATZ: Yes. If we come to two weeks before a meeting and it's clear to either SC&A or OCAS that you're not going to be able to get a substantial amount of the work done, let me know.

CHAIRMAN GRIFFON: Yes.

MR. KATZ: We'll cancel the meeting instead of --

CHAIRMAN GRIFFON: Right.

MR. HINNEFELD: Okay.

DR. MAURO: This is John. One of the things that can be done when we're sitting, when we're in this situation, we're pretty well prepared for the eighth set. I noticed that we're having a hard time getting off of the sixth and seventh in the last

couple of meetings. So if there are things that are going to have to sort of stay in the parking lot on six and seven, that's fine. But we could make lots of progress on eight, I believe.

CHAIRMAN GRIFFON: Alright.

DR. MAURO: In other words, we don't have to close everything out of six and seven before we move on to eight unless you want to.

CHAIRMAN GRIFFON: No. I'm not proposing that. I'm just saying I think we can close them out for the next meeting and at this point we're almost through the seventh set. So we'll complete this.

But we do want to -- we should have plenty of time today, John, to hear from the Harshaw-Bridgeport Brass stuff and move through some of these. But I agree. Yes.

Alright. 136.5.

MEMBER CLAWSON: Basically it's tied back to the --

CHAIRMAN GRIFFON: Yes. This is tied back. Same thing. Okay. Sorry.

137.4 is the next one. NIOSH, this is a -- question. Thorium and technetium -- this question. Well, this was -- I remember some discussions around this one, too. Yes. And it is this overarching issue, too.

MR. HINNEFELD: That is the overarching issue.

CHAIRMAN GRIFFON: Right. So do we want to refer this to Jim Neton's Work Group on overarching issues?

MR. HINNEFELD: I think this should be going to the overarching issues. This goes from contaminated clothing.

CHAIRMAN GRIFFON: Exactly. Yes.

MR. HINNEFELD: I think that's going to be an overarching issue.

CHAIRMAN GRIFFON: Right.

MR. HINNEFELD: They are probably going to site --

CHAIRMAN GRIFFON: How you deal with it, yes.

MR. HINNEFELD: Yes. It will probably hit the -- this is probably going to be dealt with at probably a number of sites --

CHAIRMAN GRIFFON: Right.

MR. HINNEFELD: -- that I know of. Not all but some.

CHAIRMAN GRIFFON: Well, how do I -- there's no real work group on that.

MR. HINNEFELD: Well, we kind of have an overarching issues list. I can --

CHAIRMAN GRIFFON: NIOSH will add to overarching issues list.

MR. HINNEFELD: Yes.

CHAIRMAN GRIFFON: And assign Jim Neton to resolve this.

MR. HINNEFELD: Yes, he's got nothing else to do.

CHAIRMAN GRIFFON: In seven days.

(Laughter.)

Seven days sounds correct.

Let me ask. Now what about for this case, Stu? Is this a -- I mean is this a -- well, this is tricky because, you know, this is a skin cancer case. Depending on how you treat this it could really --

MR. HINNEFELD: Well, both of these are skin cancer.

CHAIRMAN GRIFFON: Yes, it has to be skin cancer case and depending on how you treat this issue you could have a pretty -- you know, we're just not sure on whether it's going to affect the outcome. Do you know what I mean? I'm getting to whether it could affect this case.

MR. HINNEFELD: Yes. You probably know what the Probability of Causation is.

CHAIRMAN GRIFFON: Yes.

MS. BEHLING: 42.9.

CHAIRMAN GRIFFON: Yes.

MR. HINNEFELD: Multiple cancers or a single cancer? Do you know?

MS. BEHLING: Three basal cell

carcinomas.

CHAIRMAN GRIFFON: Yes. I don't know that we could just say that it wouldn't affect.

MR. HINNEFELD: Well, you've got to -- probably a lot more.

CHAIRMAN GRIFFON: Yes.

MR. HINNEFELD: Forty percent, you're only two-thirds of the way there. You need half as much again risk in order to get to 50 percent. So it's going to have to be a pretty big increment of the assigned dose to get there.

CHAIRMAN GRIFFON: She said three cancers, right?

MR. HINNEFELD: Three cancers and three -- yes.

CHAIRMAN GRIFFON: And then we'll --

MR. HINNEFELD: The more complicated you can get.

CHAIRMAN GRIFFON: Assuming no

more are identified, too.

MR. HINNEFELD: Exactly.

CHAIRMAN GRIFFON: Right.

MR. HINNEFELD: Exactly.

CHAIRMAN GRIFFON: Well, I'm -- for purposes of this matrix, I think I can say that it's been shifted and I'll send a note to a nonexistent work group. But I mean, I guess I can document in writing to you, Stu, or Brant now or whoever.

MR. HINNEFELD: Brant, probably.

CHAIRMAN GRIFFON: Yes. That please add this to the overarching issues list and we'll track it that way.

MR. HINNEFELD: Yes.

CHAIRMAN GRIFFON: And it's gone from our list. Yes.

MEMBER CLAWSON: You were talking about does this affect this case.

CHAIRMAN GRIFFON: Well, I mean we'll have it on here to -- so it's not going to completely disappear because it's --

MEMBER CLAWSON: Okay. That's what I wanted to make sure.

CHAIRMAN GRIFFON: It's being transferred. It's being transferred, basically.

MR. HINNEFELD: Yes.

CHAIRMAN GRIFFON: Okay. I'm going to un-highlight that. Sorry. Alright.

137.6, solubility assumption. SC&A was going to review this one.

MR. FARVER: Yes, and then I believe what it comes down to is it just was not in the records that they considered Type F and Type M uranium.

CHAIRMAN GRIFFON: Okay.

MR. FARVER: Sometimes it is and sometimes it isn't.

CHAIRMAN GRIFFON: Right. This is that question of showing urinalyses. Yes.

MR. FARVER: They state that it's more claimant-favorable, but there's no documentation to say that it is. That's all.

CHAIRMAN GRIFFON: Okay. So it's closed.

MR. FARVER: Well, I wouldn't say that it's closed. It's -- how do you resolve this? In other words, you would like them to be in the records where they actually look at those cases, you know, Type M, Type F.

CHAIRMAN GRIFFON: Yes. Well, that is one of our findings, though, that question of case documentation.

MR. HINNEFELD: Yes, and I think there's probably some stuff to be said. I mean, I kind of hesitate saying, show all your work in the supporting documents, but in this case we have actual IMBA runs. We have actually a discreet, clearly a piece of work that you use in deciding what to do on the dose reconstruction. That's probably --

MR. FARVER: I mean if you're going to make that statement and you have a choice of several solubility types you should probably show that that is --

MR. HINNEFELD: If you're choosing one that's most favorable you should provide the evidence as well.

CHAIRMAN GRIFFON: I mean, I would argue --

MR. FARVER: Sometimes they do.

CHAIRMAN GRIFFON: This is my opinion but if you're in that situation a lot of times with internal dose where you're making that judgment or whatever it seems like it would make sense to document.

MR. HINNEFELD: Certainly it's the decision. The decision is based on the one that's most claimant-favorable. It would seem that you would have to run them all to know which one was more claimant-favorable.

CHAIRMAN GRIFFON: Right.

MR. HINNEFELD: And since you ran them all to show which one is most claimant-favorable just stick them in the folder.

CHAIRMAN GRIFFON: Right.

MR. FARVER: And sometimes it

comes down to millirems' difference.

MR. HINNEFELD: Yes.

MR. FARVER: Between the two and we'll see that in the files. That will show that and that's fine.

MR. HINNEFELD: Yes.

MR. FARVER: They don't even have to show all the IMBA runs. What they'll do is they'll show the final outputs and they'll put them together in a spreadsheet.

MR. HINNEFELD: Of the printouts of them.

MR. FARVER: Yes, and you can actually see the totals. That's fine.

MR. SIEBERT: I believe this is going to be an older issue that you're going to run into. Present day, I believe we do tell them to keep all their work and put it in the file because we've had this discussion many, many times.

MR. FARVER: Sure.

CHAIRMAN GRIFFON: Yes. Okay.

MR. HINNEFELD: So can we -- do you want us to go back and -- chances are we're going to have to recreate these IMBA runs. In order to show them, we're going to have to recreate them, because if they weren't saved originally, chances are we're not going to have them or at least retrieve them. So we could either close this now saying that now we are showing our work or we could recreate these IMBA runs and show this was in fact most favorable.

CHAIRMAN GRIFFON: I think we -- I mean my -- it is one on my -- on the case findings is one of the things that I've mentioned as -- to show the work question.

MR. HINNEFELD: And I think we're doing it going forward.

CHAIRMAN GRIFFON: Yes.

MR. HINNEFELD: But certainly in a case like this --

CHAIRMAN GRIFFON: I know. The question is retrospectively and for your

archival records.

MR. HINNEFELD: Yes. But with these do we want to go back? I mean I would not propose that we go back and do it for all the claimants that are out there because we don't even know which ones they are.

CHAIRMAN GRIFFON: Right.

MR. HINNEFELD: I mean we could do it for this one. You know, we could recreate the IMBA runs or not. And we could go with it's really a show-your- work issue. You know, since you made the finding here, I guess it's just a matter of recreating the IMBA.

CHAIRMAN GRIFFON: Yes, but I also -- go ahead.

MEMBER MUNN: Is it not adequate just to say that the other ones were done, but were not at that time?

MR. HINNEFELD: That's kind of what we said.

MEMBER MUNN: And as you've already said, Mark, in your report, that's a

positive finding for actions that have resulted from our deliberations here --

CHAIRMAN GRIFFON: To make changes --

MEMBER MUNN: -- of the changes --

CHAIRMAN GRIFFON: They have at least indicated that they've made those changes, right.

MEMBER MUNN: Yes.

MR. HINNEFELD: Okay. On the other side of the coin -- I hate to argue against that -- the Subcommittee is reviewing this dose reconstruction.

CHAIRMAN GRIFFON: Right.

MEMBER MUNN: This specific one.

MR. HINNEFELD: And was this one done correctly?

MR. FARVER: Alright. And we don't --

MR. HINNEFELD: So in order to make that judgment you want to know can we see the IMBA runs to actually show that this

selection was appropriate.

MEMBER CLAWSON: Personally myself, I feel like they have to go back and show the IMBA runs and then SC&A review those.

MR. HINNEFELD: Okay.

CHAIRMAN GRIFFON: No, but I mean the question -- I think the other question is, a larger question that we're going to have to wrestle with is, if we as a Board ask for more and it may be -- I mean I can think of different sorts of outcomes from this. But one thing might be that if you have for best-estimate cases, you know, it's sort of like that quality control question that we talked about, Stu.

MR. HINNEFELD: Yes.

CHAIRMAN GRIFFON: Where the different levels of, you know, if you have peer reviews and they weren't important. So you didn't change the case. You note that.

MR. HINNEFELD: Yes.

CHAIRMAN GRIFFON: So the same

kind of thing that if you had an overestimating case or an underestimating case maybe it wouldn't be -- retrospectively, I'm not sure we would ever ask it again. But for some cases we may say it's important for the archival record to go back and add the --

MR. HINNEFELD: And since we're here, since you're reviewing this one, I think the easiest thing other than the discussion is for us to go and recreate the IMBA.

CHAIRMAN GRIFFON: Oh yes, for this one. Yes. But I'm thinking the global implications, you know.

MR. HINNEFELD: Okay. Beyond anything that's specifically in front of you.

CHAIRMAN GRIFFON: Yes.

MR. HINNEFELD: Okay. Well, that's up to you.

MR. FARVER: And what I'd suggest is that if you want to include the IMBA runs, fine. But I would just put it, you know, paste the --

MR. HINNEFELD: The IMBA results.

MR. FARVER: -- IMBA results so you can show that one's higher than the other.

MR. HINNEFELD: Yes.

MR. FARVER: And the other concern is, is it documented now in a DR instruction or somewhere that they include all their solubility classes or like you said show your work?

MR. HINNEFELD: I don't know. Scott, can you answer that?

MR. SIEBERT: I do not believe so. I mean we've all been instructed, but I don't know if there's an overarching dose reconstruction procedure that covers that kind of thing.

MR. FARVER: You might want to put --

MR. HINNEFELD: You may want to think about that.

CHAIRMAN GRIFFON: Yes, you may want to document it.

MR. FARVER: Because it will come up again. That way if it's documented somewhere you can say, ah, you didn't follow your procedure.

CHAIRMAN GRIFFON: Right.

MR. FARVER: Your procedure or -- so we don't have to go through this every time.

MEMBER MUNN: So is our action here twofold, 1) that they will document this specific case and, 2) that they will document where in their instructive process future cases will be documented as a matter of course?

CHAIRMAN GRIFFON: Yes. I think that makes sense.

MEMBER CLAWSON: I think there was something else besides; you know the IMBA runs and so forth like that. But as we've progressed on further, they've done the process different ways and there was just documentation of their work is what it came

down to if I'm correct in how did they reach this. Remember we used to have some earlier processes and you guys reconstruct their -- because you didn't know what --

MR. FARVER: Didn't know how they did things.

MEMBER CLAWSON: Right. That was one of the biggest parts right there with just showing their work of how they came to this point.

MR. FARVER: Right, and that's just part of it.

MEMBER CLAWSON: Right. I just wanted to make sure we didn't miss that other little part.

CHAIRMAN GRIFFON: So, Stu, are you -- do you want to check into where this --

MR. HINNEFELD: What I will do --

CHAIRMAN GRIFFON: -- whether this is documented?

MR. HINNEFELD: Check in to where, you know, how the --

CHAIRMAN GRIFFON: Yes. I don't want to here just say that NIOSH --

MR. HINNEFELD: What I said is that we would --

CHAIRMAN GRIFFON: -- provides a policy.

MR. HINNEFELD: We will consider where in our procedures, etc., we should not give them the work thing.

CHAIRMAN GRIFFON: Okay and that closes it for this case, though.

MEMBER MUNN: Does it?

CHAIRMAN GRIFFON: Well, maybe it's not closed.

MR. HINNEFELD: Probably not closed until we show you the other.

CHAIRMAN GRIFFON: I guess you have to show us where you're going to do it. Yes. Okay.

MEMBER MUNN: And redo the IMBA runs.

CHAIRMAN GRIFFON: Yes. Well, I

thought they had kind of redone it. It was just a matter of posting them, but maybe not.

MR. HINNEFELD: I don't know. We might have.

CHAIRMAN GRIFFON: Alright. We'll keep it open. What the heck. Okay.

137.7. We don't have many more. There are only a couple more yellows.

MR. HINNEFELD: I don't think that we've done our part on 137.7.

MR. FARVER: Well, Kathy, have you looked at this?

MS. BEHLING: No, I was actually thinking I was waiting for something from NIOSH.

MR. HINNEFELD: So, yes, you want to see the --

MR. FARVER: Okay. I see.

CHAIRMAN GRIFFON: We'll look into recorded urinalysis results greater than the MDA for some products which were not addressed.

MR. HINNEFELD: Well, there is -- are these possibly the results of MDA for fission products in the Y-12 mobile counter?

CHAIRMAN GRIFFON: I guess so. No, it says urinalysis. So I guess --

MR. HINNEFELD: Oh, urinalysis. Okay.

MS. BEHLING: The whole body count?

MR. HINNEFELD: Urinalysis okay. Alright.

MR. FARVER: And I believe, Hans, somewhere along the line didn't you use a reference for the Y-12 mobile counter and we couldn't find the reference?

CHAIRMAN GRIFFON: Yes, well, that's what the second part of that action was post the reference.

MR. FARVER: I don't know what the name of it was.

MEMBER MUNN: That was provided.

CHAIRMAN GRIFFON: Yes.

MR. FARVER: It is?

CHAIRMAN GRIFFON: Yes. That's in there. Okay.

Alright. Then I think we're on the last one here for this set, 137.8.

MS. BEHLING: Yes, I looked into this one. Initially, the employee identified in this CATI report said he felt that he was doing work where he had face and arm burns, and from dust, and NIOSH did provide us with a response indicating that they do have an approach that they can use for calculating skin contamination involving tech-99. However, they felt that in this particular case they were questioning what the basis was for this individual or for us believing that he potentially did have a skin contamination.

And I went back through all of the records and I still in my gut feel that in this particular case this individual, based on his work location and his job function, could have been exposed or could have had skin

contamination that would certainly affect this particular case. It's just a gut-level thing and just based on the data. I just can't dismiss that there possibly shouldn't have been a skin contamination dose calculated.

CHAIRMAN GRIFFON: Is this Paducah?

MS. BEHLING: It's Paducah, yes.

MR. HINNEFELD: And is this a situation where there's nothing in the record that necessarily indicates the skin contamination? But based on the type of work that that person did you feel like there's some likelihood that there was a skin contamination.

MR. FARVER: In the statements in the CATI report.

MS. BEHLING: Statements in the CATI, yes. Nothing to report any incident in the DOE records, but just where he worked, the jobs he did and information from the CATI.

MR. HINNEFELD: Well, this to me

is an issue we talked about a number of times which is what do you do in a situation where a person may have been skin contamination in their workplace and there's nothing that indicates that they did. There's no reporting or they may say in the CATI, this stuff was all around. Of course, we got it on our skin, you know, something like that, which somebody from Fernald would probably say. And what do you do about that? And what kind of dose calculation do you do in that situation?

So we've had this discussion before. I don't think we've gone anywhere with it.

CHAIRMAN GRIFFON: Yes, I know.

MR. HINNEFELD: But I think it's probably an overarching issue.

MR. FARVER: We'll see in the eighth set, there's a somewhat similar case and you do a skin contamination.

MR. HINNEFELD: Okay. I wondered how we did it.

CHAIRMAN GRIFFON: That might answer the question.

MR. FARVER: So it's not exactly the same but it's similar. It's information on the CATI report that leads to NIOSH doing a skin dose.

MR. HINNEFELD: Okay. We'll have to watch so we can see. Just on that, it's just on the general sense. I mean if a person says, my skin was contaminated. You know they monitor me and I was contaminated on such at this building and it was about this year, you know, that's pretty specific and there might be something you would do in that case.

If a person says, the stuff was all over the place. There was dust all over the place. I'm sure we have it on our hands.

CHAIRMAN GRIFFON: It depends on what you --

MR. HINNEFELD: That's another thing, too.

CHAIRMAN GRIFFON: Yes.

MR. HINNEFELD: So it all depends on what you're going to say is the evidence of the skin contamination and even then, I have to see what we did because I don't understand how we did that exactly.

CHAIRMAN GRIFFON: And then the other -- I mean there's an overarching question. But there also may be another answer which you know could lead you to say we can't reconstruct, you know, or there's a strong potential during this time period in these areas that beta doses were high and we can't reconstruct them because we don't have the data. I mean that's --

MR. HINNEFELD: Could be.

CHAIRMAN GRIFFON: Yes.

MR. HINNEFELD: Of course, as a class --

CHAIRMAN GRIFFON: Yes, that's a --

MR. HINNEFELD: -- based on skin dose --

CHAIRMAN GRIFFON: I know. That would be interesting.

MR. HINNEFELD: -- compensated in the file.

CHAIRMAN GRIFFON: I know. I know.

DR. MAURO: The irony of that is that --

CHAIRMAN GRIFFON: Yes, we've got it.

DR. MAURO: -- is you do an SEC, but the trigger that leads you there, you don't compensate skin cancer. It's sort of ironic.

CHAIRMAN GRIFFON: Yes, we just said it. Yes.

(Laughter.)

There's a lot of ironies in this program.

MEMBER CLAWSON: One of the things to match on this though is that there wasn't something reported. You realize per about

1985-1990 a lot of this was not reported unless it was a major incident. You'd go clean up. Bottom line, if you were contaminated, you would just go clean up.

MR. HINNEFELD: Sure. Yes.

MEMBER CLAWSON: No big. Just the way you'd do it. So you can tell in the later years when they actually had a procedure if this does happen that it's reportable.

MR. HINNEFELD: Once the DOE published current reportable criteria for skin contaminations, then everybody got more careful about reporting them. You're right.

MEMBER CLAWSON: Right.

MR. HINNEFELD: And realistically if you're working today and you get contaminated and you get cleaned up at the end of the day, you're not getting much dose but skin contamination. So I mean if it's that kind of situation I don't know that it's that bad.

I think the issue might be what

about cases where people didn't necessarily clean up or didn't get detected. They didn't necessarily get cleaned up at the end of the day. That's probably where it might be a relevant issue because of one day unless you're -- well, you guys may have had this. I don't know. But there would be a very limited number of spots where you're going to get significant dose in one-day contamination. There's going to be a limited number.

MEMBER CLAWSON: That's from experience. I can't talk about that.

MR. FARVER: But even something like that would be useful to document because I believe like at the uranium plants I believe the policy was that when you leave the area you wash your hands.

MR. HINNEFELD: Shower.

MR. FARVER: Or shower. At the end of the day, you'd shower.

MR. HINNEFELD: Yes. At the end of the day, shower.

MR. FARVER: So if you could actually show that if you did shower at the end of the day, the most you could have it on is so many hours and this would be the dose.

MR. HINNEFELD: So it essentially would be sort of policy that says that's done and that's not something --

MR. FARVER: It's either a concern or not a concern.

MR. HINNEFELD: That's something that needs a little further discussion than just meeting down here.

DR. MAURO: We had this discussion as it applied I think to places like Paducah and there was some discussion on this matter and SC&A's position always has been if there's a work setting like a Paducah or Portsmouth where there's a real potential for airborne particulate -- in this case it would be uranium -- and if you have that potential and a person has a skin cancer that's on a possibly exposed portion of the body, the

face, neck, ears -- we've had those -- we ran some calculations with our skin. Say, okay, let's assume this guy has -- and we had different particle sizes. You know, we did it parametrically and you're right. When it comes to uranium, if you assume that the little spot on the guy's neck where the skin cancer was found, you know, beside the beta dose that you would assign from his beta dosimeter, you add to that some localized dose for eight hours that he just happened to have a particle land and he's exposed for that, you can do that calculation. And then we were talking about it, but you wouldn't assume that would happen every day. You know, what's the chance that that same spot every day would get contaminated.

So what I'm getting at is that there are ways of coming at the problem and I would agree that when it comes to uranium, I think our numbers showed that an eight-hour exposure to uranium particle on the skin is

not going to be that great.

But I mean we had lots of discussions about this and I believe it was the intent of NIOSH to look into this matter. But I don't think it's gone that far and I think it's a very important matter because time and again I know I comment. I deal with a lot of AWE facilities and when I see a skin cancer it's always one of my comments. You know, here we have an AWE, lots of grinding of uranium, that sort of thing where the particles have become airborne. These are early years. A person has a skin cancer on his arm or his face or his neck. But we've really never achieved closure on any of those.

CHAIRMAN GRIFFON: Correct. I left this as an action for this case and said that there is a potential that it will be moved to the overarching issues. But I think there's that job question hanging out there with this one, too, you know, that is there a likelihood of this person was in an area where

it could, where he/she could, have received higher beta exposures.

MR. HINNEFELD: Yes. I think just based on the count, you know, probably our own observations and accounts of some places, there were probably some places where there were some skin contamination was just expected and then washed off at the end of the day.

CHAIRMAN GRIFFON: Yes.

MR. HINNEFELD: And some of those are probably worse than others.

CHAIRMAN GRIFFON: But you did note -- I don't know this person's job, but you did note in your response that there is some buildings that had the potential for higher levels of the --

MR. HINNEFELD: Plus at Paducah there was some high level of tech and stuff.

