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

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ADVISORY BOARD ON RADIATION AND
WORKER HEALTH

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SUBCOMMITTEE ON DOSE RECONSTRUCTION REVIEWS

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MONDAY
MARCH 22, 2010

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

PRESENT:

MARK GRIFFON, Chairman
MICHAEL H. GIBSON, Member
WANDA I. MUNN, Member

ALSO PRESENT:

TED KATZ, Designated Federal Official
HANS BEHLING, SC&A*
KATHY BEHLING, SC&A*
ELIZABETH BRACKETT, ORAU*
HARRY CHMELYNSKI, SC&A*
DOUGLAS FARVER, SC&A
STUART HINNEFELD, DCAS
EMILY HOWELL, HHS
JENNY LIN, HHS
JOHN MAURO, SC&A
MUTTY SHARFI, DCAS*
SCOTT SIEBERT, DCAS*
BRANT ULSH, DCAS

*Participating via telephone

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

(9:32 a.m.)

MR. KATZ: Good morning, everybody in the room and on the line. This is the Advisory Board on Radiation and Worker Health Dose Reconstruction Subcommittee. This is Ted Katz. I'm the Designated Federal Official, and we're about to get started. We'll begin, as always, with roll call, with board members in the room. Mark?

CHAIRMAN GRIFFON: Yes, Mark Griffon, Chair of the Dose Reconstruction Work Group, or Subcommittee.

MEMBER MUNN: Wanda Munn, Subcommittee Member.

MEMBER GIBSON: Mike Gibson, Subcommittee Member.

MR. KATZ: And do we have any Board members on the line? Okay, no Dr. Poston? No Bob Presley? No Brad Clawson? Okay, then the NIOSH ORAU team in the room?

MR. HINNEFELD: Stu Hinnefeld,

Interim Director of Division of Compensation Analysis Support.

DR. ULSH: This is Brant Ulsh.

MR. KATZ: And on the line, NIOSH ORAU Team?

MR. SIEBERT: Scott Siebert, ORAU.

MR. SHARFI: Mutty Sharfi, ORAU.

MR. KATZ: Okay, and then SC&A in the room?

DR. MAURO: John Mauro, SC&A.

MR. FARVER: Doug Farver, SC&A.

MR. KATZ: And on the line for SC&A?

MS. BEHLING: Kathy Behling, SC&A.

MR. KATZ: Welcome.

DR. BEHLING: Hans Behling, SC&A.

MR. KATZ: Welcome, Hans. Okay, and then HHS or other federal officials or contractors to the feds in the room?

MS. HOWELL: Emily Howell, HHS.

MS. LIN: Jenny Lin, HHS.

MR. KATZ: And on the line, HHS or

other federal officials or contractors to the feds? Thanks. And then any members of the public on the line? Okay, quiet morning. Mark, all yours.

CHAIRMAN GRIFFON: Yes. This is a -- probably we don't have a big crowd because we handle the details here of the down and dirty review details, important nonetheless. I think a simple agenda to start the day, for those on the phone, we're just going to do -- look at our follow-up report for the first 100 cases again.

Just to remind you, we were asked by the Board to give a follow-up from the letter that we have submitted to the Secretary regarding the first 100 case review. I would -- well, I'd like to close that out today and maybe we will. Hopefully we will.

Then on the agenda after that I think the sixth set and seventh set of cases, and I believe -- actually, for the last couple meetings, we've been very close to closing

those out. So I'm hoping that today we can be done with those final matrix items on those two sets of cases and then continue on these from wherever we left off. I think we were still doing our first pass through some of the findings.

We have those mini site profile reviews we started on as well. So -- and I don't know if that helps anyone on the phone. I don't know if Kathy and Hans are primarily on the phone for those mini site profile issues. I mean, they might come up later in the day.

DR. MAURO: Yes, they're on the schedule. I know Hans, he wrote a special counter report on Harshaw.

CHAIRMAN GRIFFON: Okay.

DR. MAURO: And I know that's one area where I know he'd be interested in discussing. If it comes up early, great. If not --

CHAIRMAN GRIFFON: Okay. I just

don't want to tie him up unnecessarily if we don't have to.

DR. MAURO: Okay.

CHAIRMAN GRIFFON: So with that in mind, I did send out an -- and I know it was a little late, but I didn't get any other comments and I did have Wanda's comments to the previous follow-up report, the draft, that I -- we had talked about on the phone call meeting, which I believe was on January 14th of this year. We had a phone-call Subcommittee meeting where we only discussed this report.

At that time, Wanda submitted a number of edits. I looked at her comments. I took most of them, Wanda, I think almost all of them.

MEMBER MUNN: Most of them.

CHAIRMAN GRIFFON: I may have -- I may have taken out -- at least one thing that you had deleted I took out and reinserted. So we can talk about that.

MEMBER MUNN: Yes. Most of it was minor.