CHAIRMAN GRIFFON: Tech, yes. Tech is one of them, yes. So we'll leave it as an action for this committee right now with the potential that they'll slide it into the

overarching.

Alright. And is that it for the seventh set? I think it was.

MEMBER MUNN: Looks like it.

CHAIRMAN GRIFFON: Yes. So I think we're at a good point to break for lunch.

DR. MAURO: Say, Mark.

CHAIRMAN GRIFFON: Yes.

DR. MAURO: This is John. Could I -- before we break for lunch could I make what I hope is received as a positive, constructive criticism. When we're in the home stretch like on the sixth set and on the seventh set before we, let's say, jump into the real big, say the eighth, ninth, tenth and we're at a point where there are five, six, seven, ten issues that need to be driven, one of the things we're fortunate enough to do on the Procedures Work Group is a few weeks before the meeting Steve Marschke sort of pokes everybody, everybody at SC&A. And I believe

he even interacts with some folks over at NIOSH to say listen, we're coming to an upcoming meeting. There are a number of action items that we discussed three months ago, two months ago, where SC&A would do this and NIOSH would do that and he sort of takes it on himself to sort of annoy everybody and say, listen, we have an obligation to address. We have some action items here that we committed to at the last meeting. And he sort of pushes it and tries his best to get everyone to respond, gets in touch with Joyce, gets in touch with me and the other members of our team and pushes us to write our response so that he brings to the table at the meeting material.

Otherwise, we're all otherwise engaged and we don't really --

CHAIRMAN GRIFFON: So I should have poked earlier than Monday, is what you're saying.

DR. MAURO: Yes. In other words,

yes.

(Simultaneous speakers.)

CHAIRMAN GRIFFON: Well, I did send you a revised matrix about a month ago.

DR. MAURO: Yes, but it might be a good idea not necessarily, I mean, to have someone, whether it's an SC&A person or a NIOSH person, to sort of go back and see everything we just did over the last three hours.

CHAIRMAN GRIFFON: Right.

DR. MAURO: And let's say it's all recorded. We have it all. But one of the things that might be helpful is, two or three weeks before the next Subcommittee meeting that person would sort of take it on himself to just poke everyone to say, listen, we have an action item here, and that would go for both sides. You know, I know that it really helps us a lot on the Procedures Work Group meeting where I know Steve Marschke who does that.

Now, of course, it's a little easier from Procedures because we don't have very many new procedures we're reviewing while we're inundated, all of us, with ongoing review of DRs. But, still, I think a little bit of that kind of thing might really help us move through these quicker.

MR. KATZ: John, I mean I think this -- Kathy, to volunteer you. I mean I think this is something you could probably do. I would just say two weeks is probably not enough. You would probably want a month ahead of the meeting. No? Don't you think, Mark, to -- if you're going to sort of lay out the action sheet.

CHAIRMAN GRIFFON: The problem I'm finding is, you know, I sent out the matrices. I forget what date, but it was a while ago. It's been a month.

MR. FARVER: I got ours two days ago.

CHAIRMAN GRIFFON: You got the

matrices two days ago.

MR. FARVER: Yes. On the third.

CHAIRMAN GRIFFON: That's a management problem then.

DR. MAURO: No, I don't necessarily think that. It's a matrix problem. I think, Mark, you're putting out the matrix and that's fine.

CHAIRMAN GRIFFON: Yes.

DR. MAURO: But we just had a meeting and we all know we should all be here taking notes. We should know where all the action is on the sixth and seventh cases.

CHAIRMAN GRIFFON: Right.

DR. MAURO: And if someone were given the responsibility to say, listen, make sure that action is taken as we committed to on both ends.

CHAIRMAN GRIFFON: Yes.

DR. MAURO: And initiate that.

CHAIRMAN GRIFFON: This can be done, John. I agree. But you can also -- I

mean, we're all professionals here. You can go into Outlook and put a tickler for three weeks out from the Subcommittee meeting and say, oh, yes. Mark said all those yellow highlighted ones. I'd better go back and look at those.

DR. MAURO: And it may be as simple as that. You're right.

CHAIRMAN GRIFFON: I can do that, but I get a little busy myself and I don't feel like I have the time to -- David, you know -- hassle people to get responses done.

MR. KATZ: I don't think you need to do it, Mark. But I think it's good. I mean I think it could be effective to just have the list of the to-dos not buried in the matrix but just in a line listing. OCAS' to-dos with the references.

CHAIRMAN GRIFFON: Yes.

MR. KATZ: And SC&A's to-dos with the references. It would just make it easier because everybody has too many balls in the

air.

CHAIRMAN GRIFFON: Yes. I know.

MR. KATZ: And that's what happens.

CHAIRMAN GRIFFON: I suppose. I just thought the yellow highlights; they stand out pretty easily when you scan through it.

MR. KATZ: If you're reading through your matrix at that time.

CHAIRMAN GRIFFON: Yes.

MR. KATZ: This just puts it in front of people. I don't know. I think it's a minor step administratively to pull them out.

CHAIRMAN GRIFFON: Yes, it's fine with me.

MR. KATZ: And I think it would make things just very clear then that three weeks in advance or whatever, a month in advance.

I don't know. John or Kathy, does that sound okay to you to just actually

extract those?

DR. MAURO: I think it's needed and the person that I think is the best position to do it and here we go is probably Kathy.

CHAIRMAN GRIFFON: Yes.

DR. MAURO: You know she's got the big -- the bird's eye view of the whole thing and I could see -- Kathy, would you mind taking that on?

MS. BEHLING: No, that's fine. I'm willing to do that.

DR. MAURO: Great.

MS. ADAMS: This is Nancy Adams. Are you, John, suggesting, too, that she ought to look at the transcript before or the matrix is just enough?

DR. MAURO: I think the fact that she's on the line right now she could move on this. Of course, when the matrix, when the transcript comes out, that would be helpful because I am assuming the transcript will come

out well before the next meeting and the main thing is we could just tickle a tickler for everyone at least a month before the next meeting because many of these items I get the sense that if someone would just put aside an hour or two --

CHAIRMAN GRIFFON: Yes.

DR. MAURO: -- they probably could put this to bed, write up a little White Paper and response and have it all ready for the meeting and say, yes, we've looked at this and here's our position or even provide it before the meeting. In other words, it's just a relatively small step. So the answer is I think we could work from a transcript especially if it's out pretty quick. I understand the transcripts are put out on about a month cycle.

CHAIRMAN GRIFFON: I don't even -- I don't know why you have to work from a transcript. I mean it's --

DR. MAURO: I agree.

CHAIRMAN GRIFFON: It can be used as backup, but I think the matrix is --

MR. HINNEFELD: Or from our notes from the meeting.

CHAIRMAN GRIFFON: The matrix and from Kathy's notes.

DR. MAURO: I agree. Either way.

CHAIRMAN GRIFFON: And so Wanda just slipped a note that I did forward the matrices on 10/13 to everyone. So in my -- it's not my -- that's a problem internally, but I sent them out to SC&A, NIOSH and all Committee members on 10/13 and that's about three weeks in advance.

DR. MAURO: And that's great, but you could see without someone cracking the whip, it doesn't happen.

CHAIRMAN GRIFFON: I know what you're saying and that's fine. If Kathy wants to take on that task, that's fine.

MR. KATZ: Let's do that.

CHAIRMAN GRIFFON: Yes, that's

fine. Okay. Alright. On that note, we'll break for lunch. Kathy, can you get a list of to-dos for -- no, just kidding. Alright. I think we're going to break for lunch for one hour. So 1:20 p.m. Off the record.

(Whereupon, the above-entitled matter went off the record at 12:20 p.m. and resumed at 1:25 p.m.)

A-F-T-E-R-N-O-O-N S-E-S-S-I-O-N

(1:25 p.m.)

CHAIRMAN GRIFFON: On the record. Okay. We're ready to reconvene. Kathy and Hans, are you guys on the line?

DR. BEHLING: We're here.

CHAIRMAN GRIFFON: Okay. Great.

MR. KATZ: And, Mike Gibson, are you back with us?

MEMBER GIBSON: Yes, I'm back.

MR. KATZ: Great.

CHAIRMAN GRIFFON: Okay. I was just -- so we closed out the sixth and seventh sets. I was just wondering at this point. I wanted to discuss the issues identified in the first 100 cases. But I thought just for scheduling purposes we might go on to the eighth set and talk about those two mini site profiles. I think this would probably be a good point so that then -- because I know, Hans, you're involved in that and I don't want to hold you on the line waiting for when that

might come up on the agenda.

DR. BEHLING: Okay.

CHAIRMAN GRIFFON: So if you would prefer, I mean we can do that right now if that's --

DR. BEHLING: That's fine and, in fact, if it turns out that Bridgeport Brass is the first one we'll discuss, Harry Chmelynski was one of the chief -- with some of the issue that were raised.

DR. MAURO: Yes, I would prefer that, too, because I do have to bail out of here about a quarter to four or so.

CHAIRMAN GRIFFON: Alright. Why don't we do that then? Either order you prefer just --

DR. MAURO: Bridgeport Brass would be the one that --

CHAIRMAN GRIFFON: Alright.

DR. MAURO: -- I'd like to go first.

CHAIRMAN GRIFFON: Alright. Let's

go to Bridgeport Brass then and give us a second to pull these documents open. We're all going to find what you sent out.

DR. MAURO: Okay.

CHAIRMAN GRIFFON: It should be the ones I sent this morning. Yes. Bridgeport Brass is actually a Word file.

MEMBER CLAWSON: Is it White Paper Bridgeport TBD?

CHAIRMAN GRIFFON: Yes.

MS. BEHLING: I actually do have a PDF version of that if you would like me to send that out.

CHAIRMAN GRIFFON: I think it's okay for now. Yes.

MS. BEHLING: Okay.

CHAIRMAN GRIFFON: And just to get our bearings, John, this is listed at the end of the matrix. Is that correct?

DR. MAURO: The matrix right now, the Bridgeport Brass portion of the matrix --

CHAIRMAN GRIFFON: Can you speak -

-

DR. MAURO: -- is on page 56 of 74.

MS. BEHLING: It's Attachment 1 at the end of the eighth set.

CHAIRMAN GRIFFON: Right.

DR. MAURO: Yes. Let me help out a little bit. The actual review of Bridgeport Brass as a formal deliverable was part of the big three-ring binder eighth set and it's Attachment 1 at the back of that.

CHAIRMAN GRIFFON: Right.

DR. MAURO: However, your matrix that you sent out also contains it and it's part of the matrix. It comes right after -- in other words, you have your sequence of case numbers.

CHAIRMAN GRIFFON: It's on page 56, right?

DR. MAURO: It's on page 56.

DR. BEHLING: Yes. Page 54 is the Bridgeport Brass.

DR. MAURO: Okay. Maybe the way we printed it out.

CHAIRMAN GRIFFON: Yes.

DR. MAURO: It's after -- in other words, you're going through Case number 178.

CHAIRMAN GRIFFON: Yes.

DR. MAURO: And then the next string then begins the attachments, Attachments 1, 2 and 3. So the two places that we could work from, one is the actual big, thick three-ring binder with Attachments 1, 2, and 3 or we could work from the matrix which, of course, captures it in summary form.

MEMBER MUNN: Since I don't carry the big three-ring binder around and since --

CHAIRMAN GRIFFON: Yes.

DR. MAURO: And that's okay. We can give you the 30-second sound bite on each one and I think these can move pretty quickly.

MEMBER MUNN: Yes.

CHAIRMAN GRIFFON: Yes, and you can expand as you need to. That's fine. This

would be a good overview for us I think for these. So go ahead. Start with Bridgeport Brass. Everybody has the matrix opened and we also have your White Paper on the topics.

DR. MAURO: Good. I'll sort of start off, but, Harry Chmelynski and Hans, we were all very much a part of this.

So let's start off with the first item. The first issue has to do with -- the statement is made that the site profile would benefit from additional analysis demonstrating that the full value intake rates adopted in the exposure matrix are claimant-favorable for the early operational time period. Bottom line is this. This is Finding Number 1 and it turns out when you look at the data, the urinalysis data, that Bridgeport Brass consists of two different facilities, one in Connecticut and one someplace else. And it's the Havens Laboratory and the other one is the Adrian Plant.

The problem is on this issue --

this is what we raised -- is that it appears that for the Adrian Plant there is a lot of urinalysis data beginning, it starts to build, in 1960. But prior to that, it seems to be very sparse and the approach that's used to reconstruct doses in the generic matrix for Bridgeport Brass for the Adrian Plant is where they compile all these data and then they use that data, bioassay data, that's available and from that develop a coworker model that they assign to the workers.

Our concern is that the coworker model for Adrian Plant was built from data which was post-1960 urinalysis and there's some question whether it has applicability to pre-1960 time period and that's the question we raised.

CHAIRMAN GRIFFON: What's the -- John, if I can interrupt, when is it? Pre-1960, but does it go back to what date?

DR. MAURO: Yes, let me see the dates. I have to check to see when they --

the introduction here.

CHAIRMAN GRIFFON: Okay.

DR. MAURO: I would have to go --

CHAIRMAN GRIFFON: Fifty four --

DR. MAURO: Yes. It started -- the Adrian, the history of the site, it started before. Yes. The exact date I don't have handy unfortunately.

MEMBER CLAWSON: Havens Lab was June 1952 and the Adrian Plant was May 1954.

DR. MAURO: There you go. Thank you.

CHAIRMAN GRIFFON: Yes.

DR. MAURO: So we got ourselves a five-, six-, seven-year period, whatever, yes, there's a paucity of bioassay data and the question becomes can you use the post-1960 data, urinalysis data, as a reasonable surrogate for the pre-1960 data for the Adrian Plant. And that was the question. And in the matrix, there is a response. NIOSH said that they're going to look into that. So my

understanding is that's where we are right now on this issue.

CHAIRMAN GRIFFON: Let me get some help on that. I don't see anywhere a NIOSH response. Do I have --

DR. MAURO: Well, I'm looking at that yellow marker on the yellow mark.

MR. FARVER: That's in the file I sent you, John. That's not in the file that Mark sent you.

DR. MAURO: Oh.

MS. BEHLING: There was a separate file.

DR. MAURO: Okay. We're looking at different files.

MR. FARVER: Yes. NIOSH did send out responses back in the spring and I just put them into the matrix to send them off to John and Hans so they would have those to look at.

CHAIRMAN GRIFFON: Do you know what they sent those under because I didn't

have the matrix obviously.

MR. FARVER: Well, they sent them as a matrix, but this is where everyone sent in different matrices.

CHAIRMAN GRIFFON: Oh.

MS. BEHLING: There was a file named Response to NIOSH Comments on Bridgeport Brass Matrix. No, that must not be it.

DR. BEHLING: Kathy, these are the responses right here.

CHAIRMAN GRIFFON: I don't have any such file.

MR. FARVER: I know there was one that Stu sent earlier in the year.

DR. BEHLING: The response I read here in the matrix is that -- and I quote in NIOSH's response, additional analysis of this finding is necessary and will be provided upon completion.

DR. MAURO: Yes, that's what I have also.

MR. FARVER: Yes, that's in the

file that I sent you.

DR. BEHLING: And that is dated June 4, 2008.

CHAIRMAN GRIFFON: June 4th, okay. June 4, 2008?

MEMBER MUNN: 2008?

DR. BEHLING: No, I'm sorry. I'm looking at the wrong side of the table. It's working draft January 26, 2009.

CHAIRMAN GRIFFON: Okay. Yes, I still have that.

MS. BEHLING: Probably somewhere in the March-April 2009 time frame.

CHAIRMAN GRIFFON: I've got a March one though and I didn't see --

MR. HINNEFELD: It's about January 26th of '09?

CHAIRMAN GRIFFON: Do you have the full file name?

MR. HINNEFELD: Yes, I've got what I called it. It starts with the Matrix Determination Report Rev 0 January 26 '09 with

Disclaimer. And so it's got that, you know, the disclaimer on the top document contains pre-decisional stuff.

CHAIRMAN GRIFFON: That's the file name or is that --

MR. HINNEFELD: No, that's all in the file name.

CHAIRMAN GRIFFON: I don't have that one.

MEMBER MUNN: We're still on Bridgeport, right?

CHAIRMAN GRIFFON: Yes, we're trying to find this.

MR. HINNEFELD: Yes.

CHAIRMAN GRIFFON: We're trying to find this --

MR. HINNEFELD: I'm looking when we sent this.

MEMBER MUNN: I have two transmittals.

CHAIRMAN GRIFFON: I'll add those into the current matrix, but I don't have

those. So I must have overlooked it if I received it or --

MEMBER MUNN: I have Bridgeport -- review White Paper April 16th.

MR. HINNEFELD: Do you want me to send it to your government emails?

CHAIRMAN GRIFFON: To my regular.

MR. HINNEFELD: Regular email.

CHAIRMAN GRIFFON: Yes.

MR. KATZ: Only the Board members use their government emails.

CHAIRMAN GRIFFON: I'm not so good at it yet.

MEMBER MUNN: So this is SC&A's follow-up that we're looking for, right?

CHAIRMAN GRIFFON: We're looking for NIOSH's response on this Bridgeport.

MEMBER MUNN: Okay. What I've got is SC&A's follow-up to NIOSH's responses. That was sent in April. That's what we're looking at.

CHAIRMAN GRIFFON: That's pretty

good. You got an SC&A response.

MEMBER MUNN: Yes. That's the document that --

CHAIRMAN GRIFFON: Is it a matrix or a separate --

MEMBER MUNN: No, it's a White Paper.

CHAIRMAN GRIFFON: Oh.

DR. BEHLING: Now, Wanda, what you're looking at is the most recent White Paper.

MEMBER MUNN: Right. That's what I was looking at.

CHAIRMAN GRIFFON: Those haven't --

(Simultaneous speakers.)

MEMBER MUNN: That's what I was looking at to begin with and there's supposed to be something back from NIOSH before that.

CHAIRMAN GRIFFON: Before that, yes, and that's what I'm not finding. But it must be out there and I just didn't include it

in the matrix. I apologize.

DR. MAURO: This is John. Where are we though on this? Right now, has there been a response to that issue by NIOSH?

CHAIRMAN GRIFFON: No. We're just trying to -- bear with us.

DR. MAURO: Okay. I just wanted to make sure I wasn't missing something.

CHAIRMAN GRIFFON: Bear with us. We're just trying to find NIOSH's initial response.

DR. MAURO: Okay.

MR. HINNEFELD: Just that we needed to --

CHAIRMAN GRIFFON: Just so I can get the file and update this matrix and then we'll let you continue on your at least preliminary presentation.

DR. MAURO: Okay. Yes.

CHAIRMAN GRIFFON: Sorry.

DR. MAURO: No, that's okay. I just wanted to be on the same page.

MR. HINNEFELD: Okay, this has that -- this file I'm sending has that language in it.

CHAIRMAN GRIFFON: Has this included.

MR. HINNEFELD: Yes.

CHAIRMAN GRIFFON: Okay.

MR. HINNEFELD: And it seems to be just the Bridgeport Brass appendix finding for this.

CHAIRMAN GRIFFON: So it's not all.

MR. HINNEFELD: It's not the entire matrix.

CHAIRMAN GRIFFON: Okay. I won't have to go through line by line. Okay.

MR. HINNEFELD: No, it seems to be just that.

CHAIRMAN GRIFFON: Alright. Good. Harshaw -- doesn't that have Harshaw? Doesn't have the other --

MR. FARVER: Harshaw is a

different entity.

MR. HINNEFELD: Harshaw is different than this one ahead of it. What I'm saying is it just has Bridgeport Brass.

CHAIRMAN GRIFFON: Okay.

MR. FARVER: Right.

CHAIRMAN GRIFFON: Alright. John, you guys can continue, I guess, and we're getting the file now. Stu is sending it.

MR. HINNEFELD: It's in the cyberware.

CHAIRMAN GRIFFON: Go ahead. John, I'm sorry to interrupt you.

DR. MAURO: No problem.

The second issue is called the Correlation Issue. In essence, the site profile, the exposure matrix, for Bridgeport Brass, what it did was construct a coworker model for all the workers was, it pooled the urine -- no, this is the external now. Sorry. It pooled all the external dose data for penetrating and non-penetrating radiation

together because it didn't really have enough data to do individual workers. And from that data they created a distribution and in the write-up that describes all this and all the data and we have access to the data it basically says, what we're going to do is we pooled all these. I believe there were two weeks turnaround times, biweekly. Pooled all the data, made a large number of values from that of film badge measurements, both penetrating and non-penetrating and then they plucked off the upper 95th percentile of that distribution for penetrating/non-penetrating and said, we're going to use that to assign to all the workers.

Now there's an important point, however. In their site profile, they explained that when we did that -- this is NIOSH speaking -- we used what's called the correlation approach and in layman's terms the way I understand it and we'll certainly let Harry get into a little more detail, it simply

means that we recognize that some people had jobs where they were exposed to higher levels of exposures than other people's jobs. So what that means is that you can't just pile up all these two-week changeouts for everybody, hundreds of numbers, and treat them as if each one of those individual readouts were independent of each other.

Reality is they're correlated because you may have a worker, Worker Number 1, who has 10, 12, 15, 20 readouts and his job was such that he's at the high end. And to treat and if you're trying to reconstruct the dose to a worker you can't just simply assume each one of these individual measurements are independent of each other. They're correlated.

So NIOSH explained in their write-up that, no, we did a sampling using correlation techniques to come up with the upper 95th percentile. Harry Chmelynski, our statistician, who is on the phone, he checked

that. He took all the data, downloaded it all, loaded it all up and he ran the sampling using correlation techniques and using independent non-correlation techniques and he was able to match the upper 95th percentile value when he ran it as non-correlated data.

When he ran it as correlated data he comes up with numbers that are about twice as high as the numbers recommended and adopted in the site profile. So we believe that, though NIOSH states that they use correlated approach for coming up with their surrogate number or their default number we believe that in fact they didn't.

Now there is a reason. That's our story in a nutshell and to get into the details of it certainly Harry could explain how you go about doing these types of things. But NIOSH did respond in the column in the matrix, but we feel that the response is nonresponsive. Okay. In other words, it really didn't address the concern that we

raise and I guess with that we could turn it over to NIOSH or if you would like to hear a little bit more about this correlation/non-correlation issue Harry certainly could explain it.

MR. HINNEFELD: We've talked about this at another meeting.

CHAIRMAN GRIFFON: Yes, we did.

MR. HINNEFELD: This all has this kind of eerie familiarity.

CHAIRMAN GRIFFON: Yes.

DR. MAURO: No, we did, but right now the matrix doesn't reflect a new NIOSH position on this.

MR. HINNEFELD: Right. Well, we haven't provided an additional position on it and I remember the conversation and I remember going -- there's a fairly -- as I understand it, there's a fairly lengthy write-up that Harry wrote in the appendix or in this attachment.

DR. MAURO: Yes.

MR. HINNEFELD: In this review that kind of lays out where we've been --

CHAIRMAN GRIFFON: Yes, at this point we'll probably let NIOSH look at that.

MR. HINNEFELD: Yes. We just need to take care of that.

CHAIRMAN GRIFFON: Right. Sit down and talk about that.

MR. FARVER: And that's in Appendix B of the White Paper?

CHAIRMAN GRIFFON: And bring it back to us. I don't think we need more detail at this point, John.

MR. HINNEFELD: I really can't provide any more update on that.

CHAIRMAN GRIFFON: Right.

MR. HINNEFELD: But I seem to -- I remember the conversation.

DR. MAURO: Okay. Then we'll move on and you understand our concerns and there may be more to the story. But from what you see, it was your intention to do correlation,

but you didn't.

MR. HINNEFELD: Yes. It doesn't need to go far into the statistics before I don't understand it anymore, but I recognize the issue. So, yes, I recall the issue and I think I can elucidate it to the people on our side who would have to deal with it.

DR. MAURO: Okay. We'll move on.

CHAIRMAN GRIFFON: That's fine.

MR. HINNEFELD: If not, I'll give you a call.

CHAIRMAN GRIFFON: Just one thing before you continue, John. Stu, did others get that email?

MEMBER MUNN: I got the email.

CHAIRMAN GRIFFON: But it's encrypted, I think.

MEMBER MUNN: It's encrypted, yes.

CHAIRMAN GRIFFON: And we can't open the file.

MEMBER MUNN: I can't open it.

CHAIRMAN GRIFFON: Yes. I opened

it but it's gibberish.

(Simultaneous speakers.)

MEMBER MUNN: A bunch of ASCIIs.

CHAIRMAN GRIFFON: Yes. That's all you have.

MEMBER MUNN: That's all I get.

MR. HINNEFELD: Seriously. Can either of you get to your government email?

CHAIRMAN GRIFFON: I suppose.

MR. HINNEFELD: I mean it may not be worthwhile. I mean we can kind of describe what's in there.

CHAIRMAN GRIFFON: As long as I get them later and update the matrix, I don't think it's a big deal.

MR. HINNEFELD: Okay. Well --

CHAIRMAN GRIFFON: John can kind of read it for me.

MR. HINNEFELD: I put your government email on there.

CHAIRMAN GRIFFON: Okay.

MR. HINNEFELD: Because I was

starting with the government emails. So then I put both. So you've gotten both.

CHAIRMAN GRIFFON: Okay.

MR. HINNEFELD: I can send to everybody at your government email, your CDC email.

MEMBER MUNN: Okay.

MR. HINNEFELD: It could be that our system is encrypting these things going outside. I didn't think we did that. I don't know what happened.

CHAIRMAN GRIFFON: I've heard of that problem before, but yes.

MR. HINNEFELD: It opened okay on my computer.

MEMBER MUNN: I've had it from time to time, but it opens as --

MR. HINNEFELD: Just gibberish.

MEMBER MUNN: -- your initials are the only thing I can read on there.

CHAIRMAN GRIFFON: Right. That's the same with me with me, yes.

MS. BEHLING: I can forward the file to you if you'd like.

MEMBER MUNN: You can?

MR. HINNEFELD: That might help.

CHAIRMAN GRIFFON: Okay. Try that.

MEMBER MUNN: Great.

CHAIRMAN GRIFFON: Thank you.

MEMBER MUNN: Thank you.

CHAIRMAN GRIFFON: Okay, John. Are you going on to item --

DR. MAURO: I'm moving on to three, but I just want you to say that since this is a fairly sophisticated statistical issue, Stu, when you turn this over to your statisticians, I would encourage a dialogue between Harry and your statisticians if they're -- where we may misunderstand what was done.

MR. HINNEFELD: Okay.

DR. MAURO: It might be helpful.

CHAIRMAN GRIFFON: Yes. I think

that would expedite the process.

DR. MAURO: Actually, the next time we get together at least we'll say, yes, we've had a chance to talk, and certainly if we have one of those technical calls we'll --

CHAIRMAN GRIFFON: Just let us know, yes.

DR. MAURO: -- at the work-group level.

CHAIRMAN GRIFFON: Yes.

DR. MAURO: Okay. Number 3, I think this issue is resolved and I'll tell you what it is. Right there is a generic approach to calculating the dose from non-penetrating radiation in the exposure matrix for Bridgeport Brass and we raised Finding number 3, a concern about, what about localized parts of where people might have been in contact with their hands and forearms with this material. There's also this issue of the particles falling on a person's skin. We talked about that before. It's a recurring

theme.

But NIOSH's reaction, response, was -- I think probably all you really could do is say that this is a very unique and unusual circumstance, let's say, and when it occurs they'll deal with it on a case-by-case basis. For example, let's say a person does have a claim that has skin cancer on the forearm where he might have come in contact with this material, the uranium. And on that basis NIOSH's position as well, we'll deal with that when it comes before us.

Now this is really a call on the part of the Work Group whether you'd like a definitive description of how do you deal with that special circumstance or we'll just leave it as is and deal with it when the situation arises. Because I guess there aren't that many claims for this facility -- I'm not sure -- where having a generic approach to dealing with direct contact and how to deal with that whether the direct contact is because of

handling material or because of particles settling on your arms.

DR. BEHLING: Well, John, just a comment in the context of what you just said.

DR. MAURO: Sure.

DR. BEHLING: After all, we only at this point have had a chance to review one percent of the total number of claims that have been adjudicated or dose-reconstructed. So it's not like you were going to see these cases.

DR. MAURO: Yes.

DR. BEHLING: So obviously if there's going to be a remedy, it has to be more generic because we will not likely see such a case.

MR. HINNEFELD: Yes, this is back to the skin dose in a situation where there's liable to be skin contamination, but there's no evidence of skin contamination.

DR. MAURO: No, but in this case it's a little more than that. The nature of

the work is people handled uranium. It wasn't a matter of where there was sort of like grinding and maybe a particle fell on the skin. Apparently there was -- the nature of the work was where they very well may have come in direct contact, their arms, their hands, with the uranium, the different forms of uranium. And the dosimeter would not necessarily pick up that. In other words, the dosimeter is only going to see the radiation field created by the beta particles. It's not going to pick up the fact that someone was in direct contact with the --

DR. BEHLING: And it doesn't have to be direct contact, John. But the fact is the skin doses were not monitored. In other words, extremity doses were not monitored.

DR. MAURO: Yes.

DR. BEHLING: So there is the issue of not necessarily having contact or contamination. But it's the basic issue of geometry, distance.

DR. MAURO: In effect.

MR. HINNEFELD: Okay. So if it's an adjustment for an extremity dose, I mean that's something that we do I think with some regularity on dose reconstruction.

CHAIRMAN GRIFFON: Yes.

MR. HINNEFELD: In terms of making some judgment about what the dose to the extremities when the cancer is on the extremities compared to what the badge would read. I think that's --

DR. BEHLING: And that would be -- Stu, that would be fine. But I guess what I took exception to was the notion that I think the response that you submitted was that the claim was left to the dose reconstructor's judgment and I always get a little antsy when I hear that because the dose reconstructors out in the field are not necessarily people who have been party to these discussions who are sensitized to the concern that maybe in the case of a basal cell carcinoma to the

forearm that they would have to go and sort of make a judgment call that would ultimately prove to be claimant favorable. These people have not been party to these discussions and so they would simply look at the shallow dose as registered by a chest badge and then apply it to the forearm and assume that that's okay. And that's not necessarily pointing a finger at the dose reconstructor. It's just that he may not be sensitized to the issue as we're discussing it here.

MR. HINNEFELD: Well, okay. I mean I can -- fine. I don't particularly care for this response particularly when it says, general scenario presented doesn't occur because it could be quite likely all you need is an extremity dose -- an extremity cancer and it occurs.

So I can find out what kind of instruction we have on sites and adjusting badge doses for extremity measurement or badge measurements to extremity doses. I think

there must be some guidance out there.

MR. FARVER: There is Mallinckrodt? It's one of those and it has an adjustment factor in for extremities.

MR. HINNEFELD: Yes. I mean it's not a question that's unique to Bridgeport Brass.

CHAIRMAN GRIFFON: Right.

MR. FARVER: No, I think it's unique --

CHAIRMAN GRIFFON: But it should be proceduralized I think is what --

MR. FARVER: It should be applied more broadly, I would think.

CHAIRMAN GRIFFON: Broadly, yes.

MEMBER MUNN: Well, I take exception to that just on the face of it simply because the scope of this entire program is so broad. The number of different kinds of activities that are covered, the number of different types of materials that are covered, the actions that are involved,

the processes, are innumerable. They just go on forever. It's very difficult to see how one can become very generic when you're talking about such a wide variety of materials and procedures. How would you even begin to do that?

DR. BEHLING: Can I jump in, Wanda?

MEMBER MUNN: Sure, Hans.

DR. BEHLING: It's relatively simple because you do have a measurement for a skin dose. But unfortunately here the skin dose measurement would be that at the chest level and we can certainly look at a generic approach and say we can convert the 7 mg/cm^2 dose that is monitored at the chest level and translate that to a more or less bounding value at the extremity level and that has very little to do with the complexity or the differences between site A, B, C, D. Those are basically generic. If you have a skin dose measurement as monitored by a chest badge

you should be in the position to say what might be the dose for people who handle this material at the extremity level.

CHAIRMAN GRIFFON: This is a different question than before. I mean you have just with your data.

MR. HINNEFELD: Yes. I'm pretty confident we do this. But I'll have to figure out where we put it down.

CHAIRMAN GRIFFON: Where the guidance is.

MR. HINNEFELD: It should be a broadly applicable guidance.

DR. MAURO: Keep in mind that the kinds of doses that are assigned are 1.8, 2 millirem-hour if we look at the exposure matrix. If you're in contact with the surface of uranium metal, it's about 230 millirem-hour. So I mean it's not a small difference. That is, by disregarding the possibility that there was some contact the difference in the dose rate is enormous between being a foot

away and being in direct contact with uranium metal. And for a person that has a skin cancer, let's say, on his hands or on his forearms and his job was such that he did come in direct contact, that changes the whole picture for him and the film badge rating that you would have for him would bear no resemblance to what his actual direct contact was where the cancer may have occurred.

MR. FARVER: OCAS TIB-0013 has something very similar. It is special consideration and dose reconstruction of energy employees who worked with uranium metal, powders and residues. And that's the Mallinckrodt one. And they have shown three correction factors for extremities. So probably something similar to that.

DR. MAURO: Okay.

MR. FARVER: Or just making it applicable to other sites.

DR. MAURO: Okay. Should I move on?

CHAIRMAN GRIFFON: Just hold on a second.

DR. MAURO: Okay.

CHAIRMAN GRIFFON: What was that TIB? Which?

MR. FARVER: OCAS TIB-0013.

MR. HINNEFELD: That would not be an OTIB problem or ORAU TIB. It would just be the TIB-0013.

DR. MAURO: I presume we reviewed that because we reviewed most of the procedures.

MR. HINNEFELD: Yes, you did.

DR. MAURO: Yes. Okay.

MR. HINNEFELD: I know because I have a bunch of responses that I have to provide. I think I actually provided them at the last Procedures Subcommittee.

CHAIRMAN GRIFFON: Okay, John. Go ahead. I'm sorry.

DR. MAURO: Okay. We'll move on to Number 4. Number 4 is something that I'd

like to turn over to Harry. It's called the leave one behind or leave one out issue and my understanding of -- again in layman's terms -- would be that when you have a population of data and it's from a group of workers and you want to use that data as a surrogate with a distribution of values and as a surrogate for another group of workers and you're concerned about the degree to which that dataset might or might not be applicable to a different group, there's a technique called leave one out. This is something that we never talked about before. I don't think we have, and it's interesting.

Harry, could you expand upon that a little bit more because I think it has such a tremendous applicability to the surrogate data issue?

MR. CHMELYNSKI: Okay. Basically this is a technique of cross-validation for confirming that the model you're building actually works to predict numbers that you

haven't seen yet or, in our case, that we will never see.

CHAIRMAN GRIFFON: Can you speak up please a little bit?

MR. CHMELYNSKI: Okay.

CHAIRMAN GRIFFON: Thank you.

MR. CHMELYNSKI: The idea of the leave one out approach is to cross-validate the model that's used for the coworker estimations. Generally, what we do is pull data together for various job categories, various facilities and various time periods. Well, the time period thing we normally cover by doing them for each time period. But often we're forced to combine data from workers in different job categories or areas.

And in order to determine how well the model we build from that data works for the coworkers who do not have data is to leave out a subpopulation from the data that we have like, for instance, all the furnace operators, leave them out and re-estimate the model and

then use that model to predict their exposures. We already know what they are. So we're sort of simulating the case where we have missing data.

And we do this over and over again holding out different groups of workers which are identifiable subpopulations and we do it repeatedly until we get a feel for how well this model, if it were estimated on this set of data, how well it works for those other workers. And I don't see anything like that being done to support the coworker models. Generally, we assume all these workers are interchangeable.

So that's the gist of it is to estimate the model based on all the data except one group and then use the model to predict that group and do it for the various groups that you've included in the aggregate data.

CHAIRMAN GRIFFON: I'm trying to understand. Are you proposing that NIOSH

should validate and this is one technique that they could use?

MR. CHMELYNSKI: Yes.

CHAIRMAN GRIFFON: Oh.

MR. CHMELYNSKI: The coworker model should be validated using some resampling technique of this sort.

MR. HINNEFELD: So, in other words, you remove a subgroup from the population from the model with the remaining population, does your model as generated in that fashion predict the doses of the subgroup you left out?

MR. CHMELYNSKI: Right.

MR. HINNEFELD: So, in this instance, I only get on this because of furnace operators. In my judgment if a person was a furnace operator and worked as a furnace operator for their entirety, they are probably at the upper end of the exposed people. And I mean just from using that example if you remove them it would seem like the model

wouldn't predict their exposure.

MR. CHMELYNSKI: Well, I agree. But it gives us a measure of how far off it is for different workers, different groups of workers.

MR. HINNEFELD: If we randomly select a subpopulation to remove.

MR. CHMELYNSKI: Well, one of the techniques here is just to remove the workers one at a time and do it systematically until we've done them all one at a time.

MR. HINNEFELD: Right. I think there are only like 20-some odd workers in the dataset, right?

MR. CHMELYNSKI: Right. In some datasets, they're not very big.

MR. HINNEFELD: Right.

MR. CHMELYNSKI: In others, we have thousands of data points and then one would extrapolate this method to be what I described just previously which is to leave out one group of workers.

MR. HINNEFELD: Okay.

MR. CHMELYNSKI: Rather than one worker at a time.

CHAIRMAN GRIFFON: So you're -- I mean I guess I would say SC&A's concerned that the model needs to be validated and this is one approach NIOSH is -- it's just to NIOSH I guess to decide how or if they need to validate the model.

DR. MAURO: In fact that was the response in the matrix that they would look at -- that NIOSH said that this sounds like something we should look into.

MR. HINNEFELD: We even said that.

CHAIRMAN GRIFFON: Okay. I didn't have -- I'm still trying to --

MR. HINNEFELD: I'm concerned that I think if there are serious questions about how we're going to proceed here we'll just have our staff call Dr. Chmelynski.

CHAIRMAN GRIFFON: Yes. I agree.

MR. HINNEFELD: And we can do

that, right, to get clarification that has to happen with the subcommittee?

CHAIRMAN GRIFFON: That's fine.

MR. HINNEFELD: Okay. I think -- I don't have to understand it that well then. But I would like to have at least a chance to explain it to the people I have to explain it to.

DR. MAURO: I will move on. Okay. Our last item, Item Number 5, Finding 5. We uncovered what we believed to be a hundredfold error in one of the calculations in the exposure matrix and I believe NIOSH's response is that they agree and that they're going to fix it.

MR. HINNEFELD: Yes, I think we'll fix it when we fix the other things when we come to resolution on the other finding. I don't see us fixing it in the meantime when there are several other things that still need to be fixed.

CHAIRMAN GRIFFON: Okay.

DR. BEHLING: John, that brings us to the new issue.

DR. MAURO: The new issue, I'm sorry.

CHAIRMAN GRIFFON: Hold on one second. Let me catch up for a second, John.

DR. MAURO: Okay. I mean, the specifics; it has to do with the residual activity on surfaces and using that residual activity on surfaces to reconstruct doses to the contaminated surfaces. There seems to be a --

CHAIRMAN GRIFFON: Yes, I've got it. I was just catching up on the documentation.

DR. MAURO: Okay.

CHAIRMAN GRIFFON: And NIOSH agrees and we'll modify the site matrix, right?

DR. BEHLING: Yes, specifically, Mark, the issues that the error exists in Table 5-1 which has the daily intake of 6.66

E^{-2} and of course if you look at that page on the 0030 on page 73 you can quickly grasp the error because on the top of the page it basically identifies an inhalation intake for a year of 2,540 picocuries and if you divide that by 365 days you end up with approximately 7 picocuries per day which is a hundredfold higher than the value cited in Table 5-1.

CHAIRMAN GRIFFON: Okay. Alright. We've got the issue.

DR. BEHLING: Yes, but when I looked at that I realized. I said, how did this number come to pass, and this is explained in Section 3 of my White Paper and what I came to conclude was the following. On page 4 of my White Paper, if you can quickly follow it, I basically devised the value that I said is a correct value that should be introduced in Table 5-1. But what's bothered me regarding that particular value of the revised value of 7 picocuries per day which is a hundredfold higher than the value in Table

5-1 is the fact that it is based on a resuspension factor of – 1 E^{-6} per meter is the resuspension value. That's how that value came to pass.

And if you read the White Paper, Section 3 on the bottom of page four, you start to understand how that value was derived. And what it turns out to be is that if you look at that value, you end up with a number that is actually lower in 1961 than a measured empirical value that was taken 15 years later. And, of course, what that would assume either the measured value 15 years later is in error or our assumption about a resuspension factor is clearly an error, and the reason I suspect the resuspension value cannot be taken seriously is because it was void of any depletion value and, of course, in other documents that NIOSH has used they use a depletion value of one percent per day. So you have a myriad of inconsistency by which that original number of 7 picocuries per day

was derived.

And you can read through the write-up on pages four, five and six to come to that conclusion because it's based on a series of measurements including empirical data and reported values. And I think we've discussed it at NIOSH and I think the last time, in addition to Stu, Jim Neton was there and they kind of recognized this error and said, well, this is obviously something we need to address. But as far as I know, that has not formally been addressed by NIOSH.

MR. HINNEFELD: Correct.

CHAIRMAN GRIFFON: And is this a -

DR. MAURO: This is a new item.

CHAIRMAN GRIFFON: The only question I have here is this broader than just the modifying the same matrix just to say -- I mean I know we talked about the 1 E^{-6} for the suspension factor.

MR. HINNEFELD: Well, if we want to throw that in, I mean, there's an issue on

the table on that.

CHAIRMAN GRIFFON: Yes. Right. We've got that covered I think. Yes. Alright.

DR. MAURO: Well, with that, I think we've -- let's see. Are there any more -- hold on. I think that's it for the issues related to Bridgeport Brass, you know, with the addition of Hans' new item, the degree to which you want to work that new item into that matrix or because it's fundamentally a 10^{-6} problem which of course we've been struggling with for a long time.

MR. HINNEFELD: Yes.

DR. MAURO: However you'd like to proceed. But I think that does it and you know we could move on to Harshaw if you'd like.

MR. HINNEFELD: If it is a 10^{-6} issue I guess that it wouldn't hurt to capture it here. I mean I don't think we'd need to talk about it anymore because it's out there

to be resolved.

CHAIRMAN GRIFFON: Yes, I can add it on as Finding 6 -- Attachment 1 Finding 6. And I'll add that one.

DR. BEHLING: Actually, what can be done is to somehow look at 1975 empirical data and then work backwards to devise a resuspension value that now matches the number that was defined in '61 in the surface contamination. And so you can in essence work backwards and devise the appropriate resuspension value that's one we can easily expect that is now consistent with empirical measurements.

CHAIRMAN GRIFFON: Yes, I think we need to add this on because it might be also a site specific issue, you know.

DR. MAURO: It goes both ways. I agree. That's a good point.

CHAIRMAN GRIFFON: Yes.

DR. MAURO: Good point, Hans.

CHAIRMAN GRIFFON: Alright. I'll

capture that as a separate finding, Finding Number 6, in the matrix.

DR. MAURO: Alright.

CHAIRMAN GRIFFON: Okay. You want to start on Harshaw.

DR. MAURO: Sure.

CHAIRMAN GRIFFON: Yes.

DR. MAURO: Okay. Let's see. Let me just get myself oriented. Okay. The Harshaw issue Number 1 that's raised here -- by the way, Hans also had submitted a White Paper in response.

CHAIRMAN GRIFFON: Yes.

DR. MAURO: So please, Hans jump in because there is a process at work here where we originally identified an issue. NIOSH provided a response to the issue and then Hans provided a report, a White Paper, dated April 2009 in response to NIOSH's response. So there's a process.

But it's probably good to start and get the 30-second sound bite. The first

issue has to do with the exposure matrix for Harshaw. Bioassay data was compiled and the approach taken to use that matrix was to go with the median of the log-normal distribution to assign that median dose to workers and as we've been concerned with on many occasions in the past when you're doing that automatically it's often a problem. And a consideration should be given to a lot of different approaches to be used, the median itself, the full distribution, using the mean or the 95th percentile confidence level of the mean or using the 95th percentile confidence level itself or the 95th percentile level itself. These are all ways of using your dataset in a coworker model in a way that is tailored to the worker and to try to factor in the worker's job into consideration and not just simply go with either the median or the full distribution. So that was Issue Number 1.

DR. BEHLING: Well, John, I think it needs further explanation.

DR. MAURO: Please do. Yes. Sure.

DR. BEHLING: Let me sort of give you a different perspective of what the concern here is. I'm very much in agreement with the basic guidance as established in OTIB-0019 where you normally assume that if you have a population of workers and you monitor the most highly exposed individual group of individuals and sort of reduce the monitoring of lesser exposed people and maybe not monitor some or at the very low end of the spectrum. And on the basis of the higher exposed people you sort say, well, that really represents our 95^{th} percentile and if you were in the lesser exposed people then the 50th percentile will more than adequately cover our basis. And if you're not monitored at all, it can reasonably be assumed that the 50th percentile will apply. But that would -- all those things we would agree with or I would agree with if that, in fact, was the

monitoring program.

But as you see if you look at the White Paper on page number 3, Section 3.1, actually on page 4, I provide verbatim statements that were taken where we sort of look at this whole program of monitoring and realize maybe they didn't monitor all the higher-exposed people as you see in our quote from section 5.3.1.2 where it says sergeant and gives a date of 1950. Meanwhile it referred to a previous lot of units and also requested Harshaw institute a sampling program on a running basis to sample about 100 workers per month and in the next paragraph we talk about stated 200 workers were subject to urinalysis. And then at the bottom of that paragraph Harshaw provided the AEC an estimate of several hundred such people that previous had been exposed for more than a year.

What to me that suggests is that you're only taking a graph sample of people and they may not necessarily be all highest-

exposed individuals. It may be a cross section which means that you may have very highly exposed people who were perhaps not monitored because the sample didn't necessarily intend to sample only the maximally exposed individuals. Under that circumstance, you will have a 95th percentile person in terms of true exposure who would not be monitored. But in the course of using a coworker model he would qualify for the 50th percentile. And I think that's at the heart of the concern here.

CHAIRMAN GRIFFON: So it's a familiar issue, yes.

MR. HINNEFELD: Yes.

DR. MAURO: And by the way that covers Issue Number 2. I mean that's also finding -- in effect what we're talking about is both Findings 1 and 2.

CHAIRMAN GRIFFON: Okay.

DR. MAURO: Because they're linked.

DR. BEHLING: Yes, and like I said in the same issue we talk about people who were not monitored being thrown in the same bucket as people whose monitoring data are not available, illegible or are inadequate. They are two different populations if you are a 95th percentile high-end worker and somehow or other your records were lost. You should not put him in the same category as a person who we know for a fact was clearly not monitored and perhaps and hopefully so because he was not necessarily in need of such monitoring because he was an office worker or only occasionally was exposed. So the lumping of people whose records were missing with people who were not monitored is perhaps an unjust approach to treating those two individuals.

CHAIRMAN GRIFFON: Okay. I think we're in listening mode mainly right now because NIOSH hasn't responded to these, right?

MR. HINNEFELD: We sent the

response.

CHAIRMAN GRIFFON: Oh, you did send a response.

MR. HINNEFELD: Yes, back in January.

CHAIRMAN GRIFFON: Alright. Is that in the matrix, too? Or I'm still waiting for that?

MR. HINNEFELD: It's not in the matrix. No, this was a finding and response attached to that.

MS. BEHLING: Excuse me. Just one second, Mark. I did send you and the others -- I hope I got everyone the matrix. I tried sending it twice.

CHAIRMAN GRIFFON: I didn't get anything. Did you send it to the CDC address?

MS. BEHLING: No, I didn't.

CHAIRMAN GRIFFON: Oh, okay.

MS. BEHLING: No, I sent it to -- did anyone in the room get it?

MEMBER CLAWSON: I didn't, Kathy.

This is Brad.

MS. BEHLING: Okay.

MEMBER MUNN: You just sent it, right?

MS. BEHLING: No, I sent it at the start of this conversation and I just now sent NIOSH's response to the Harshaw also.

MEMBER MUNN: I have three messages from you.

MR. KATZ: I received it.

MS. BEHLING: Okay.

MEMBER MUNN: I haven't tried downloading any of them. That's the proof of the pudding.

MS. BEHLING: Yes. Mike and Ted, I apologize. I did not send you the Bridgeport Brass matrix. I was in the process of doing it. I apologize.

DR. MAURO: Let me add a little bit more to the response, the original response.

CHAIRMAN GRIFFON: I don't have

anything yet by the way.

DR. MAURO: We have responses from NIOSH and the responses I would say are very much in keeping with our thinking mainly you have all the data. You have the means. You have the 95th percentile. You have all the data. And in the response it's basically stated that the dose reconstructor has the wherewithal to use that dataset intelligently. But there really is no mention made of the point that Hans pointed out, namely that there seems to be lots of evidence that the data that you do have does not represent the upper end data and it makes a big difference on how you use your model, your exposure matrix. If you've come into it saying, no, the data we have is evidence that it represents the high-end people only or, the evidence is no, it looks like it's more the type of data which is a cross section of all workers and perhaps does not represent the high-end people but in fact may actually, if you're just randomly

picking people, you may actually emphasize and the distribution may capture because most of the people are not exposed and if you just randomly pick people. So there's a problem in just grabbing the data you have and saying, okay. Here we have a -- and making a distribution and then using that somehow as your method if you don't really have a full appreciation of what that data sample came from.

You could almost envision the circumstance if you randomly pick people just so that you get an idea of what the kinds of exposures were. This goes back to earlier days. You may just happen to grab -- Most of the people you grab may be people with low-end exposures because usually the large number of people get very little exposure and only a handful get very high exposures and if you were doing just a cross section of workers your distribution is going to look like the exposures are fairly low and in any event it

goes toward thinking a little bit more about the data that you have and how best to use it to build the coworker model. I think that that kind of thing is needed here.

DR. BEHLING: Also before you go on, John, there is additional discussion regarding Finding 1. Under Section 3.2 in the White Paper that you have on page five, we also identified a new finding and again it's not so new because I think it's also been discussed at previous Work Group meetings and that is the issue of Friday and Monday morning timing involved for doing bioassays.

DR. MAURO: Yes.

DR. BEHLING: And I think on pages five and six I briefly discuss the issue that if you're dealing with something that is very, very soluble, the difference between a Friday sample that's at the end of a work week versus a Monday can be as high as a tenfold difference in terms of what you will find in the urine and therefore assign as a data point

for entry into the IMBA program.

Now the point here is that we have discussed this in the past before and people have always said well, you know the people -- we have dates on these individuals and we can determine whether or not this is a Friday or a Monday morning. But the truth is when people work on a shift rotation, they may get two days off that may represent Tuesday and Wednesday or something like that and when we see a bioassay that occurs two days after their last exposure, it may not necessarily be a Monday. But it's still necessarily termed a Monday morning. I think it has become more or less a term that has to be interpreted in proportion to what it really represents for a worker who is on a rotating shift. So there is still the issue of how do we deal with the time interval that may be a 48-hour hiatus that will potentially underestimate the actual body burden for a highly soluble material and therefore underestimate the exposure that IMBA

assumes represents an end of the shift urine sample.

DR. MAURO: Yes, that's not captured in this write-up here. But it is captured in Hans's report, you know, White Paper, and as you know this is something that we're dealing with on Y-12 and it's something I guess that's across the board. But I know we're paying a lot of attention to it on Y-12.

And I think the interesting part of this whole issue is that I think everyone agrees that if in fact we're dealing with Type F and Type M and in fact there was the urine sample deliberately collected after a two-day hiatus, there is a need for an adjustment. Everyone agrees. I think there's general agreement on all sides that this is the case.

The real question is, though, was that in fact the case, namely, that it was routine to have this two-day hiatus. We have evidence at least from our interviews from the Y-12 people that that was in fact the case.

That is, it was standard practice to wait two days, and I believe in talking to Jim about this he also agreed that in the early years that was, you know, they did that on purpose because they were not so much interested in the rapidly clearing material as they are with the long-term body burden of, let's say, Type S in the body.

So we have an interesting problem here is if you have a site where Type M or Type F is -- or a job category and you have that practice you're going to miss the dose and we've gotten the numbers. Joyce wrote a White Paper on this -- there are so many White Papers -- showing quantitatively how much of a difference there is, and, if I remember, we were talking factors of two or three or four at that time.

DR. BEHLING: No, it's as much as ten, John.

DR. MAURO: As much as ten. Okay.

DR. BEHLING: Look at page six

where I actually take a quote where they looked at people at two different time frames and for uranium hexafluoride, a highly soluble material, that two-day hiatus would actually reduce the urine excretion rate by a factor of ten.

DR. MAURO: There you go. That would be a Type F?

DR. BEHLING: Yes.

DR. MAURO: Okay.

DR. BEHLING: So for facilities if you have a very highly insoluble that two-day interval will make little or not difference.

DR. MAURO: Right.

DR. BEHLING: But for hexafluoride or a very soluble material, the difference between a Friday and Monday morning or, more correctly, a two-day hiatus will introduce a tenfold error if the IMBA assumption is that this is the end of the work day kind of urine sample.

DR. MAURO: But I do believe

technically we are all in agreement that this is an issue. The only question is was this practice of a two-day hiatus widespread.

DR. BEHLING: Yes, in some cases, John, I even quote that was a directive given by the AEC at the time.

DR. MAURO: Yes.

DR. BEHLING: And so they had very little choice but to conform. And unfortunately for very highly soluble material and if IMBA doesn't take that into consideration you will actually underestimate the inhalation intake by as much as a factor of 10.

CHAIRMAN GRIFFON: Okay. We have the issue.

DR. MAURO: Okay.

CHAIRMAN GRIFFON: And I don't think that -- I'm not getting any of these documents, but I don't think you need to time to --

MR. HINNEFELD: Okay. Well, we

prepared responses. Apparently, it didn't get to anyone.

CHAIRMAN GRIFFON: Yes.

DR. MAURO: Do you have -- I mean I would be interested in --

MR. HINNEFELD: I can summarize what --

DR. MAURO: -- a 30 second sound bite. Yes.

CHAIRMAN GRIFFON: Yes.

MR. HINNEFELD: Well, it's that the OTIB-0019 doesn't explicitly require the 50th percentile be used. It kind of gives instructions on how to derive the 50th percentile and 84 of them from that can get essentially a description of your distribution. And let's see. Some of these need to be site profiles with assigned intakes based on the 95th percentile, but it's because there were very limited monitoring data. So in cases where there were very limited monitoring data, we use the 95th percentile.

That's intended to compensate for the possibility that highest exposed workers may have been missed or at least there can be some fraction of them.

For instance, if you sampled representatively from the population and you had unmonitored, highly exposed people, they should absolutely be at the higher percentile.

And it just doesn't really draw any conclusions. Okay. I see. NIOSH determined that sufficient data existed for Harshaw sites. So the conclusion, I guess, from this response and the arguing point is -- is NIOSH's conclusion well founded that there's adequate data from Harshaw that it is broad and broadly representative and I guess in which case you would in general use the 50th percentile with an eye out for highly exposed people in which case you'd use the 95th.

So we can revisit this further, but I mean that's what the thing says. This

response does not get into the two-day off sampling.

CHAIRMAN GRIFFON: No. This is separate.

MR. HINNEFELD: When we've discussed that in the Procedures Subcommittee, I think we, from our opinion, left it at if we find evidence that in fact the samples were predominantly or exclusively taken with the two-day off requirement, two-day interval, that an adjustment needs to be made, and our point at Y-12 was where is the evidence for that, that was consistent, that that was always done. You know, in my experience, the samples can't sit around for very long without deteriorating and therefore screwing up the analysis. So the lab would not collect them all on Monday and run them through the week. The lab did not have the capacity to run all the samples on Monday. They needed to run them through the week. So they were collected through the week.

CHAIRMAN GRIFFON: But was it always after two days off? That's Hans's question.

MR. HINNEFELD: Yes. And so our point is, where is the evidence?

CHAIRMAN GRIFFON: Where is the evidence?

MR. HINNEFELD: Where is the evidence that the samples were always or predominantly taken after two days off?

CHAIRMAN GRIFFON: I don't think always, but I think he's suggesting that there's at least some directives that are --

MR. HINNEFELD: Certainly. I'm old enough to remember. I'm old enough to remember when, that you wanted a two-day sample because it's easier to interpret.

CHAIRMAN GRIFFON: Right. Maybe it's not something that you apply for all time periods. But if there is a correction for early years.

MR. HINNEFELD: For some period of

time, yes.

CHAIRMAN GRIFFON: Yes.

MR. HINNEFELD: So I guess that's where that discussion kind of needs to go.

CHAIRMAN GRIFFON: Yes.

MR. HINNEFELD: And then from this I think we'll just have to -- I think the question is for the Harshaw data is it a complete enough set and is there reason to believe that it's representative? And does in fact the OTIB give instruction that for people with jobs that appear to be highly exposed that you should not use the 50th percentile if you have this database that's representative of the entire population? So I think that's -

DR. MAURO: What I'm hearing is that we agree in principle. You know, I mean, we have come to a philosophical understanding that, yes, there are these challenges to the dose reconstructor and, you know, we agreed there is a right way to do this and how to do that. It's just not all articulated in the

exposure matrix.

MR. HINNEFELD: Yes. And that's -- I mean clearly because of the number of findings it's very likely that some things are going to have to be changed in the site profile, and that would be one of them. You know, some articulation of why we think what we are proposing is the right way to do it.

DR. MAURO: I'll move onto finding number three. We expressed some concern about the exposure matrix with respect to radon exposures. You folks built a coworker model for radon exposures at Harshaw drawing from data that came from Mallinckrodt as a surrogate, and we reviewed that data, and we noticed that some of the measurements, the higher measurements, from Mallinckrodt did not make it into your surrogate database to build your coworker model. But then you folks answered that you did that deliberately because the higher numbers came from very specific operations at locations and types of

ore that just didn't exist at Harshaw.

And taking that on face value which we certainly believe, I'm going to recommend that we agree with your answer and that your coworker model is fine given that answer. We did not check, you know, that in fact there are these different kinds of -- I forget the types, the names, of the rooms where these activities took place. There were certain rooms where these higher levels were experienced. Yes, the Scalehouse sampling room and the drum storage outside of Building 115. These are the places in Mallinckrodt where the high levels were observed but were not used when building the coworker model for Harshaw. And we're accepting on face value that those locations were in fact unique to Mallinckrodt and were appropriately excluded. That being the case, we accept your answer.

MEMBER MUNN: Excellent.

CHAIRMAN GRIFFON: Having not seen the NIOSH response I guess I could accept that

in good faith as well.

DR. MAURO: Yes. I don't know why I have it, but that's --

CHAIRMAN GRIFFON: Yes.

DR. MAURO: It's a very long response. It actually goes on for about three pages. Well, you know the columns are long and skinny. But there's about three full pages of a two inch column addressing this matter. It looks like maybe two pages explaining in essence what I just said and it certainly seems to be a reasonable answer.

CHAIRMAN GRIFFON: Okay. Why don't you move onto the next one then? I accept it, too. I think that's reasonable.

DR. MAURO: Okay. The next is finding 4. Our finding was NIOSH needs to provide more detailed guidance on the reconstruction of doses to extremities. This is an extremity issue again. I have to say I'm going to pass the buck over to Hans. Is there anything about this that is uniquely

different than what we talked about before?

DR. BEHLING: No, other than, again, the statement that bothers me a little bit is that we can do this, but at the same time in a TBD you do see statements that suggest that there is, and I quote on page eight of the White Paper, you will see there are quotations there. It was taken from the TBD. And those quotations acknowledge some of the difficulties especially in your early years regarding the ability to really provide some kind of an assessment of extremity doses and at the bottom it says and I write in section 7 of the Harshaw site profile Annotation Number 25 states that not enough information is available to formulate a site specific method for calculating extremity dose. And again, I don't know what to do with that when you have the situation where a person's exposure to the extremities is critical in assessing a claim.

MR. HINNEFELD: That's kind of the

same finding as early, right?

DR. MAURO: Yes.

MR. HINNEFELD: Needs some general, maybe broadly applicable guidance.

DR. MAURO: Would you like me to move on?

CHAIRMAN GRIFFON: I just got these emails now. So I was looking at that.

DR. MAURO: Okay.

CHAIRMAN GRIFFON: So where do we stand on that, Stu? Is that something --

MR. HINNEFELD: I think it's the same. It sounds like much the same, and the specific information for any given site might be slightly different wherever available.

CHAIRMAN GRIFFON: Right.

MR. HINNEFELD: But there needs to be some sort of general understanding of how you're going to adjust doses, extremity doses, in situations of uranium handling plants that I'm familiar with where chances are you are in close proximity with your hands on the piece

for at least some portion of it. You don't actually lift it because it's too heavy. But your hands could be on it. Usually everybody I knew wore gloves when they did that, but the geometry is still the same.

MEMBER MUNN: So is NIOSH going to take a look at that?

MR. HINNEFELD: Yes.

CHAIRMAN GRIFFON: I missed number 3 then maybe.

MR. HINNEFELD: I think number 3 was the radon one. I think this was the one we were discussing.

DR. MAURO: Yes. And our recommendation is that we accept their finding.

MR. HINNEFELD: On number 3 or number 2?

DR. MAURO: Three, the radon one. Which is that?

MR. HINNEFELD: Okay. The radon one is 3.

DR. MAURO: Yes.

CHAIRMAN GRIFFON: Oh.

DR. MAURO: Yes, radon was 3 and we're recommending accepting. It's certainly -- Mark, you may want to take a look at that write-up and agree to what you want and follow up, certainly. But as far as we're concerned that argument seems to be sound.

CHAIRMAN GRIFFON: Yes. Well, I'll put down that SC&A is in agreement with NIOSH's response.

DR. MAURO: Yes.

CHAIRMAN GRIFFON: But I would like to look at that especially since we've done so much with radon models lately, you know.

DR. MAURO: No, I understand.

CHAIRMAN GRIFFON: And surrogate data. There's no data for Harshaw at all, correct?

DR. MAURO: I don't know if that's true.

CHAIRMAN GRIFFON: Okay. I don't know.

MR. HINNEFELD: I don't know.

CHAIRMAN GRIFFON: So I'd like to know. I mean this is kind of important from the surrogate data standpoint, too.

DR. MAURO: Yes.

CHAIRMAN GRIFFON: But I'll put down that SC&A is in agreement at least.

DR. MAURO: Yes. Our only concern, when we looked at this, the fact that they used Mallinckrodt as a surrogate for Harshaw didn't disturb us very much. The only thing that disturbed us is that they were selective in what they included and what they didn't until they explained why.

CHAIRMAN GRIFFON: I understand that part.

DR. MAURO: But you're right. I mean we did not do any kind of detailed analysis of whether or not it makes sense to use Mallinckrodt for Harshaw. We sort of

accepted that, given the nature of the work they did at Harshaw and the potential for high radon exposures.

CHAIRMAN GRIFFON: I guess that would be the issue. I mean I would think this goes back to Jim Neton's sort of can't get higher than Mallinckrodt sort of approach for radon.

DR. MAURO: Yes.

CHAIRMAN GRIFFON: Which is probably true. But I mean I don't know. You have a lot of other factors as we all know now --

DR. MAURO: Yes.

CHAIRMAN GRIFFON: -- related to radon exposure.

DR. MAURO: No, I understand.

CHAIRMAN GRIFFON: Yes. So I'll put this agreement but with that --

DR. MAURO: With that proviso or whatever.

CHAIRMAN GRIFFON: At least look

at the response. Yes.

DR. MAURO: Yes.

CHAIRMAN GRIFFON: And what did we do with number 2 then, John? I'm sorry.

DR. MAURO: Two.

MR. HINNEFELD: Number 2 seems to be like a 95th percentile question but on external doses, whereas number 1 was for internal.

DR. MAURO: Yes. They're the --

CHAIRMAN GRIFFON: So both are related.

DR. MAURO: They're related, yes.

CHAIRMAN GRIFFON: Okay.

MR. HINNEFELD: And we've sent a response on that, Mark. You can take a look at that, and I don't know that we need to go through it very much here.

CHAIRMAN GRIFFON: Okay. For this --

MR. HINNEFELD: But I think the fundamental finding is that there ought to be

some sort of direction about in what circumstances are you interested in using the 95th percentile.

CHAIRMAN GRIFFON: Yes.

MR. HINNEFELD: As opposed to this completely open-ended and just say, well, that option is available to the dose reconstructor. That's sort of our thought.

DR. MAURO: Well, but I want to emphasize the idea that the data you're starting with also. It's not just the matter of saying oh, this worked.

CHAIRMAN GRIFFON: Yes.

DR. MAURO: It's also the data itself, whether or not it was selected to be high end.

CHAIRMAN GRIFFON: Yes, we got it.

DR. MAURO: You got that. So there are two parts to it.

CHAIRMAN GRIFFON: Yes. Alright. And then you were just finishing up number 4, and I think Stu said you have to follow up on

that, the extremity stuff. Right?

MR. HINNEFELD: Yes, there's extremity finding early, right?

DR. BEHLING: And just to comment. I guess the focus is really one of the guidance given in the TBD that says go to Tables B-5 through B-8 for data that may be usable. And I looked at that data and I said God, I hope -- I wouldn't want to be a dose reconstructor who's burdened with that kind of diffuse guidance. It's not very specific and leaves an awful lot of interpretation to the dose reconstructor to make a decision as to how to assign doses based on that information in Table B-5 through B-8.

MR. HINNEFELD: Okay. That was on finding number 4, right?

DR. BEHLING: Yes. And we can go to 5 because, again, it's somewhat related. It is, again, an issue of the film badges especially in their early years for a system for which we have little or no data in terms

of how was the badge assigned and how was it calibrated. Was the calibration one in which a photon energy was used that's obviously appropriate for the facility, et cetera, et cetera? But all that may or may not be something that we can even address at this late in the day.

But there was one particular issue that did strike me, and that goes to the center of page nine in my white report and I quote something. There was a time early on apparently where someone says, you know, do we really want to even bother monitoring these people and we're really using the film badge as a security badge and there was a back and forth. Ultimately, I guess the health physicists prevailed in saying, no; we will use the dosimeter in combination with a security badge.

And one of the things I guess in days past we discussed on behalf of other facilities when that was done often times the

open window was covered up and I think that's really the second half of this issue about can we really trust any dosimetry data if in fact for the early years that dosimeter also served a secondary purpose as a security badge. And in some instances we know that that involved covering up the open window, meaning we don't really have a good assessment of the beta component as acknowledged on the bottom of page nine. But it's something we may or may not be able to resolve.

MR. HINNEFELD: Yes, it depends on what badge design they were using and what calibration they were using.

DR. MAURO: And that's basically the question that's raised in our finding number 5. Yes.

MR. HINNEFELD: Yes.

DR. MAURO: You know, as a think piece, too, when you use your film badge, in other words, if you issue a security badge, and accompanying that is also your film badge,

it effectively means everybody on site will have a film badge. And when you think about it we also know that most people on a site don't get any exposure.

And now you have this population of data from film badges. All of a sudden you have a population of data. Now if everybody was monitored -- I mean it was given to everybody -- then you could reconstruct the doses for each person. You don't have to have a coworker model.

But I guess what was disturbing me is that if you do have a large amount of data, but for some reason that data represents a cross section of workers where the vast majority of them did not get any exposure you're in a very interesting situation on whether you could use that data as a coworker model, you know, and apply it to workers who did get exposures.

I mean I want to emphasize the importance of that because we've been running

into that time and again. You know, you've pooled your data and then you sample from it. And on face value, it sounds like whether you use the full distribution or even if you pick off the 95th percentile, you know, you're being claimant favorable. Not necessarily. I just want to reiterate that.

DR. BEHLING: And you're exactly right, John, because I realized when I was in the utilities after the Three Mile Island accident there was a changeover in terms of conservatism that says from here on in every person who comes onsite regardless of whether you're a secretary or a groundskeeper, everyone wears a TLD. And what it really means is that when you go to, for instance, the annual reports that are issued by the Nuclear Regulatory Commission that identify all workers monitored, et cetera, et cetera, you will find that after '79 a complete shift to the left. That means the average of all monitored workers was reduced by a factor of

five or so because you're now monitoring people who were never monitored before who didn't really need to be monitored. And so you're really diluting the actual arithmetic dose to people who are truly rad workers that in days prior to that event were a very select group of people onsite who might only be representative of maybe 20 percent, 25 percent, of the total population that's onsite. So when you monitored everybody, what you're really in effect doing is you're reducing the 50th percentile by a huge margin because you're incorporating people who don't have any exposure.

CHAIRMAN GRIFFON: And I guess also if you're monitoring everyone you would have the individual data.

DR. MAURO: Right and that's true, of course.

DR. BEHLING: But if you try to do a coworker model for that instance --

CHAIRMAN GRIFFON: Yes. We got

the issue here.

DR. MAURO: You got it.

CHAIRMAN GRIFFON: So number 5 I just want to know before we move on. Is there an action here?

DR. BEHLING: I don't think there's really any resolution.

MR. HINNEFELD: We haven't responded. I mean it would have to be learning something about calibration of the badges and I haven't even read Harshaw badges.

CHAIRMAN GRIFFON: I mean this whole question of a security badge being over your dosimeter. I mean that seems like a global kind of --

MR. HINNEFELD: But, again, if your dosimeter is calibrated in that configuration --

CHAIRMAN GRIFFON: To account for that, yes.

MR. HINNEFELD: -- then you're using energies that are appropriate.

CHAIRMAN GRIFFON: Yes.

MR. HINNEFELD: Then you're confident that you've allowed for --

DR. BEHLING: Not really, Stu, I think and I'm going to obviously plead stupidity here because I don't remember for what facility, but this was done at another facility and it may have been Mallinckrodt. But at one other facility that's a whole process of using the badge as also an identifier for that individual's security badge. I think it introduced an 80 mg/cm^2 filter over the open window. And, of course, that would reduce a large percentage of your low energy data completely. So it would be very difficult to try to figure out what the true dose would have been to the skin had that 80 mg/cm^2 filter been eliminated.

MR. HINNEFELD: But if your calibration field matches your field, you know, your workplace field, and your measurement of your calibration dose rate

includes the low energy, you know, your standard, your reference measurement of your standard for the low energy calibration --

DR. BEHLING: Sure.

MR. HINNEFELD: If that in fact is the true measurement of low energy dose, then your badge will correctly interpret.

DR. MAURO: Yes.

DR. BEHLING: I'm not sure I understand that, Stu. What if you have a badge that has the 80 mg/cm^2 filter on it and you expose it to a field that has a low energy component? You will obviously not see it and yet your bare skin on your face, your arms and so forth will see it. So you're measuring something that's the skin is seeing but not your badge.

CHAIRMAN GRIFFON: If you're assuming you know the field.

MR. HINNEFELD: If you have exclusively a low energy field --

DR. BEHLING: Yes.

MR. HINNEFELD: -- then you're right. You won't see anything on the badge. So the key though is to identify a site that uses that as a security badge and has exclusively as its non-penetrating spectrum a low energy field.

DR. BEHLING: You're right.

MR. HINNEFELD: And uranium is not a low energy field. Harshaw is a uranium plant.

DR. MAURO: Yes. This is sort of like the NTA issue. That is you know, if you know what the energy distribution when you calibrate your badge and you know your energy distribution even though you're only seeing --

CHAIRMAN GRIFFON: And this site, it seems you would.

DR. MAURO: Yes.

CHAIRMAN GRIFFON: But I thought the more general -- I didn't quite understand that. I'm just thinking of experiences I've had where I've walked around sites on audits

and things and people are totally miswearing their badges or they're covered up with other, you know, and you're supposed to have an open window exposed, and -- but I think that wasn't the issue that Hans was looking at.

MR. HINNEFELD: Yes.

DR. MAURO: Well, your response, I mean you have a lengthy response that I have in front of me which says listen. Yes, it's true. If you don't calibrate your film badge properly, you've got a problem. And this is not only a problem at Harshaw or whatever experience, but every facility in the weapons complex.

CHAIRMAN GRIFFON: Right.

DR. MAURO: So, again, we agree in principle that if they are not properly calibrated and take into consideration the film badge packaging -- including the possibility that there may be some additional shielding associated with the security badge -- yes, we're going to have a problem. And

this is true everywhere.

So, again, I don't think we are in disagreement. The only thing we may disagree on is that in building your coworker model -- that's really the question. In building your coworker model and using the data that you have available, which you have plenty of film badge data available, did the folks that looked into that make sure that the film badge records they had, in fact, do represent a good data set to represent the real radiation field that these people experienced?

Now the argument you just made is that since they're working with radiation it's really not that big of an issue because you're going to get some very strong data and you're going to get your photons, a strong enough field of a photon field, that this is not going to be an important issue. If that's the case, then that solves the problem. But I don't know whether -- and certainly that's not discussed at all in the exposure matrix.

MR. HINNEFELD: Well, actually sitting here, what I said is it's doable with uranium. I didn't say that they did it right at Harshaw.

DR. MAURO: Okay.

MR. HINNEFELD: So that's what we need to check is what do we know about badge design and calibration, and then was it adequate for -- was the calibration correct given the fact that the way the badge was configured. So that's what we need to check.

DR. MAURO: Yes.

DR. BEHLING: Well, according to the TBD, there's no record. So I guess we may be --

MR. HINNEFELD: Does the TBD say who read the badges?

DR. BEHLING: Well, early on, there is no -- apparently there doesn't seem to be any records that would allow us to review the protocol for calibration of dosimeters, et cetera. So it may be an

unresolvable issue.

MR. HINNEFELD: Okay. Well, we'll see what we can find out then.

CHAIRMAN GRIFFON: Okay. That's the action then. I got the actions.

Finding 6?

MEMBER MUNN: Resolved.

DR. MAURO: Let's see. Number 6, the last one, we believe we uncovered an error. I believe it was about a fivefold error in a calculation related to a bioassay data report. And NIOSH's response is they agree. There was an error in the F1 value used in their calculations, and that's going to have to be fixed. So I think we are in agreement on that item.

CHAIRMAN GRIFFON: Alright.

MEMBER MUNN: Done.

CHAIRMAN GRIFFON: Okay and I added on finding number 7 as the Monday morning sampling question. That came out of the report, right? So it wasn't specified as

a finding, although Hans discussed it. Right?

DR. BEHLING: Yes.

DR. MAURO: Yes, in the White Paper.

CHAIRMAN GRIFFON: Yes.

DR. BEHLING: Yes, that's the 48-hour hiatus.

CHAIRMAN GRIFFON: So that's just going to show up on the matrix as finding 7 now, and, I mean, you've got -- this has come up on other sites, right? So you're --

MR. HINNEFELD: Yes. I mean there's a general -- our position has pretty much been the same, that when we identify a situation where it's pretty consistent --

CHAIRMAN GRIFFON: Yes.

MR. HINNEFELD: -- the majority, either all or the majority of the sites, of the samples have a two-day off -- were two-day off samples, then we have to make some adjustment to what you had --

CHAIRMAN GRIFFON: Yes. But I

think in this case in Hans's White Paper apparently he's got some evidence at least further than the --

MR. HINNEFELD: Where he's seen the direction for the AEC that it's a -- sample of two-days off is what he said.

CHAIRMAN GRIFFON: Right.

MR. HINNEFELD: And so what period are we talking about and what --

CHAIRMAN GRIFFON: Right.

MR. HINNEFELD: The other thing was that if you did the logistics at the site, just how firm was that? It said do this and only do this or did it say if possible, do this or some things like that.

CHAIRMAN GRIFFON: Yes.

MR. HINNEFELD: Or they're preferred? Two day off samples are preferred because I -- like I said, I'm old enough to remember that.

CHAIRMAN GRIFFON: Right. Well, yes and I think you're never going to find out

100 percent one way or the other.

MR. HINNEFELD: Yes.

CHAIRMAN GRIFFON: But the weight of the evidence that's coming --

MR. HINNEFELD: We have to try to weigh the evidence.

CHAIRMAN GRIFFON: Yes. So is it in your hands to look at? I mean I'm not sure exactly what's in Hans's paper.

MR. HINNEFELD: Well, we could look at Harshaw.

CHAIRMAN GRIFFON: I haven't had a chance to look at it yet.

MR. HINNEFELD: We can look back at Harshaw and anything that Hans or John can provide that makes them believe that there was this preference or this overwhelming preference for two-day off samples in this data set. If they can share that, that would be helpful and we can go check and see what we know. Because I don't know anything sitting here.

CHAIRMAN GRIFFON: Yes. Right.

MEMBER MUNN: Well, there's the quote from NIOSH TBD.

MR. HINNEFELD: Yes, and just for the record, our indications from our work on the Procedures Work Group the difference doesn't go up with that factor of ten. We have about a factor of three with Type F. So we can go through that.

CHAIRMAN GRIFFON: We can go through that more. Yes.

MR. HINNEFELD: Yes.

CHAIRMAN GRIFFON: Okay. Alright. So I just put an action to determine if there's evidence at this site. For the most part, they administer a policy of two-day off prior to urinalysis sampling. Alright.

Okay. And that takes us to the end of Harshaw, right? Is that the end of Harshaw?

DR. MAURO: That's the end of Harshaw.

CHAIRMAN GRIFFON: Alright. I think what we can do now -- can we take ten, a ten minute break?

DR. MAURO: Yes.

CHAIRMAN GRIFFON: And then I'm proposing that we come back to the first 100 cases issues if we could because I'd like to have at least some discussion on that before Brad has to leave and others might have planes to catch or whatever. And we tend to fade out a little late in the day. So I'm hoping to have at least a half hour of good dialogue on that. And, Stu, when we come back, I'll probably ask you to kick it off with that just to get our minds thinking about this, your presentation, if you could go over the PowerPoint.

So let's take a ten minute break.

DR. MAURO: Mark, this is John. I'm going to break. I won't be returning for the back end of this. I've got an appointment.

CHAIRMAN GRIFFON: That's fine. Okay.

DR. MAURO: Very good. Thank you.

CHAIRMAN GRIFFON: Okay. Thanks.

MR. KATZ: About five after three by my watch. Off the record.

(Whereupon, the above-entitled matter went off the record at 2:54 p.m. and resumed at 3:08 p.m.)

MR. KATZ: Mike Gibson, are you still with us?

MEMBER GIBSON: Yes, I am here, Ted.

MR. KATZ: Okay. Great.

CHAIRMAN GRIFFON: Alright, Mike. Hang in there. We're almost done.

Yes. What I want to do now is to go over the issues regarding the first 100 cases report, and we were asked to reexamine the findings and sort of assess the sufficiencies or deficiencies categories and how which ones were critical with regard to

the Dose Reconstruction Program. Some of these actually I looked back at the transcript, and I think that sentence came almost from Larry's sort of overview last time we were in session about what he thought we should be looking for out of this.

So with that in mind, I sort of put together this really rough draft, but also I remembered that Stu had given an overview of some of the findings and sort of categorizing them at one of our last Board meetings. I don't know if it was the last one or the one before that.

MR. HINNEFELD: Just the one in Cincinnati.

CHAIRMAN GRIFFON: Yes. So I think it would serve us well maybe if you could go through that again and so we can start thinking about this, and then we can discuss this brief draft a little bit, and I think the outcome that I'm looking at from this is you've got a very, very rough thing

here with some ideas, certainly not in any way intended to be in a letter format. I just wanted to get some ideas out there and we don't have to try to reword everything now but to take this back and each Subcommittee member can sort of redline it, send me some ideas back and send separate documents saying that I came in and edited this. Here's what I think. And then I can kind of pull together all the ideas and come back with a more -- like a draft letter for next meeting.

MEMBER MUNN: Okay.

CHAIRMAN GRIFFON: Alright. So with that introduction, I'll let Stu kind of sort of represent what you did last time.

MR. HINNEFELD: Well, I've sent this to everybody. It's a PowerPoint presentation that I gave in Cincinnati that described what our response has been to the kind of the summary of findings. There was a summary of findings in the first 100, the report on the first 100 DR reviews and what

we've done in response. So I will go through this. It's not very long.

The first finding is the dose reconstruction final reports need modification to allow for a more complete audit and better explanation of information to the claimant. Well, this is getting pretty close, and it's a pretty significant change. And so there's a certain amount of concern about pulling the trigger on a big change like this.

The new format for dose reconstruction we've been working on for quite a while and we have like some of the final attempts at it. We've actually seen some dose reconstructions format. It's more of a package than a letter, and it contains the dose reconstruction report essentially in two parts. Well, it's prepared in two parts.

The first is what I'd like to call the summary that's readable by a claimant, by a layman. And rather than trying to intermix the two parts where you give the scientific

basis of the dose reconstruction in combination with the explanation, we give an explanation to the claimant which is much simpler and therefore not as complete as the old dose reconstruction was. It essentially tells the claimant, this is the information we had, and, in general terms, this is what we did with it, and this is the result, and this is how it comes out. And we also usually include if they were monitored, this is what the site reported as your monitored exposure. So that's kind of the essence of it.

It will, I'm almost sure, will retain the picture of the IREP input sheet because the dose reconstruction report the rule requires that you use as part of the dose reconstruction report you include the reconstructed dose year by year. And that's a convenient way to include it. So I'm almost sure we'll include that.

The meat of the dose reconstruction from our standpoint will be in

a separate packet, which is likely an Excel workbook that should be able to be quickly reviewable by a dose reconstructor or someone who is familiar with how the dose reconstructions were done that describes the technique that was used to reconstruct that component. So it will be in sections. It will have, for instance, the external section and rather than -- it may or may not give each year's dose because that's going to be on the other form anyway. But it will describe during what years we used what technique.

For instance, during '71 through '75 we used the coworker approach, and from '76 through '80 we used the reported doses. Missed dose would be accounted for by actual number of zeros or maximized number of zeros or those kinds of things. And then a similar kind of thing for internal, it would describe, you know, in the fifth on the actual bioassay data to determine the inputs, chronic intake over the duration of employment or chronic

over the duration of employment plus acutes on these dates fitted, you know, using in the fifth to describe to a dose reconstructor how was the dose reconstructed. So you don't have to try to divine that out of this combination of the description and the other part where it's hard sometimes to decide exactly what was done. You should be able to just look through this worksheet, this workbook, and if you're familiar with how dose reconstructions are done, it should be clear to you what was done to do the dose reconstruction.

So essentially the decisions that were made to convert the file information of what you know about the claim into the dose reconstruction should all be described there. So the reviewer can just say, okay. That's how they get it. And then you either can say, okay, that seems to be right, or they didn't get it right; it should have been this other. So that's the part there.

CHAIRMAN GRIFFON: Yes.

MEMBER MUNN: That's your final internal report you're talking about.

MR. HINNEFELD: That we have not proposed to send to the claimant.

MEMBER MUNN: I would think not.

MR. HINNEFELD: We had proposed that that would be in DR supporting file. We can provide --

CHAIRMAN GRIFFON: The part 2 report.

MR. HINNEFELD: Yes. But we can provide it if they ask. But it's not -- from our standpoint it's really going to be understandable to someone who's been involved in either doing or looking at these dose reconstructions.

MEMBER MUNN: Exactly.

MR. HINNEFELD: Because we're not going to explain in detail the technique. We're going to say it's OTIB-0004. You know? That's going to be the extent of the explanation. So it's intended for people --

it's intended for our reviewers first of all. It's needed for our reviewers.

CHAIRMAN GRIFFON: Right.

MR. HINNEFELD: And in this group on the ones they select for review and anybody else who starts to look at it, and it would be available to the claimants if they ask so that if they felt that they wanted to see that they could see it, or if they were a help to the system and wanted to look at it, or if they felt like they wanted someone to look at it for them. It would be available to them.

CHAIRMAN GRIFFON: Right.

MR. FARVER: Would it include references so we know what version of the document were used?

MR. HINNEFELD: The references -- yes. I mean it should describe that in the description of how it's done. There will likely be references in the first section. There will probably be a references section in the one that goes to the claimant.

MR. FARVER: Right, but I'm thinking so we know what version or what revision was used. So you can track back to the table or whatever.

MR. HINNEFELD: Yes. It should -- it's supposed to be -- it's supposed to just make it easy for a reviewer to look at it and say, okay. I see what it is.

MR. FARVER: Because, I mean, in the workbooks I've seen where they'll put notations in where this is from the coworker data.

MR. HINNEFELD: Yes.

MR. FARVER: But you won't have a reference to that document or what revision it is, or it will say OTIB something, but you won't know what revision.

MR. HINNEFELD: Yes, it should do that, but that's a good point. I'll make sure that it does. It has that connotation.

So that is essentially the dose reconstruction report. You know, those two

pieces are the dose reconstruction report. The remainder of the packet is sort of a "what comes next page," so the claimants will know how the process is going to proceed. There is a glossary. There is -- I think that it seems like maybe there is one more piece. I can't remember what it is right now.

But they are essentially packed. They're just forms, you know, that are provided with each case in order to help to explain it. And a lot of that came from findings from various places whether it be procedures or CATI or wherever these findings will come from that say, you're not being very explanatory to the claimant.

And so it's an attempt to try to make it better, and it's to try to maybe remove finality of closeout interview. There's kind of this perception that if you go to a closeout interview and then it's done, it's done forever. Well, it's not done forever. If additional information is learned

later, it's reopened. You know, it goes back to Labor, but it can be reopened with new information. So the closeout information isn't really the end forever necessarily. It's supposed to try to alleviate some of that, some of those concerns that have been raised.

So that's the entirety of the package, and unfortunately it's a package. What we will tell them is read this part first which is the summary of the dose reconstruction.

CHAIRMAN GRIFFON: Right.

MR. HINNEFELD: And then you probably want to see what happens next, and the rest of the stuff, look at it if you want to. That's essentially what the message is supposed to be. And here's a cover letter on the context.

MR. FARVER: I figured it was.

MR. HINNEFELD: What to do.

CHAIRMAN GRIFFON: At least the

way you described it is definitely responsive to some of the concerns we've brought up, I mean --

MR. HINNEFELD: Yes. Well, we tried to -- there's a lot of stuff.

CHAIRMAN GRIFFON: Yes. The question is-- is it more friendly to the claimant and more readable.

MR. HINNEFELD: Yes.

CHAIRMAN GRIFFON: And the other big concern that we always bring up is the audit ability, you know.

MR. HINNEFELD: Yes. You go through this stuff --

CHAIRMAN GRIFFON: Some auditor can track through, yes.

MR. HINNEFELD: Yes, we tried to hit several different audiences with one dose reconstruction report, and it didn't hit any of them very well. That's really what it's been doing, so on and so forth. So that's in essence what it is.

Now everybody will have their own judgment on how well we did.

CHAIRMAN GRIFFON: Right.

MR. HINNEFELD: And I'm trying to think of -- I'm thinking there ought to be some sort of test audience. I think this group might be good before we go plunging forward. It might be good.

CHAIRMAN GRIFFON: Yes, and I was saying one of us, either we should --

MR. HINNEFELD: I would like to get to Denise Brock and see what her reaction is because she had some of those comments about understandability and things early on. So, of course, she's a lot more knowledgeable of that program.

MR. KATZ: The trouble with Denise at this point is that she --

MR. HINNEFELD: She knows so much about this program, yes.

MR. KATZ: -- has become so sophisticated that she actually is no longer

so much a representative of a naive --

MR. HINNEFELD: Certainly not a naive claimant.

MR. KATZ: No, she's not. She understands really an awful lot.

MR. HINNEFELD: Really understands a lot.

MR. KATZ: But she's still always good -- it's still always good to use her as one --

MR. HINNEFELD: So I think we ought to use some sort of sounding board rather that just go plunging into this. So I can take an action to send that out once we get in the situation or even close. I don't have to be completely happy with it to share it.

CHAIRMAN GRIFFON: Yes. Well, I don't know if we can review it on the Subcommittee until it's a final package, I mean.

MR. HINNEFELD: I don't know. I'd

have to check and see.

CHAIRMAN GRIFFON: Yes.

MR. KATZ: You know you could pull together a focus group of actual -- pool of potential claimants or whatever.

MR. HINNEFELD: Yes.

MR. KATZ: Less than 10.

MR. HINNEFELD: We'll have to see what we can do. I'll work with --

CHAIRMAN GRIFFON: I'm not sure what our restrictions are.

MR. HINNEFELD: They know how to do that.

CHAIRMAN GRIFFON: We can review a draft. I don't know that we --

MR. HINNEFELD: I see a lot --

CHAIRMAN GRIFFON: I mean everybody.

(Simultaneous speakers.)

MR. HINNEFELD: You get a lot of kind of draft material.

CHAIRMAN GRIFFON: Right.

MR. HINNEFELD: You know, all the stuff that's been seen in here.

CHAIRMAN GRIFFON: And you can always do Rev 2.

MR. FARVER: Is there something you could present at a meeting and maybe get input from people?

MR. HINNEFELD: I can. I really want to have a -- you know, I kind of like the idea of having the claimants.

CHAIRMAN GRIFFON: I believe that might be a good forum for it.

MR. HINNEFELD: Make sure you have claimants. I think it would be better to have, well, a mixture of -- maybe have some claimants who have been through this and maybe some who haven't, you know, maybe something like that.

But there are people who know more about how to do this than me back in our office.

MR. FARVER: And that's not

typically an outreach meeting that you don't usually get that kind of --

CHAIRMAN GRIFFON: I think you're --

MR. FARVER: -- of focus group.

MR. HINNEFELD: Well, it depends.

CHAIRMAN GRIFFON: Your other resources might be like Mark Lewis and the Worker Outreach Group internally.

MR. HINNEFELD: Yes. It depends on the type of outreach meeting. Sometimes an outreach meeting is with the leadership of a union at a site, and many of those are not claimants. They just want to know how to advise their membership who are claimants.

CHAIRMAN GRIFFON: Right.

MR. HINNEFELD: So it depends on the --

MEMBER CLAWSON: I still think that Denise would still be a good resource though. I know she has become very knowledgeable about it. I think she's still

in touch enough that she can see what the issues are that are coming.

MR. HINNEFELD: Yes. I would like to send it to her, but like I said, like Pete was -- or Ted was saying -- where did Pete came from. Like Ted was saying, this guy does need -- I mean she does really know a lot about the program and understands a lot about how we do things and why.

MEMBER MUNN: Well, you got to get the best feedback from your proposed target audience. That's not Denise or any of us.

MR. HINNEFELD: Yes.

MEMBER MUNN: That's somebody who is --

MR. HINNEFELD: That's the claimant.

MEMBER MUNN: -- the claimant.

CHAIRMAN GRIFFON: But the part 2 probably gives some pretty good feedback from this.

MR. HINNEFELD: From this group.

MEMBER MUNN: Sure.

CHAIRMAN GRIFFON: Or the ones auditing the cases.

MEMBER MUNN: Yes.

MR. HINNEFELD: Yes. So anyway that's the form it's going to take. And like I said it's getting close. It's just like it's scary to pull the trigger on it and change that date because it's a pretty big change and we want to make sure all our processes are in place, and ORAU is getting their system built to take care of it and handle this new package, and then we, on our side, do, in fact, use some dose reconstructions. We thought, gee whiz. We've got to make sure we can do it. So that's being done as well.

And it may come in phases. It may not be like we flip the switch and all of a sudden everyone comes out in the new format. There may be some old format ones still working their way through this as we will

switch to the new. So that's where we are on that.

I see that this wasn't my last version because I didn't have a finding on the response on that.

The second finding, the summary finding, is case files, which is supporting data from the dose reconstruction, should include the internal guides or instructions used by the dose reconstructor and should include supporting data analysis. And internal guidance or instructions related to relevant employment are now at least included and because we showed you that work thing we had that conversation earlier on. That's in there.

CHAIRMAN GRIFFON: Yes, it was already touched on.

MR. HINNEFELD: We touched on that, and then we do have the worthwhile comment that this needs to be --

CHAIRMAN GRIFFON: Documented,

yes.

MR. HINNEFELD: -- documented for posterity rather than just putting it out at a staff meeting because sometimes you hire new staff. You know, there needs to be some instruction on this.

CHAIRMAN GRIFFON: And even when we say show your work kind of thing --

MR. HINNEFELD: What does that mean?

CHAIRMAN GRIFFON: Yes, what does that mean? Right. So I get into some of that with my paper that I wrote up several things that we've touched on the last meeting and other discussions about not only the -- like IMBA runs if you used IMBA, but what about peer reviews or is a peer review done?

MR. HINNEFELD: Yes.

CHAIRMAN GRIFFON: Should that document be included and that kind of stuff. So what does it mean to show all work? Okay. Go ahead.

MR. HINNEFELD: So the next summary finding or several findings related to the claimant interview process. These include questions about the adequacy of the interview, consideration of the information provided in the interview, and explanation in the dose reconstruction report of how the information was considered. And our action or response was the Subcommittee recommended a series of reviews to CATI, and those are working their way into OMB, essentially, a request. OMB has approved of the form we got. We're just changing the form. We don't think the change is a burden. It's just a pro bono thing we have to get the OMB okay on making those changes.

Consideration of the information is explained after the fact in each case. What does that mean? That relates to the -- the consideration of the information provided in the interview.

Oh. There have been -- I guess

this finding relates to --

CHAIRMAN GRIFFON: Several of the findings, yes.

MR. HINNEFELD: Several of the findings were -- you know there was just information in the CATI. How is this addressed in the dose reconstruction? We have been able to explain that here. I think the further thing though is that which actually relates to number 3 is make sure you're clear that in the dose reconstruction how you use the information from the interview.

CHAIRMAN GRIFFON: Right.

MR. HINNEFELD: Which is kind of -- that's kind of part of it. I think that to me they're kind of the same.

CHAIRMAN GRIFFON: Yes, they definitely are related.

MR. HINNEFELD: One is did you consider the information, and the second one is did you explain to the claimant that you considered the information. So it's kind of

the same thing. Make sure that the information in the CATI is addressed and that you have explained it in the dose reconstruction to the claimant how you used the information they gave. I think we're at least getting better at that.

The next one is dose reconstruction methodology for compensable claims. This practice was adopted briefly in 2005 under pressure to complete claims more quickly. It was discontinued based on the issues later identified by the, you know, the exact kind of comments or issues that were raised in here, were the reasons why we said this really isn't a good idea. We shouldn't be doing it.

CHAIRMAN GRIFFON: And that was a formal policy announcement and stuff, yes.

MR. HINNEFELD: Yes.

In best estimate cases, several findings related to professional judgment and consistency were made which may have impacted

the overall outcome of the case. And our action and response was professional judgment is required in a number of those dose reconstructions, and those specific findings were all addressed, and attempts are made to better explain the basis for such judgments.

CHAIRMAN GRIFFON: That goes back to that.

MR. HINNEFELD: And that was the last one. So that's essentially from the summary findings from the first 100 letters, you know, things that we say, well, we're not ignoring this. We are doing things about these.

CHAIRMAN GRIFFON: Now I'm going to hold you off on the quality control thing you sent around --

MR. HINNEFELD: Okay.

CHAIRMAN GRIFFON: -- and go to the document that I put together, again, very rough, but one part of it is quality control. So that may be where I ask Stu to elaborate a

little bit on what exists currently, and maybe some of that -- earlier comments you were making to me off the record before the meeting was about quality assurance.

MR. HINNEFELD: Yes.

CHAIRMAN GRIFFON: So all I did here was to quickly try to get my thoughts together on, just reflecting on Larry's sort of, well, here's what I think we're really looking for in terms of you assessing these findings a little further. And that is focusing on identifying certain deficiencies or categories of deficiencies that were critical issues to assure a scientific, valid, and defensible dose reconstruction program.

So, again, the categories of deficiencies that were critical that came up in the first 100 cases, again, that's important, too, that came up in the first 100 cases because we know all the sort of restrictions, not restrictions but all the -- you know, that we weren't necessarily getting

the reflective cases of the overall program although we might have. There are not that many best estimates in our cases as I thought that there were going to be eventually.

But the first three sets of cases, as you'll see, Kathy Behling pulled together some numbers for me that I put into this report, and the first three sets of cases, you know, where I have a little footnote there, Kathy actually put that in her text that we had no best estimate cases in these first three sets. So you wouldn't expect to see anything but zeros on the right-hand side for that one.

MEMBER MUNN: Yes.

CHAIRMAN GRIFFON: Anyway, if we go back up to the first paragraph, I just started to try to think, and this certainly is not -- like I said, it's very rough. But three items that I sort of thought of categories out of this first set of 100 that seemed to meet that definition of critical to

me were -- and my document just went away -- there it is -- dose reconstruction quality control and quality assurance. Number 2 is the appropriate use and consideration of information provided by the claimant workers and the public. And number 3 is case documentation and reporting. And then I tried to expand a little on each one of those topics just for discussion purposes at this point certainly.

The first one, quality control and assurance, we talked about this at the last meeting, this notion of looking at quality control related findings versus the type of case. Obviously, you could certainly make an argument that some of these quality control findings if they were always for the overestimating cases are not as big of a concern. But they are certainly more important if you get them in the best estimate cases. At least, we were discussing maybe you need different sort of acceptance criteria for

different types of dose reconstruction.

So just looking at these, this gives a breakdown of how they fall out, and I guess the fourth and fifth set might be most representative since we have a mix of all the cases in that. But there's certainly some -- Kathy said -- and, Kathy, are you on the line?

MS. BEHLING: Yes, I'm on the line.

CHAIRMAN GRIFFON: And you did say in your email -- I'm using the numbers. Do you have this report?

MS. BEHLING: No, I don't.

CHAIRMAN GRIFFON: I'm sorry.

MS. BEHLING: Alright.

CHAIRMAN GRIFFON: I forwarded it to John.

MS. BEHLING: Okay.

CHAIRMAN GRIFFON: But it probably didn't get passed on.

MEMBER MUNN: I'll send it to you, Kathy.

MS. BEHLING: Thank you, Wanda.

CHAIRMAN GRIFFON: Thank you. Anyway, the fourth or -- Kathy did indicate in pulling this information together it was difficult in some cases being sure which cases were overestimates, underestimates, or best estimates, you know, as Stu has had that challenge before, too. Sometimes you have a best estimate external, and it's sort of a hodgepodge. So these are not necessarily clear lines between these categories.

But anyway that's sort of what came out. So the question about -- I guess the concern with regard to this topic would be just that, is, you know, it appears that we had a lot of these findings. We definitely -- my opinion is that it is a concern. The question is that in terms of how it should be considered. I think we have to have a better understanding also of the current program that exists, what's being done. Another thing -- and that's why I was talking about the show

your all because some of these categories tend to overlap in my mind, too. But the show your all work part of this, you know, we're never sure when we review these cases the peer review information -- I don't believe is documented in the case files. At least I haven't seen it. Yes.

So you know we're -- the only way we notice that something's been reviewed is that you see several sets of signatures, right. But we don't actually see a document produced by the reviewer.

MR. HINNEFELD: Correct.

CHAIRMAN GRIFFON: So anyway.

MR. HINNEFELD: In many cases I don't believe there is a document produced by the reviewer.

CHAIRMAN GRIFFON: Okay.

MR. HINNEFELD: It would be from ORAU reviewer stand -- from an OCAS reviewer standpoint a certain percentage, you know, the person reviewing has to fill out a form. It

pops out at the site and they have to develop a form. But that doesn't go in the CPR file necessarily.

CHAIRMAN GRIFFON: Right.

MR. HINNEFELD: It's filed in a programmatic set rather than in the case file and --

CHAIRMAN GRIFFON: Well, can you at this point step us through like some of the quality control?

MR. HINNEFELD: Let's see what I sent here.

MEMBER MUNN: And, Stu, a long, long time ago we had some discussions -- I can't remember in which work group about -- early on we were talking about a QC check off list that I think ultimately worked into what you use for the dose reconstructor. But I can't recall whether we talked about a similar kind of check off sheet for peer reviews. Did we even discuss that, or do you recall?

MR. HINNEFELD: I don't recall if

we discussed any kind of a checklist for peer review. I don't right now remember if there is one. I think Scott is still on the phone. He might know.

MR. FARVER: There is one for ORAU procedures.

MR. SIEBERT: We have a peer review checklist. However, it is not a portion that needs to go -- it doesn't go into the case file. There is a separate sign-off form that the dose reconstructor signs to state that they followed everything within the peer review procedure.

MEMBER MUNN: Oh. So --

MR. FARVER: It's about a 12 page check off list. I mean, it's pretty intense.

MEMBER MUNN: Right. So we might not -- in those cases, we might not need the actual form itself as long as -- in each case --

CHAIRMAN GRIFFON: Right.

MEMBER MUNN: -- as long as we

knew what the contents of the checklist were.

CHAIRMAN GRIFFON: As long as you knew the form, yes.

MEMBER MUNN: Yes.

CHAIRMAN GRIFFON: And I guess when you -- I think when I'd want to see it in the case file is when there was a discrepancy found or this whole notion of discrepancy identified but no need to change, you know, that idea that Stu was talking about last meeting when we said some of these things if it's a millirem difference or something and it's not going to affect anything and it's an overestimating case, you know, they might know the discrepancy. But there's no need to redo the dose reconstruction. But that should be in there so we don't have to --

MEMBER MUNN: At least the sentence identifying what it is. Yes.

CHAIRMAN GRIFFON: Yes.

MR. FARVER: They usually have a comments form.

CHAIRMAN GRIFFON: Yes. A comments form.

MR. FARVER: And sometimes that may have that typed in.

CHAIRMAN GRIFFON: Are those in the case files though? I've seen this --

MR. FARVER: I won't say they're in all the files.

CHAIRMAN GRIFFON: Yes. Well, they probably shouldn't be.

MR. HINNEFELD: Usually the comment form is one that is filled out when we're sending the dose reconstruction back for correction.

MR. FARVER: Okay.

MR. HINNEFELD: As you do in comment forms.

MR. FARVER: Oh, back to the DR for -- yes.

MR. HINNEFELD: Back to the DR for correction.

MR. FARVER: Yes.

CHAIRMAN GRIFFON: So this middle --

MR. HINNEFELD: So the middle -- well, I see there is a mistake here. But I'm going to let it go because it's a mistake on the high side and this is and overestimating from the DR anyway. A dose reconstructor might just decide that's okay, and that doesn't necessarily get recorded anywhere now.

MR. FARVER: Yes.

CHAIRMAN GRIFFON: And I feel like in the first 100 that we probably had a lot that could have fallen into that category.

MR. HINNEFELD: A lot of the findings, yes. A lot of the findings could have fallen in.

CHAIRMAN GRIFFON: Right. Because we all at the end of the day after several hours of discussion we say but it only would have resulted in a 50 millirem difference per year and not affect anything or whatever.

MR. HINNEFELD: Yes.

MEMBER MUNN: Yes. Just wouldn't affect anything.

MR. HINNEFELD: All of the OTIB-0008 and OTIB-0010 findings, well that was, I guess some of those may have come up here. OTIB-0008 and OTIB-0010 findings.

CHAIRMAN GRIFFON: Yes. OTIB-0008.

MR. HINNEFELD: All of those were high, high errors on an overestimating approach. And in fact it was really ambiguity -- you couldn't really tell what the procedure was telling you to do.

CHAIRMAN GRIFFON: We can have Clawson review that and --

MR. HINNEFELD: He gets all the action from now on.

CHAIRMAN GRIFFON: Yes. See you, Brad.

MR. HINNEFELD: Thank you, Brad.

CHAIRMAN GRIFFON: Alright. So I mean I'm just -- these are just discussions to understand the process.

MEMBER MUNN: Yes, I know, I interrupted Stu before he started giving his --

CHAIRMAN GRIFFON: No, no. And I think when we're pulling this together I'm thinking, okay, we identify this, but also better understanding of the process might help the Board to then make any recommendations if necessary, you know. I mean we have to sort of understand what exists now before we can --

MEMBER MUNN: True.

MR. HINNEFELD: In terms of the actual dose reconstruction itself and what's done with the dose reconstruction, there is one thing that's in the form I sent which is more of a QA activity than a QC activity which is the training required for dose reconstruction. There is a training expectation in dose reconstruction. They have to complete that training before they do dose reconstructions, and then after that they work essentially under close supervision of a peer

reviewer or their team leader while they turn out and become proficient at doing it. So that process is in place which is not just inspection.

Then, from then on, the other items that are identified is the peer review process and in what I sent out there is no detail, like the peer review form isn't there. But it is available in terms of what's looked at on peer review and then the review by OCAS, and there is a little more detail here on what the OCAS review includes. There's a procedure for doing dose reconstruction review.

I think we've commented there are a lot of things on there. It's just that the other that's kind of nice is that really what you want to have this in, and you can always argue can there be more specific description, more specific requirements in there. But the approach is that the review by the OCAS reviewer should make sure their approach is technically valid. In other words, they've

chosen their approach that is appropriate for the specifics of the claim, that the Probability of Causation falls on the correct side. In other words, if you see an -- and this is what you were saying. Well, this is no resonating approach. They've just mistaken it. They've actually estimated higher than what they maybe should have, but it's still overestimates below the 50 percent. So they're on the right side of 50 percent. So you would probably let some things go just because that's what you're checking for. Is the outcome correct? Is it clear that the outcome is correct?

CHAIRMAN GRIFFON: Those things aren't necessarily separately noted.

MR. HINNEFELD: Correct.

Now the second one, the next high, is they are completed according to the guidance contained in the approved procedures. So that actually is more specific than the one we gave. In other words, did they follow the

procedure correctly?

And, again, this kind of implies that if it wasn't it would be sent back. But I don't know that that's necessary the case.

CHAIRMAN GRIFFON: Right.

MR. HINNEFELD: If there is a deviation from the procedure that didn't change but it's clearly on the --

CHAIRMAN GRIFFON: On the wrong side.

MR. HINNEFELD: It's on the wrong side. That might not be corrected just for expedience because once you return it then there's a whole other cycle to this dose reconstruction.

CHAIRMAN GRIFFON: Yes.

MR. HINNEFELD: And that the IREP input file produces the same result as IREP summary provided because when we get these dose reconstructions there is an IREP summary on there. For the IREP input file, there's an IREP summary. And so we run all those. We

run those IREPs and make sure we get the same output that was provided with the case file.

And if in fact there is this deficiency that the dose reconstructor -- that needs to be corrected, then the comment form of what you commented about, that comment form is filled out and is provided back to ORAU. ORAU databases their comments. You know, they know why everything is sent back, things like that. And those comment sheets are in the dose reconstructor. It's important.

Okay. And then this next part talks about the five percent, and it randomly popped up to require the completion of the checklist. And then quarterly, we do an assessment of what those checklists are telling us. But that's essentially looking at the forms that were filled out last quarter, putting an assessment form on the front, and seeing if there's anything that stands out in terms of what's being identified on those forms.

And then finally after the OCAS reviewer approves it, there's still one more senior HP or a team leader takes one more look to make sure there's not something obviously wrong. They don't do the review in depth like to the same depth that the OCAS reviewer did. But they just read through it to make sure it reads right and make sure there's nothing -- and it's consistent with what you'd expect. If you see a prostate claim with one year of employment that gets paid, normally that gets your attention, you think, boy, that one doesn't look right. We'd better take another look.

CHAIRMAN GRIFFON: Right.

MR. HINNEFELD: So things like that. That's essentially what's done on the dose reconstruction.

MEMBER MUNN: So following a dose reconstruction, you have a standard peer review and then --

CHAIRMAN GRIFFON: By ORAU, right?

MR. HINNEFELD: It's by ORAU. The peer review is by ORAU, yes.

MEMBER MUNN: Yes.

MR. HINNEFELD: If it's an ORAU dose reconstruction.

CHAIRMAN GRIFFON: Right, right.

MEMBER MUNN: And then you have a closer review of a selected number of cases.

MR. HINNEFELD: Do you mean on the ORAU side?

MEMBER MUNN: Yes.

MR. HINNEFELD: I don't know. I don't know that that's the case. That occurs on our side.

MEMBER MUNN: On your side. And then there is a final high level overview of the case.

MR. HINNEFELD: Well, I always like to think of it when it's on ORAU and when it's with us.

MEMBER MUNN: Yes.

MR. HINNEFELD: If it's on the

ORAU side, the dose is compared and there's a peer review. And after the peer review and the peer reviewer, that's usually kind of informal because it's usually a team leader or a senior person or disclosure person and they'll say, well, you ought to do this different or word this a little differently. I don't think they can get into the wording of it very much, though. And they make sure that the peer reviewer has kind of focused dose reconstruction and done it appropriately, technically appropriately, and then it's submitted to us.

MEMBER MUNN: Then it comes back to you.

MR. HINNEFELD: Then it's submitted to us. When it's submitted to us, then it gets a review by a health physicist, you know, one of our OCAS reviewers, and then five percent of those are the ones that are selected for the report.

MEMBER MUNN: Right.

MR. HINNEFELD: After that review, then a senior tech or team leader, not a senior tech, senior HP or team leader does a fairly cursory look just as sort of a sanity check. It's not in depth the way the OCAS reviewer -- so that's done. And then once that's done --

CHAIRMAN GRIFFON: That's OCAS also --

MR. HINNEFELD: That's still us. And once that's done then it is compared and the draft is sent to the claimant. That's the process through us with the various inspections.

So what begs the question now is Doug is sitting over there saying, but I see all these mistakes. I know that's what he's thinking. And so I think to really understand that, we have to think carefully about that. You know, this is a nutty -- problem. This is not a simple problem because there are a number of things that could lead to that. One

thing people could be just messing up, you know, they could just not be inspecting carefully. That's one possibility.

Another could be that we have not provided clear enough instruction on how to inspect. You know, we have a procedure, but it isn't really clear what we want this to say.

Another might be that we don't all have the same understanding of what should be inspected out. You know, what is it exactly that you want this thing -- how you want it to look? I might have a different judgment than the OCAS reviewers, to be completely honest, about what that is. And so I would guess I'm in the position to change the OCAS reviewer's mind at this point if I choose to. So that might be a part of it as well. So it's going to take a little more analysis to really understand those kinds of issues.

CHAIRMAN GRIFFON: Right.

MR. HINNEFELD: Of course, that

analysis takes time and somebody to work on it.

CHAIRMAN GRIFFON: Yes. And money.

MR. HINNEFELD: Yes, time and money and the bad thing is, you take somebody to do that you know you're taking off something else. That's what we do.

CHAIRMAN GRIFFON: Yes. Well, that's why I think we want to understand it better so that if we make any recommendations, it's the targeted recommendations. You know, it's --

MR. HINNEFELD: I think as I think about this, the helpful approach might be, you've seen a number of them. I think -- I hate to make it hard to go find these again, but if you could find some examples of a particular error that made it out to a dose reconstruction and said, look. This we don't really think should have gone -- this one shouldn't have gone out. It wasn't a TIB-0008

or a TIB-0010, or it's an overestimate, an overestimated approach.

But the dose reconstruction just doesn't say what it's supposed to say. You know, it did one thing, but it said it did something else or this or whatever you think are fairly significant things that ought to be pointed out. And we could probably pick them off the matrix; at least, get first selection on the matrix.

CHAIRMAN GRIFFON: Yes.

MR. HINNEFELD: And get those back to us and let's get the guys who actually do the work engaged in this and see what exactly is going on and why are these going out this way. That might be a way.

MR. FARVER: Some of the mistakes that come to mind are doses are missing.

MR. HINNEFELD: Yes, yours won't be in there.

MR. FARVER: Okay. Or all the bioassay data wasn't considered. Or all the

positive bioassay data wasn't considered, and I believe these are check items in the ORAU checklist.

MR. HINNEFELD: Yes.

MEMBER MUNN: They ought to be.

MR. FARVER: So I believe that checklist is very good and very thorough. And this is where I get confused. If we have this thorough checklist and it's being followed, then we shouldn't have to come around and be finding missing dates and missing data and things like that.

MR. HINNEFELD: Well, I think that would be an important step then is to -- let's get those examples out and let's get back to the people who do the work and say, what exactly is going on here. You know, is there explanation of this other than, oops, I missed it. And if it's, oops, I missed it, and we're doing that a lot, then we have got to rethink what's causing us to miss it all those times.

CHAIRMAN GRIFFON: And then, what

the --

MR. HINNEFELD: You are being lax or if you're too familiar with them or --

MR. FARVER: And if you have this checklist in place, it should not be that difficult to track the items that are more frequent.

MR. HINNEFELD: Yes. Provided it's filled out every time. I won't swear that it's filled out every time. I mean it's --

CHAIRMAN GRIFFON: Yes.

MR. HINNEFELD: It's a lot like -- for instance, we have checklists and it's filled out on the five percent that come up and when the reviewer feels, but other than that, when he wants to he can fill it out any time. But other than that, he doesn't have to fill it in, either when he approves it or returns it, he doesn't have to fill that out.

CHAIRMAN GRIFFON: Right.

MR. HINNEFELD: And, again, it

doesn't seem very hard, but maybe it's five minutes, and if you do 100 dose reconstructions a week, that's 500 minutes or almost ten hours. That's eight hours of personnel time, eight man hours of time that you now are spending, and you're producing the same amount of work that you did before. So those are things we kind of want to weigh here.

CHAIRMAN GRIFFON: Well, yes, as opposed to spending the time on the other side.

MR. HINNEFELD: Well, I've spent a hell of a lot of time down here. If those guys have 14 more hours, I don't care.

MEMBER MUNN: Yes. The real question is if the checklists are thorough and in place and are not being followed, that's the real question. If the checklists are not being followed, then why not? Because there are only two aspects to the issue really and truly. One, are the proper controls in place,

and, two, are the proper controls being followed? And if we come to the conclusion that the controls are in place but they're not being followed, then that raises the question of why.

CHAIRMAN GRIFFON: Are the controls proper, too, I guess would be the one step back.

MR. HINNEFELD: Yes.

CHAIRMAN GRIFFON: Yes. Basically I would agree with you.

(Simultaneous speakers.)

CHAIRMAN GRIFFON: Right. Look at the checklist, and it seems like it's pretty -

MR. FARVER: I believe it's pretty thorough.

CHAIRMAN GRIFFON: Right.

MR. FARVER: And if I was overseeing a program like that, I would probably be tracking all these items to start with on every dose reconstruction and seeing if they're met and to get some feedback if

you've got errors and then you know which ones to concentrate on. And then after you do so many you could say, wow, we don't need an extensive one. We're getting all these right and we can cut it back. And then you scale it back based on your input that you have from your previous dose reconstructions. But if you don't look at any of that then you're not getting any feedback.

CHAIRMAN GRIFFON: And you could also see if you're getting a lot of comments in the same areas.

MR. FARVER: Yes, and focus on those areas and then drop some of the areas that you really don't need to focus on. So it can be scaled back.

CHAIRMAN GRIFFON: Are you saying you're not sure that data has been looked at in that way?

MR. FARVER: But I'm not sure it's being looked at and you really can't say much about it.

CHAIRMAN GRIFFON: So that's something we could at least ask maybe. I'm just trying to get -- I don't think we're in a position to ask NIOSH to do anything yet. I think we just want to get a sense and then come back to the Board and discuss.

MEMBER MUNN: That's true. But I think even a group like ours needs to continue to be mindful of the fact that you can destroy what you're trying to do by imposing too many administrative activities on it. And we don't want to get to the point where we are recommending so many administrative oversights that the work doesn't get done. We have to realize that we have a responsibility to the claimants, maintain a balancing act here that's reasonable but still fair and comprehensive for their sake.

CHAIRMAN GRIFFON: Yes, fair and comprehensive and scientifically defensible and all that. I mean because that's the issue if -- and that's the question about sort of

what's an acceptable level of errors because people we hear that come to the committee, come to the full Board meetings and they say my husband, wife, whatever, had this cancer and you assessed it at this and here's the report, and you have the wrong cancer selected. Those are ones we get. Now that's going to happen.

MR. HINNEFELD: Well, certainly there are cases where we do a surrogate target.

CHAIRMAN GRIFFON: Well, but sometimes it was erroneous. I mean I've had a couple cases of that, yes. But that's the ones that come to the Board.

MR. FARVER: That's a give-me. That shouldn't make it through.

CHAIRMAN GRIFFON: It's a very --

MR. HINNEFELD: That's right. That should not make it through. But I mean -

CHAIRMAN GRIFFON: That kind of error is unacceptable. Zero tolerance, right,

or whatever? I don't know.

MR. HINNEFELD: I would think --

CHAIRMAN GRIFFON: But other errors certainly are going to happen, but they're acceptable. You know, we kind of accept that -- and we don't want to, like Wanda said, waste a lot of energy and your dose reconstruction team's time chasing down these two millirem issues for over -- you know. But I think we're all kind of saying the same things.

I mean the examples I would use -- Doug gave out some examples, I'm thinking of the ones from I think it's the eleventh -- the last set of cases we just picked. I haven't even opened those cases, but I already have three in mind that when I selected them I said, what the heck is going on here. I think you had the same reaction. They were Paducah and Portsmouth. They were all less than one year, and they were compensable. You know 57, 80 percent. So how did those get past even

this high triage? It seems to me that that --

MR. FARVER: Yes, I don't know.

CHAIRMAN GRIFFON: Yes.

MR. FARVER: I haven't looked at them yet.

CHAIRMAN GRIFFON: Right. We haven't looked at them. But I mean that's the --

MR. KATZ: We don't know if they are a problem, yet.

CHAIRMAN GRIFFON: I'm pretty sure they're a problem. How could they not be a problem?

MR. HINNEFELD: Well, it could be a large number of basal cell carcinomas. People that were at a gaseous diffusion plant -- we would only have enough -- on the case and if it had a large number of --

CHAIRMAN GRIFFON: So even with that, you're saying even though it's less than 250 days you would still by the policy --

(Simultaneous speakers.)

MR. HINNEFELD: The number of basal cell carcinomas --

CHAIRMAN GRIFFON: Yes, I know. I know.

MR. HINNEFELD: It doesn't take much.

CHAIRMAN GRIFFON: Yes.

MR. FARVER: We've seen them with, what 70 or so, or more?

MR. HINNEFELD: We've had them with a 99. We had one with 99.

MR. ULSH: I recall 50.

MR. HINNEFELD: Yes. We had one with 99.

CHAIRMAN GRIFFON: And that's probably what it is. So then it ends up being in another box for us to consider which are these inconsistencies. Let's put that in our 250 day work group for instance, you know. Is that really equivalent to a criticality situation, you know? You only needed five days of work to --

MR. HINNEFELD: Well, let's leave that 250 days.

CHAIRMAN GRIFFON: Yes. I know. I'm just -- but anyway and maybe that was flagged and they did say and they solved.

MR. HINNEFELD: See the ones you showed me. I remember you showed me three of them that seemed to be puzzling, and they puzzled me as well. But I have not opened them up.

CHAIRMAN GRIFFON: And they probably are a skin cancer, yes. You're probably right. Multiple skin cancers.

MR. HINNEFELD: I can't see what else they would be, and even then I would guess we would have to have a fairly healthy model for assigning the skin dose during those years to get them to those levels, I would think, but I don't even know, I haven't looked at it, and I'm not as conversant with everything we do as others.

CHAIRMAN GRIFFON: Yes.

MR. HINNEFELD: What do you think of the suggestion of pulling out examples? I don't propose that we go out and do this. I don't know if you -- if SC&A is equipped and has time to do that. But just off the matrix, let's just say, "Hey, these look like -- from what we wrote in the matrix these look like the kinds of things that might take a careful look."

CHAIRMAN GRIFFON: That's what I was trying to understand.

MR. HINNEFELD: And things like that which would give -- you know, it's much better to look at something concrete.

CHAIRMAN GRIFFON: It's a decent idea, but how do you track it back?

MR. HINNEFELD: Track it back where?

CHAIRMAN GRIFFON: There's no documentation. How do you track it back? You said go to the people --

MR. HINNEFELD: Well, what I would

do is I would go to -- I don't know if I would go to the specific one whose name was on it. I would go to the team leaders and our OCAS reviewers and I would say, okay, now look. Here's a case where this was in a final dose reconstruction report. It would seem to me that it doesn't belong there. What do I not understand here? Is there -- did it just slip out? Is there something I should know that I don't know? What is it I don't understand about this? Because I don't know that my judgment would be a lot different than yours because I talk to you guys a lot more than I actually look at dose reconstruction. And so I don't know that my judgment would be a lot more than yours.

MR. FARVER: That's true.

MEMBER MUNN: I know.

MR. HINNEFELD: In terms of what's acceptable and a person who is doing a dose reconstruction or a person who is reviewing a dose reconstruction might have a really

different view on some things than I do and might be explaining something that's not occurring to me. Or they might say, well, it just slipped out. Or they might say something else I haven't thought of.

So I would like them to at least have and I would like to pursue that avenue of questioning with the people who do the work whether they're dose reconstructors or OCAS reviewers for certain concrete examples and say, in this instance, what happened. It would seem to me that this wouldn't be in a final dose reconstruction. Would you explain why it's okay or what happened or anything like that? If we keep getting, well, it slipped out, it slipped out, it slipped out, then that has to do with how the control is being executed, and then we have to rethink that and figure out why is the control not being executed any better.

CHAIRMAN GRIFFON: I think it's a worthwhile idea. Part of what my hesitation

is that, you know, if you're going back to look for the peer review sheets that's a different --

MR. HINNEFELD: I wouldn't necessarily do that.

CHAIRMAN GRIFFON: No, but I mean just discussing it you could get a sort of defensive kind of posture.

MR. HINNEFELD: I'm getting used to it, Mark.

CHAIRMAN GRIFFON: No, I know. It's true. I'm not saying it's not valuable. But I'm saying the first question I would try to find out is do some of these DR checklists exist for some of these cases we reviewed.

MR. FARVER: That's what we want to find out. We could pick out ten case examples --

CHAIRMAN GRIFFON: Ask for the documentation --

MR. FARVER: And we get the numbers, the case numbers, and you can go and

say, why is it this way.

MR. HINNEFELD: Yes, all I would need is the case numbers.

CHAIRMAN GRIFFON: Yes.

MR. FARVER: Would you like us to do that?

MEMBER MUNN: It would seem to me that ten might be a bit of a high number if you're really going to do this to the level that I thought we were talking about which is pretty deep down in the weeds. But a half dozen maybe. Five or six.

CHAIRMAN GRIFFON: I don't know how. I mean maybe is it worthwhile pulling the -- yes, maybe pull all the cases together and then, if you can, out of the cases that we have -- I guess we're sticking with the first 100 cases.

MR. FARVER: That was my next question.

CHAIRMAN GRIFFON: Yes.

MR. HINNEFELD: You know I

actually would -- I think it would be more informative --

CHAIRMAN GRIFFON: Yes, I think so, too.

MR. HINNEFELD: -- because in the later groupings where of course the DR reviews had been done in the later groupings --

CHAIRMAN GRIFFON: Yes.

MR. HINNEFELD: -- we have kind of been focusing on more recent claims.

CHAIRMAN GRIFFON: I think so, too. I was just asking because our follow-up for the Board is for the first 100 cases. But I think we can broaden our selection.

MEMBER MUNN: Well, there's another issue, and that's the time involved in reviewing them.

CHAIRMAN GRIFFON: Yes.

MEMBER MUNN: And then having us hear the review. We probably don't want to hold up the letter on the first 100 cases. But --

CHAIRMAN GRIFFON: Right.

MEMBER MUNN: -- we could include, incorporate in the letter the fact that --

CHAIRMAN GRIFFON: That we're testing this. Yes.

MEMBER MUNN: -- is the result of what we're seeing.

CHAIRMAN GRIFFON: Right.

MR. FARVER: Five cases out of the first 100?

CHAIRMAN GRIFFON: No, I'd say -- I think we should still -- don't restrict yourself to the first 100 or what I was going to ask is maybe up through --

MR. FARVER: Ninth set? Eighth set?

CHAIRMAN GRIFFON: Eighth set because that's where we're kind of at. Through the eighth set and, again, I would ask if you can produce, if you can pull out all the QC cases and then highlight five or six that you want to review in depth. Is that

possible?

MR. FARVER: It's probably easier just to pick five or ten.

CHAIRMAN GRIFFON: Yes.

MR. FARVER: Because I think if we just pick all of them we're going to have a lot.

MEMBER MUNN: Well, if you have --

CHAIRMAN GRIFFON: The reason I'm saying that is I want to make sure that we get sort of representation of -- I'm not saying pick five or six to follow up on. I'm saying show the Subcommittee all of them and then -- do you think that's difficult to go through and flag all of them and then pick --

MR. FARVER: Yes.

CHAIRMAN GRIFFON: -- propose your five or six?

MR. FARVER: Yes.

CHAIRMAN GRIFFON: Yes.

MR. FARVER: I think you might want to just start --

CHAIRMAN GRIFFON: Well, how are you going to find your five or six? Let me ask that.

MR. FARVER: Basically I'm going to go down through the findings list and look for ones that are like real obvious.

CHAIRMAN GRIFFON: Yes.

MR. FARVER: Where the year's dose is missing or --

CHAIRMAN GRIFFON: I mean, Kathy went through -- Kathy apparently has done a little bit of this already, possibly for the first five sets where she's identified some of these. Is that right, Kathy?

MS. BEHLING: That's correct. I have.

CHAIRMAN GRIFFON: So?

MS. BEHLING: I took the matrix and went through, and I actually marked up the matrix on the first five sets.

CHAIRMAN GRIFFON: So you've got half the work, at least, the preliminary work

done on that. I would ask if you could do that and then out of that pick. Come back to us and say, here's the whole list. Here's the six we propose to --

MR. FARVER: See, my idea was to pull out ones that were very obvious.

CHAIRMAN GRIFFON: Well, let's -- if that's the final result, that's fine. I just want to see --

MR. FARVER: I mean, there are going to be ones that are going to be more questionable.

CHAIRMAN GRIFFON: Yes.

MR. FARVER: I mean, if you find ones that are very obvious that should have been caught, the wrong origin was used, something like that, that's pretty obvious.

CHAIRMAN GRIFFON: Yes, and I also -- I want to see the nature of all of them. You know what I'm saying? I don't want to just see here's the obvious ones, but then there are some that it was a minor deficiency

and they made a decision but it's not documented. You know, they made a decision not to include it and not to kick it back to DR, but it was --

MR. FARVER: My thoughts -- this was just going to be a first stab at it when you take some of the obvious ones and go look them up and then see where it takes you. Then you go look for the ones that are more subjective.

CHAIRMAN GRIFFON: I'm not sure this won't be our only stab at it, you know, that's why I'm --

MR. FARVER: I don't know. I mean if you want we'll go flag all the ones --

CHAIRMAN GRIFFON: I still think Kathy's made a --

MR. FARVER: -- that we believe are QA.

CHAIRMAN GRIFFON: I think Kathy has made an initial stab at that already with the first five sets.

MR. FARVER: Okay.

CHAIRMAN GRIFFON: You can just go sixth, seventh, and eighth and do that and then pick out, and I think you're right. Pick out some of those ones that we've been talking about a lot lately, you know, the obvious ones like how could three people miss this that all bioassay was considered and clearly it was right there that they had bioassay. You know, things like that. But I just want to see the nature of all the other ones so that we --

MR. KATZ: If I could just say something. You want to understand how well QC is working for a variety of different kinds of problems.

CHAIRMAN GRIFFON: Right. That's what I was saying.

MR. KATZ: It doesn't work to just do the simple ones because you want to know how well it's working for more complex situations, too.

CHAIRMAN GRIFFON: Yes.

MR. FARVER: I understand that. I was just going to look for the obvious ones first.

CHAIRMAN GRIFFON: The obvious ones are certainly good. Yes, I agree because they'll be clear for us to -- have the more clear cut ones when we're talking to the people, too. Yes. But I think we want to see them all.

MR. FARVER: And you want us to provide all of them, or do you want us to provide all of them and then choose five or six or ten that we feel are representative?

CHAIRMAN GRIFFON: The second. Provide all of them and then choose the ones that you think are representative of overall.

MR. FARVER: How many do you want us to select?

CHAIRMAN GRIFFON: I say five to ten and leave it up to --

MR. FARVER: Okay.

CHAIRMAN GRIFFON: I wouldn't go

more than ten, though. Is that reasonable, Wanda?

MEMBER MUNN: Yes, it certainly is to me. I cannot imagine that you are going to have more than a half dozen egregious oversights that we need --

CHAIRMAN GRIFFON: Well, I think we have a lot that will be similar, too. So if you can kind of look at it and say, oh, we've got these kinds of categories.

MR. FARVER: That's why I said representative.

CHAIRMAN GRIFFON: That's why I asked to show the overall. So I think you have the idea. So is that an okay -- is the task done with that?

MR. FARVER: Yes.

MR. KATZ: That's a good thing when we're here. That's what the Work Group meetings are for.

CHAIRMAN GRIFFON: Subcommittee.

MR. KATZ: Subcommittee, too.

CHAIRMAN GRIFFON: Alright.

MR. FARVER: We'll have you something for the next meeting.

CHAIRMAN GRIFFON: Okay. Alright. Then let's go back to or go to, yes, back to it. I guess the first 100 cases report. So that kind of -- so we've got at least a little better handle on the QC process and follow-up action.

The second item I had in here was this -- and most of these come out either from sort of a combination of the findings that you just went over or maybe a little expansion on a few of them. But they're very similar. Appropriate use and consideration of information provided by the claimant, workers, and the public. Use worker information. Don't just -- this is -- sort of just talking to you.

But these are some claims not only by myself but others. You know, it's the question of are you really using this worker

information. When you say address the worker comments, are they being addressed or -- let me give an example. In the DR report if there's incidents that the person mentions in the CATI, and we've had this come up in a couple of them, the way that it was addressed was to add a line in the DR report that says, a claimant favorable approach was used for internal dose assessment, and therefore all incidents are considered bounded by this approach.

Did anybody ever really consider the incidents or did you just throw that line in there and say -- and this is my -- going back to John's comment earlier. This cures all ills. You know, this sort of --

MR. HINNEFELD: I understand that's been used, and it's not what I intended when I sent the instruction --

CHAIRMAN GRIFFON: Right.

MR. HINNEFELD: -- that comments in the CATI should be explained. You need --

the intention of addressing the findings or the comments, the information in the CATI, is to make it clear to the claimant that you paid attention during the interview and that you're utilizing it.

CHAIRMAN GRIFFON: Yes.

MR. HINNEFELD: So that's the point. And so if you say all incidents are covered by this approach, that doesn't tell them anything.

CHAIRMAN GRIFFON: Right.

MR. HINNEFELD: So that doesn't really fit the bill for what I thought we were trying to accomplish. So I guess that's an action, maybe a further action on our part to make sure that we're careful about that, and it may be a checklist or instruction of when you're doing a -- it really belongs in the instructions for doing a dose reconstruction. Read the freaking CATI and make sure that the person understands that what they told you is covered in the dose reconstruction.

CHAIRMAN GRIFFON: And I'm not sure. And this goes -- we've gone around on this certainly. But this does go back to if an incident is mentioned at what point would it be worthy of pulling the string.

MR. HINNEFELD: Yes.

CHAIRMAN GRIFFON: And often if you started doing that then you could end up with a research project on every case.

MR. HINNEFELD: Right.

CHAIRMAN GRIFFON: So I understand that there's this balance.

MR. HINNEFELD: There has to be some sort of --

CHAIRMAN GRIFFON: Yes, there's this balancing act. So I don't want to leave the wrong impression on that. I mean, I understand that issue. But I think -- and this is also just from the people receiving this on the claimant's side if they have the impression that you're just giving them lip service, so to speak, then that's not good for

the program. It's not what you --

MR. HINNEFELD: Yes, and even though that's going to knock down the quality approach, it's really focusing on the customer's needs, the customer's info.

CHAIRMAN GRIFFON: So this does overlap with quality assurance issues.

MR. HINNEFELD: It does overlap with that, and that's a hard concept in our path because what the customer really wants is the dose reconstruction is above 50 percent.

MEMBER MUNN: Absolutely.

MR. HINNEFELD: If I were doing it, that's what I would want if I were a claimant.

CHAIRMAN GRIFFON: Of course.

MR. HINNEFELD: And so we're never going to --

CHAIRMAN GRIFFON: So you're never going to make your customer --

MR. HINNEFELD: But at the very minimum you know the customer should

understand what was done and should feel like we've fulfilled our part of the deal. We took their information. We found as much information as we could, and despite that we couldn't get, you know, show the causation. So that's kind of what I would think should be done because that's kind of the way this law was designed was that we would do the technical work for the claimant and they're claiming this occupational illness.

CHAIRMAN GRIFFON: Yes.

MR. HINNEFELD: So they wouldn't have to do that. That's the way it's designed. We should be trying to find those things to do.

CHAIRMAN GRIFFON: Let me just say. You said that might be an action on our part. I don't think we should slip into actions. I just want to go through some of this kind of discussion.

MR. HINNEFELD: Okay.

CHAIRMAN GRIFFON: And maybe

stimulate thoughts for Wanda and other Subcommittee members to kind of react to this so that we can pull product back to the Board.

MR. HINNEFELD: Okay.

CHAIRMAN GRIFFON: I don't think -- I think it's preliminary to take action on anything now.

MR. KATZ: Just something to note about that though, too, is that Mike's group, Outreach, if you look at the evaluation plan there, they're going to look into -- that's part of the plan to investigate that whole question thoroughly.

CHAIRMAN GRIFFON: Yes, and there are a couple things in there.

MR. KATZ: Not just for CATI but other sources.

CHAIRMAN GRIFFON: There are a couple things in here that as we go on that are going to overlap with Mike's Work Group I'm sure.

MR. KATZ: Yes.

CHAIRMAN GRIFFON: Yes, we might be able to even say in the letter that the Worker Outreach Work Group is currently working on this.

Item B-- there is interview the workers as experts. This is something that comes up from some of the Worker Outreach stuff and from other places the question of -- well, this is just a question of considering all workers' input as -- you know, how is it being considered? Is it really being valued, I guess? And, you know, whether you're interviewing Roger Falk about the NDRP or whether you're interviewing an operator with 40 years experience at the gaseous diffusion plant working the cells.

I mean they certainly have different things to offer you, but they might both have valuable information to offer. And I'm not sure that there's always -- at least in the way interviews are conducted, I'm not sure that we're always or NIOSH is always

trying to do those in an equal fashion, I guess, is the way to say it.

MR. HINNEFELD: This is not so much a dose reconstruction specific finding, then. Right? Because really on a particular, any individual dose reconstruction, we really are just probably interviewing the claimant.

CHAIRMAN GRIFFON: That's right.

MR. HINNEFELD: So this is how in terms of building the approaches for doing dose reconstruction is related.

CHAIRMAN GRIFFON: Yes. So this really does delve into the worker outreach kind of side.

MR. HINNEFELD: Yes. I'm not saying anything.

CHAIRMAN GRIFFON: And may not be long in this letter or whatever.

MR. HINNEFELD: Yes.

CHAIRMAN GRIFFON: And then I just think I talked a little bit about the balance. And that was my example, yes. I just went

through some of it.

The second paragraph, these are just my observations on this. Some indicators of this problem may be -- and, Stu, I've gone over this in this meeting since some of this is not very new to you. But I was looking for a sort of metrics of is this really broken or is it just my perception or what?

MR. HINNEFELD: I think the unfortunate part here is the perception that we gave to claimants that their coworkers are going to be able to explain a lot that's really going to help us give them a numerical dose reconstruction. You know, as a general rule, if somebody tells us something in an interview, we believe what they're telling us. So we don't have to go get another employee to confirm their account, you know, that person's account.

But the issue comes down to what does the person tell you. What can a person tell you in the interview? Either that person

or a coworker, what can they tell you about exposure at the site? They can explain to you conditions. They can explain to you of said conditions, basically some things like that.

But they're going to be able to explain things that they can see, hear, touch, smell, things like that. They're not really going to be able to give you information about-- the radiation exposures were such. It would be very unusual for someone to say there was this incident where we all received our annual dose in a particular incident. I mean, that may happen once and a while.

CHAIRMAN GRIFFON: I agree with that part of it. But I think that might be a little short-sighted in that having done a lot of these worker -- I mean they can tell you process stuff. They can tell you stuff that went on on the shop floor that wasn't the operational protocol --

MR. HINNEFELD: What they'll tell you --

CHAIRMAN GRIFFON: -- that your health physicists are telling you.

MR. HINNEFELD: Exactly. What the health physicist managers will tell you is the rules were this, and everything worked this way.

CHAIRMAN GRIFFON: Exactly.

MR. HINNEFELD: That's what they'll say.

CHAIRMAN GRIFFON: And they --

MR. HINNEFELD: People on the shop floor will say, well this is something --

CHAIRMAN GRIFFON: -- Yes, well, that ain't quite true.

MR. HINNEFELD: That's exactly right.

CHAIRMAN GRIFFON: Right.

MR. HINNEFELD: So that's true, and I think, again, it speaks to the techniques that are done that are adopted to do dose reconstruction. It happens though. It certainly happens on occasion that a

claimant tells us something that says holy crap. That is something we would have completely missed, and we'd better go chase that down. That happens.

CHAIRMAN GRIFFON: Right.

MR. HINNEFELD: That's not real common.

CHAIRMAN GRIFFON: Right.

MR. HINNEFELD: Normally they'll say, these things happened, and we'll say, certainly, we certainly expected those things.

CHAIRMAN GRIFFON: Yes. And I'm not saying that I would have expected a lot of these follow-ups, but to -- I think you said a handful of these experts were ever contacted out of 20,000 or whatever CATIs.

MR. HINNEFELD: Yes.

CHAIRMAN GRIFFON: You know, it just raises the question of whether in some instances especially with survivors and things, you know, you're not going to get anything from the claimant. So really most of

these survivors are saying --

MR. HINNEFELD: The survivor claims, the survivors are at a real disadvantage if there's not any information there.

CHAIRMAN GRIFFON: But sometimes they did indicate other individuals that could be contacted, and they weren't.

MR. HINNEFELD: Right.

CHAIRMAN GRIFFON: So then why are you doing the interview? Why are we wasting those resources if we're not trying to get anything from it?

MEMBER MUNN: But, Mark did we not in our Procedures Subcommittee's review of the CATI? Did we not address this there, and did we not request and receive a slight change in the wording of the information that goes to the claimant that specifies that they may not -- that we're not assured? Please don't assume that all these people will be contacted.

CHAIRMAN GRIFFON: Yes. But we still asked that they can provide names.

MR. HINNEFELD: Yes.

CHAIRMAN GRIFFON: We did qualify a little more so there wasn't the expectation.

MR. HINNEFELD: Yes, we tried to remove the expectation that we would contact the coworkers.

CHAIRMAN GRIFFON: Which is fine. But I'm saying that they're --

MR. HINNEFELD: Your point, though, is that, okay, even if you don't have the expectations, keep an eye out for situations where you really should.

CHAIRMAN GRIFFON: Yes. Right.

MR. HINNEFELD: And that's probably a broader question than I can really speak much to here in the room.

CHAIRMAN GRIFFON: Yes. And the thing that really flags it for me is the percentage, the very low percentage that were ever contacted off of these things, and, like

I said, why -- if my concern from that standpoint, well, number one, my concern would be I think you can get some useful information from these people especially if considered in aggregate. I think I get into that later.

But number two is if -- I guess I said that already. If you're not going to use it, why bother putting these people through -- because they -- I doubt very much you're going to get from survivors very useful information in a CATI anyway.

MR. HINNEFELD: Yes. I mean you'll hear -- I mean there are family stories that you hear that sometimes are helpful in helping give a better picture of the person's work and, for instance, how much they were there. How many hours they were at the site?

MR. FARVER: Sometimes you'll hear, they'll describe incidents that happened on a certain day.

MR. HINNEFELD: Yes.

MR. FARVER: And then if they go

and list their supervisor or coworkers, you would think maybe if you contacted the supervisor or coworkers they might have additional information like the person we talked about earlier, the missing bioassay data. Well, if they have enlisted their foreman and coworkers, maybe their coworkers were involved, maybe they submitted bioassay.

CHAIRMAN GRIFFON: Right.

MR. FARVER: So the information is there sometimes. It's not always there.

CHAIRMAN GRIFFON: Yes.

MR. HINNEFELD: Well, again, it's difficult because you have to choose the -- how much research you're going to do.

CHAIRMAN GRIFFON: Exactly, and I did note that balance in there that it's not easy but some -- you know, my reason for raising was just some of these indicators seemed to be to me that something needs to be done a little further, and I'm not saying that certainly it's not all. It's not none. I

don't think it's none. That's the thing.

MR. HINNEFELD: Yes.

CHAIRMAN GRIFFON: Number two, just to go through these and finish off. I think I'm getting tired. I don't know about the rest of you. Not apparent how the comments from the Worker Outreach meetings are being considered, and it's not apparent NIOSH is -- Alright.

And this goes back to my -- this is the Worker Outreach thing really, but it's the same question of considering these comments, actually using the comments. And one thing we ask them and I'm sure this is Worker Outreach action, but I'll just -- just for discussion. One thing we had talked a long time ago was if you get comments from these Worker Outreach meetings, how they are dispositioned. What happens to them?

MR. KATZ: That's what the Worker Outreach group is going to be examining.

CHAIRMAN GRIFFON: And the old

database I thought started to track some of that WISPR database. It actually started to have every comment and how it was being dispositioned. It was getting a little unwieldy, I think, was one problem.

MR. HINNEFELD: Yes.

CHAIRMAN GRIFFON: Now it's been replaced, and the new database has nothing to track comments, as far as I interpret it. It seems to have the meetings and then you click on a meeting and you get the minutes. But I don't see any comments sort of lumped out. Now maybe I'm not -- maybe there's more to the database than I saw. Yes. But at any rate, yes, I think that's it. Right?

MR. HINNEFELD: I thought there was an expectation that there would be some -- the problem with WISPR was that everything anybody ever said at the worker health meetings was put in as a comment.

CHAIRMAN GRIFFON: Right.

MR. HINNEFELD: So you have this

whole hundreds and hundreds of comments, many of which you can't respond to because they're talking about their particular history or their particular cancer or things like that, and there's no answer to that.

CHAIRMAN GRIFFON: Exactly.

MR. HINNEFELD: And there's no question and nothing to ask for an answer.

CHAIRMAN GRIFFON: Right.

MR. HINNEFELD: But I could be mistaken. Maybe it's an enhancement that we're working on. But I thought we were going to do something with the tracking.

CHAIRMAN GRIFFON: Yes, and at the last meeting, Larry indicated where the new database was, and he actually gave me the link to get to it and stuff, and I was playing with it a little during break at the last meeting, and, you know, it appeared to me that, maybe I'm wrong, but I didn't seem to find individual comments tracked in any way.

And yet I agree with you on the

other side, Stu, as part of the challenge in these Worker Outreach meetings. We're definitely getting to Worker Outreach topics here, but part of the challenge there is just to sort of how do you manage the meeting so that you're getting comments of overall applicability sort of rather than people venting about their case and you may have to -- you're probably going to get some of both.

But even if you had to address all comments in the database, some of them could be this is a personal dose reconstruction issue. It won't change any procedure. But we did talk with the claimant at the time of the meeting, blah, blah, blah, you know, something like that. It doesn't have to be that we changed the site profile because of this comment. So just something that says what did we do to it or we considered this and it had no bearing or effect on that.

So anyway that was just -- I'll just go down these. I don't expect responses

on all these. But the third one is the CATI. This is the aggregate data for the CATI question. Searchable CATI database does not exist, or if they exist it's not available for review by the Board. I'm getting mixed information on this. I was under the impression that there was some way to search aggregate CATI information, but Larry insisted to me that there isn't.

MEMBER MUNN: What would you search it for?

CHAIRMAN GRIFFON: Well, you know, I would search it for like if I was working on an AWE site, you could search for all the claims from one site because a lot of them are small. Look at all the claims for one site and look at their incident field if they reported any incidents. Look at the exposure fields that they reported. Look at the radionuclides they reported.

If you had Chapman Valve reporting enriched uranium, you know, it might flag

something. If they reported thorium and nobody knew anything that that even existed.

MEMBER MUNN: I'm envisioning a room full of data entry people trying to fill in the details from all of the CATIs that we've had.

CHAIRMAN GRIFFON: They're already --

MR. ULSH: They're already in there.

MR. HINNEFELD: They're in there.

CHAIRMAN GRIFFON: They're logged in while they're interviewing them, right? It's authorized already.

MR. ULSH: What's not there, I don't think, is the search ability.

MEMBER MUNN: Right.

CHAIRMAN GRIFFON: The interface, right? Yes.

MR. HINNEFELD: You can't do a key word search.

CHAIRMAN GRIFFON: But someone told

me that that existed, but I don't know.

MR. HINNEFELD: We could. We would have to have our TST write it, you know, write to query. But they could --

CHAIRMAN GRIFFON: And maybe that's what was happening -- maybe people were making requests and they were done on a case-by-case basis or something.

MR. HINNEFELD: They could pull all the CATIs from Simonds Saw.

CHAIRMAN GRIFFON: Right.

MR. HINNEFELD: Our TST would do that. They would have to do it and write that code that they would pull it and then you would get the form, you know, the CATI form for each of the things. Now, but there's no -- there's not a --

CHAIRMAN GRIFFON: But then I would also take credit for that. As a programmer, you're not taking credit for that if you're doing that.

MR. HINNEFELD: You could pull

those up --

CHAIRMAN GRIFFON: You would say in your site profile, we also look at aggregate set of data.

(Simultaneous speakers.)

MR. HINNEFELD: Yes.

CHAIRMAN GRIFFON: I'm sorry to talk --

MR. HINNEFELD: Well, I was just saying that we could -- maybe it's right when you're looking back at these site profiles at some point, and, for instance, we've got comments or new comments it might be the time, say, as part of this that we are going to revise the thing anyway that we'll look through the aggregate comments. It has to be a site where you have a manageable number.

CHAIRMAN GRIFFON: I agree with that. Hanford would be difficult.

MR. HINNEFELD: You couldn't do Hanford, Savannah River. Huge plants where you've got thousands and thousands of them.

MR. FARVER: Get a sample.

CHAIRMAN GRIFFON: You could do a sample. There may be methods even for those sites.

MR. HINNEFELD: You could look them and say, is there some stuff being described here that describes things that the site profile doesn't address or doesn't cover. I mean, there is some stuff you could do there on that. But that is sort of a -- that's a programmatic thing that I don't know where it fits exactly. I think the best place for it would be a time when one of these things is up for review that -- or revision would be the time to do and that's when --

CHAIRMAN GRIFFON: Or when you're first developing a profile, I would think.

MR. HINNEFELD: When you're first developing, if we ever develop any more profiles, and we're doing it for a place where we've got claims.

CHAIRMAN GRIFFON: Right.

MR. HINNEFELD: Then that might be a time to actually go, okay, what kind of commonalty are we seeing people describing.

CHAIRMAN GRIFFON: But I'm saying, and maybe I'm just curious, if it's ever been used that way because that would -- that to me is back to that fundamental heading of my category here, Use of the Worker Data. So if you were actually using this worker data in aggregate, tell us. Take credit for it and say, here's the instances where we used it.

MR. KATZ: I can say at the very beginning, at the outset, of this program that was a concept behind the CATI, the whole CATI.

CHAIRMAN GRIFFON: Yes.

MR. KATZ: The data development businesses. The thought we had originally was that we would be able to slowly accrue data that would help us give a good picture of each of these sites from those individual interviews. That that would be one source.

CHAIRMAN GRIFFON: Especially for

the sites where we had nothing, like no data and little history, and I think that's where they have a real utility.

MR. HINNEFELD: Yes.

CHAIRMAN GRIFFON: Alright. But anyway that might be something to follow up with the team. I'm not making an action, but just if it is being done in any way.

MR. HINNEFELD: I won't say.

CHAIRMAN GRIFFON: Yes, I'm just -

MR. HINNEFELD: I really don't know.

CHAIRMAN GRIFFON: Alright.

MR. HINNEFELD: The outreach tracking system does have the capacity for tracking action items. It does have the capability of tracking. The one meeting I happened to open doesn't have any actions from the meeting. But there is an area in here where actions --

CHAIRMAN GRIFFON: Tracking comment actions.

MR. HINNEFELD: Well, actions. It would be comments. It would be a comment that we should do something to, either we should answer --

CHAIRMAN GRIFFON: Okay.

MR. HINNEFELD: -- or we should take some action because of the comment that was made. It does have the capability to do it. At the meeting I had it opened up and didn't have any actions in it. So I don't know if it's populated, or if it's populated to any great extent or anything, or if they were starting the process.

CHAIRMAN GRIFFON: Is this like a separate document?

MR. HINNEFELD: Yes, when you click on the hourglass, it brings up like some stuff and the location and the audience.

CHAIRMAN GRIFFON: I saw minutes and presentations.

MR. HINNEFELD: There's an hourglass. If you bring up -- when you bring

up -- you pick a site and you click on that site, it will open all the meetings. Over in the left-hand column, there's a column with an hourglass in it or it looks like an hourglass. If you click on that icon, it opens up another sheet that's called --

CHAIRMAN GRIFFON: Okay. So I didn't know how to use it.

MR. HINNEFELD: It's called Meeting Information, and that gives the meeting type, like the one I'm looking at is an SEC meeting, meeting date, location, points of contact for OCAS and our contractor, the audience, and then there's a note about it, kind of a description which right near it is the purpose of the meeting and then below there's a box with meeting-covered sites, meaning which sites we're addressing. And there's a meeting action items section which is empty. There are no actions for this one.

CHAIRMAN GRIFFON: But is there actions and then dispositions or resolutions?

MR. HINNEFELD: I don't know, but there is past due, due today, and due within the next week. Apparently, they are categories.

CHAIRMAN GRIFFON: I'll have to look at that further.

MR. HINNEFELD: And then there is meeting notifications, and then there are meeting files. Now those last three things are all empty in this particular meeting.

CHAIRMAN GRIFFON: Alright.

MR. HINNEFELD: And I don't know to the extent those -- I don't know to what extent those have been populated.

CHAIRMAN GRIFFON: Well, that's good to know. And that's something that Mike's Work Group is following up on.

MR. HINNEFELD: The capability is there.

CHAIRMAN GRIFFON: Okay. Let me go into just the last one, the documentation, and then we'll probably -- I was hoping to get

to the eighth set, but I think we're probably not going to go back to the eighth set at this point. Emily is saying, please no.

The third primary category that I had is case documentation and reporting, and I think, Stu, you covered that in your presentation, too. And I think we've talked around this quite a bit. I think the question of -- when I underline all work, I'm writing down some things, and I'm thinking: what's the limit here? What gets included? What doesn't get included? And does it depend on the type of dose reconstruction? Are there different levels for different types of cases? So all that needs to be considered, I think.

But I think, Stu, you even said that at this point at least the DR instructions, to the extent they still exist, are now being included. I think you've gotten away from -- according to Scott, you've gotten away from a lot of those anyway.

MR. HINNEFELD: Yes. A lot of

those instructions came out as sort of interim changes in the procedures.

CHAIRMAN GRIFFON: Interim, right.

MR. HINNEFELD: Rather than waiting for the procedure changes without those instructions and without those procedures, the instructions went away.

CHAIRMAN GRIFFON: So to the extent they're still there.

MR. HINNEFELD: To the extent they're still there, and in fact what I told them is just for simplicity, if you've got any instructions that pertain to the site that you're working on, stick them in there. Because rather than concern yourself with whether you remembered to do it that way because of the procedure or you remembered to do it that way because of the instruction, you know, you don't have to worry about sorting it out that, yes, I specifically used this instruction. Because as a general rule, I think the dose reconstructors don't

necessarily refer back every time --

CHAIRMAN GRIFFON: No. Especially if they're doing only one-site cases all the time.

MR. HINNEFELD: Yes. They tend to focus on one site or a couple sites. So they know how to do them.

CHAIRMAN GRIFFON: Right.

MR. HINNEFELD: And rather than say, well, is the guide still out there, or is it in a procedure down there to check, I said just check and see if there's a guide there. Just put it in.

CHAIRMAN GRIFFON: Yes.

MR. SIEBERT: And that is presently how we are doing it.

MR. HINNEFELD: Thanks, Scott.

CHAIRMAN GRIFFON: Thanks.

MR. HINNEFELD: So I think there might be a way to come up with sort of expectations of the work that is to be shown. You're just writing your letter now. We'll

discuss that and talk about that.

CHAIRMAN GRIFFON: Yes.

MR. HINNEFELD: Our reaction comes later.

CHAIRMAN GRIFFON: And the other part of the item, I think, the way you described your DR report may actually quite nicely address some of this.

Because it sounds like you've broken it up into a public and technical portion.

MR. HINNEFELD: That was the key thing we were trying to accomplish is something that the claimant can read and something that a reviewer can go through.

CHAIRMAN GRIFFON: So this might be something that we can say we propose this sort of approach, and a final draft is ready to be released by NIOSH. I think that's all I -- at the very bottom I also include -- the last line on this second page or third page there is what changes or what has changed in the NIOSH program as a result of findings,

that any findings result in PERs. That was just that sort of question to our group here.

I think one thing we said we wanted to add in this letter was what positive changes occurred in the NIOSH program as a result of our first 100 audit cases, and I just ran -- quite frankly, I didn't have time to do this, so actually I just wanted to put a place holder that we need to put something about this. I wasn't clear whether any findings of ours related to any PERs.

And I don't know, Kathy, if you know that or --

MS. BEHLING: No, I don't know that. I'm not sure. No.

MR. HINNEFELD: I think there are certainly lines that are related.

MEMBER MUNN: I think so, too.

MR. HINNEFELD: But I don't recall --

CHAIRMAN GRIFFON: I'm not sure we're going to figure out which came first,

the chicken or the egg.

MR. HINNEFELD: That's exactly right.

CHAIRMAN GRIFFON: But we might be able to phrase it to say that findings in these areas and as a result or in part as a result of these findings, PER reviews were done, you know, something like that.

MR. HINNEFELD: Yes. I mean there might be -- I would think almost certainly there are some of the findings that I think relate to PERs that were done. But whether they were the initiating factor or --

CHAIRMAN GRIFFON: Yes, I know. Right.

MR. HINNEFELD: We said when the PER came up to vote, well, that's taken care of or there's a PER out there to take care of it. I don't know what the --

CHAIRMAN GRIFFON: Is that an impossible task for SC&A to look over the first 100 cases and consider what findings

might have been related to PERs.

MR. HINNEFELD: You can check PER group control documents. They're up under Control Documents. You ought to be able to see them.

CHAIRMAN GRIFFON: Right.

MS. BEHLING: I can look at that.

CHAIRMAN GRIFFON: Okay.

MR. FARVER: Do you know how to do that, Kathy?

MS. BEHLING: Yes.

CHAIRMAN GRIFFON: She's got it covered.

MR. HINNEFELD: Most of the folks, not all, but a lot of the PERs are site-specific.

CHAIRMAN GRIFFON: Yes.

MR. HINNEFELD: So you could kind of look for just claimants from that site.

MR. KATZ: It seems to me it would be important whether they instigated or influenced the results either way, they would

be important.

CHAIRMAN GRIFFON: Right.

MEMBER MUNN: I think the influence is certainly worth including in our letter.

CHAIRMAN GRIFFON: Right.

MR. KATZ: That's an SC&A task.

CHAIRMAN GRIFFON: Okay. Yes. So SC&A is going to look -- Kathy is going to look into that. Thank you, Kathy, because none of us wanted it.

And I'm not sure. Like I said, I wanted to put this out. It's not in letter form by any means, but I wanted to put some thoughts out for our Subcommittee. I've forwarded this. Mike has it and others. John has it. I really would value the other Subcommittee members' comments on this.

MEMBER MUNN: I'm sure you will get some.

CHAIRMAN GRIFFON: Yes. That's why I kept some of the adjectives in there

that I did because I wanted to make sure Wanda was paying attention.

MEMBER MUNN: I'm paying attention. You will get comments.

CHAIRMAN GRIFFON: I told -- I forget. Earlier this morning I was telling someone that I took out a word, drastically, at one point because I knew Wanda would highlight that in yellow and send it back to me.

MEMBER MUNN: One more adverb out.

CHAIRMAN GRIFFON: But anyway, just the facts. That's what we want.

MEMBER MUNN: Absolutely.

CHAIRMAN GRIFFON: Right. So this is a starting point, something to work on for our Subcommittee members and send stuff as you get to it to me. But I really want to -- and I'll send out a tickler to people to get me final comments hopefully a couple weeks before the next Subcommittee meeting so I have time to kind of roll it together and bring -- the

next Subcommittee meeting my goal is to bring back a sort of draft letter in a letter format more so that we have something to deliver back to the full Board.

So I think that's the end of the agenda. The only other thing I would have is let's pick a date for the next meeting. I think Wanda is ahead of me there. She's looking at dates.

Ted, when is our next full Board meeting? January?

MS. HOWELL: February.

MR. HINNEFELD: It's February 9th, 10th, something like that.

CHAIRMAN GRIFFON: February.

MR. KATZ: Yes, the next face-to-face is February 9th, that week.

MR. HINNEFELD: The next phone call is what? The 8th of December?

MS. HOWELL: Yes.

MR. HINNEFELD: The 8th of December is the teleconference, and the face-

to-face is the second week or about the 8th of February.

MR. KATZ: Are you looking for a January date, Mark? What is your --

CHAIRMAN GRIFFON: I think a January date, yes.

MEMBER MUNN: Then a December date?

MR. KATZ: January is going to be very busy because a lot of work groups need --

CHAIRMAN GRIFFON: Well, I'm worried that once you get past the first couple weeks in December it's kind of shot.

MR. KATZ: It gets tough.

MEMBER MUNN: Well, there's a --

CHAIRMAN GRIFFON: We have one meeting on the 16th.

MEMBER MUNN: There's a meeting on the 16th.

MR. KATZ: The week before Christmas is still -- people are still working.

CHAIRMAN GRIFFON: The TBD-6000 meeting is on the 16th.

MEMBER MUNN: Is on the 16th.

CHAIRMAN GRIFFON: So we could put one next to that.

MR. HINNEFELD: The 16th of December -- are we back on December?

MR. KATZ: Let me go back to December. Okay. So right now I've asked. The 15th you're talking about of December?

CHAIRMAN GRIFFON: No, I'm not talking --

MEMBER MUNN: The 17th.

CHAIRMAN GRIFFON: Do you know what? I can't do that.

MR. KATZ: Because I asked you that for TBD-6000 actually.

CHAIRMAN GRIFFON: My daughter's grandparents are coming to visit. It's their annual visit that week.

MR. KATZ: December 15th?

CHAIRMAN GRIFFON: Yes.

MR. KATZ: You can't do that?

CHAIRMAN GRIFFON: No.

MR. KATZ: So you can't do that TBD-6000 either then?

CHAIRMAN GRIFFON: I'm probably going to call in for it.

MR. KATZ: You could call in for it though?

CHAIRMAN GRIFFON: Yes, but I don't want to have to call in for this.

MR. KATZ: Yes.

CHAIRMAN GRIFFON: So that --

MR. KATZ: So is that a yes, though, for TBD-6000 on the 15th if you call in?

MEMBER MUNN: Yes.

CHAIRMAN GRIFFON: Sixteenth, right. Yes.

MR. KATZ: The 15th. Sixteenth you already said yes.

CHAIRMAN GRIFFON: Oh.

MR. KATZ: We were talking about

having it, either changing it or having two days because that Work Group has a lot to do.

CHAIRMAN GRIFFON: Yes.

MR. KATZ: And can you do the 15th then?

CHAIRMAN GRIFFON: You think it will be a two-day?

MR. KATZ: Well, it may very well be. I mean, you know how long we spent last time we met. That was just on dealing with one site for the most part. Yes. Yes or no?

CHAIRMAN GRIFFON: And nobody could do the 17th, the two day 16th and 17th? Is that --

MR. KATZ: Well, two of us are going to be there on the 14th. Then we have the 15th.

CHAIRMAN GRIFFON: Oh. Okay.

MR. KATZ: So the 17th, I haven't checked on the 17th. That could be. That's a possibility, too. But the 15th would be a whole lot better for some of us.

CHAIRMAN GRIFFON: Yes. I mean I think I'd probably be on and off, to be honest.

MR. KATZ: Okay. And then the 17th would be good for you, though?

CHAIRMAN GRIFFON: The 17th is better because I think they're leaving on the 16th. I would hate the last two days of their visit for me to be on phone calls all day.

MR. KATZ: Questionable. Okay. Seventeenth, yes. And Wanda?

MEMBER MUNN: Either day would work for me.

MR. KATZ: Okay.

CHAIRMAN GRIFFON: Now back to this I think we're into January.

MEMBER MUNN: Darn.

CHAIRMAN GRIFFON: Is there anything else scheduled in January already that you --

MEMBER MUNN: Not that I know of.

MR. KATZ: Mound is 5th and 6th

and then the 11th, 12th and 13th --

CHAIRMAN GRIFFON: Are you out?

MR. KATZ: I'm out for those three days.

MR. ULSH: I am.

CHAIRMAN GRIFFON: You're on Mound, yes.

MR. KATZ: Yes. So the 7th and 8th of January.

CHAIRMAN GRIFFON: Yes, I mean, I could do the 7th if you wanted to roll it over into -- I don't know if it's the same people though because you're local and --

MR. ULSH: Might as well just put it all in one week.

MR. KATZ: So you want to shoot for the 7th of December, I mean of January?

CHAIRMAN GRIFFON: That's fine with me. Is that Alright, Wanda? It's a good time of the year to travel from Boston.

MEMBER MUNN: Well, it depends on personal schedules that are going on during January that I had thought was going to be

over. But I can probably be available by phone even if that transpires.

MR. KATZ: Mike, are you still on?

MEMBER GIBSON: Yes, I'm still here. Now what date are you talking about?

CHAIRMAN GRIFFON: January 7th.

MR. KATZ: January 7th.

MEMBER GIBSON: For Procedures, correct?

MR. KATZ: For DR.

MEMBER GIBSON: Yes, I'm available.

CHAIRMAN GRIFFON: The 7th. Do you want to say -- I mean the 14th is also okay for me. But I thought if people were here for the other meeting. Like you're traveling in, so --

MR. KATZ: Yes. The 7th is good.

CHAIRMAN GRIFFON: Alright, the 7th.

MR. KATZ: Okay. So let's do that. The 7th. January 7. 9:30 a.m. this

time.

CHAIRMAN GRIFFON: Didn't Wanda want 8:30 a.m.?

MR. KATZ: Wanda wanted 8:30 a.m., but I beat it back.

MEMBER MUNN: Wanda didn't want 8:30 a.m.

MR. FARVER: 8:30 a.m. especially if she's calling in.

MEMBER MUNN: Yes.

(Laughter.)

CHAIRMAN GRIFFON: Okay. I think that's it, unless anything? Any final comments? Final thoughts of the day?

MR. KATZ: Thank you everybody for your hard work.

CHAIRMAN GRIFFON: Thanks.

MR. KATZ: Thank you everyone on the phone who hung in with us. Mike.

CHAIRMAN GRIFFON: Now we get to wait four hours for the flight.

MR. KATZ: Yes. Take care. Bye-bye.

CHAIRMAN GRIFFON: Three hours I guess.

(Whereupon, at 4:46 p.m., the above-entitled matter was concluded.)