CHAIRMAN GRIFFON: Yes, but I -- I took most of the comments. So we can go through that. And then also I forwarded some other documents that Doug and the SC&A staff had looked into for us, which is the question on the quality control/quality assurance investigation, I guess for lack of a better word, and what our options are, and Stu put together three documents. If I characterize this wrong, Doug, let me know. One summarizes all the findings that they characterized as quality assurance/quality control type of findings, and the other two are options to either look at cases related to -- selected cases from the first through the fifth set of cases, or the first through the eighth set of cases. I'll discuss that more as we -- as we go into -- after we look at the main documents, but those are the four pieces you should've received. If anybody didn't get

those, please maybe let us know now, and either I can forward them or possibly Doug can forward them. Does everybody have those? Okay.

All right, so, on the basic report, and I was thinking of this as sort of a path forward here, I was thinking of lending this document out as a preliminary report to the Board on the first 100 cases, and the reason I'm saying preliminary is because I would like to get -- submit this report to the Board for discussion at the Board level, and I didn't want to wait for the SC&A investigation of those key tasks.

So at least we have something to discuss at the Board level and we can describe to the Board that we also have tasked SC&A with looking at -- at the QC-related findings further, doing further investigation on the QC findings. But at least to come back with them and say, here's generally what we have as a follow-up.

We may at that point get some comments from other Board members where we may have to come back. So then the idea would be to come back and do a final report, which would include the results of our investigation into the QC findings.

I don't know if that makes sense as a process. I -- well, I'm offering that as a process forward, anyway.

MEMBER MUNN: So, Mark, are you suggesting that we present this at the next full Board meeting, or is it your expectation that you can get this to the Board members in an exposition from that manner that it might be a topic for our teleconference that's coming up? So if there were at least -- at least if anyone had any major concerns and wanted to ask that we postpone it while we give it more thought, we could do so and then fully address it in New York?

CHAIRMAN GRIFFON: Yes to one of those. I'm not sure. I can talk to Ted and

Jim Melius about whether we can fit it on the agenda for the March 30th full Board conference call. I don't know if it can fall under miscellaneous?

MR. KATZ: It can fall under the Work Group reports. So you most certainly can address it.

CHAIRMAN GRIFFON: Yes.

MR. KATZ: We probably have to keep it pretty brief for that meeting just because that meeting agenda is -- I don't know if you've looked at it, but --

CHAIRMAN GRIFFON: I haven't.

MR. KATZ: -- there's a lot on there compared to a typical teleconference agenda. So it's a question of how much endurance the Board has for the teleconference.

CHAIRMAN GRIFFON: It may be more a matter of delivering a preliminary report and saying here it is. Here's what's in it. For the full Board meeting, maybe people can

consider this and come back with comments for the Subcommittee.

MEMBER MUNN: Yes, that was my thought. If we could get it before them --

CHAIRMAN GRIFFON: Yes.

MEMBER MUNN: -- then we could anticipate a final word.

CHAIRMAN GRIFFON: Right, yes. That's what I'd like to do. Does that make sense?

MR. KATZ: Good.

CHAIRMAN GRIFFON: Then why don't we go through the report? Wanda, you probably noticed that one paragraph at the end of the QC in section one. I'm going to add it back. That was mainly because I wanted to show that we were tasking SC&A with doing this follow-up investigation on QC findings.

MEMBER MUNN: Right.

CHAIRMAN GRIFFON: Other than that, I believe in the body of the text, I don't -- I don't think I changed any of your -

- there is one other spot I can think of where I changed your edit. It's section two, under the recommendations at the bottom of section two: A, B, and C.

And for B, and maybe it was just my choice of words, but I was trying to say in this, NIOSH should consider developing a standardized approach for interviewing. You said -- you crossed out what I had had before and put, available. And I put back in, all available.

And I guess the -- what I was trying to convey in that bullet was that there -- there seems to be a sense that comments from health physics managers or certain scientific experts are being weighted much more heavily than those from shop-floor experts who, while they may know very different things, I think they -- they do lend expertise that could be important.

MEMBER MUNN: Well, the hardest job we have, in my view, is always the

semantics. And I -- we can -- there's no real point in our arguing semantics one way or the other.

CHAIRMAN GRIFFON: Okay.

MEMBER MUNN: It just doesn't get us anywhere. At least it doesn't get me anywhere. So that's fine.

CHAIRMAN GRIFFON: Okay. Other than that -- and you may -- you may find -- I was going to leave this in the track-changes version, but it was getting very cumbersome with all the -- all the notes

MEMBER MUNN: Yes.

CHAIRMAN GRIFFON: And I just thought we needed a clean version to look at.

MEMBER MUNN: After about 105 questions --

CHAIRMAN GRIFFON: Yes.

MEMBER MUNN: -- and changes, it gets to be too much.

CHAIRMAN GRIFFON: And the only other -- at the end of this document, and --

and -- I'm not sure. Obviously, this is a preliminary going to our own, other members. So I'm not sure it has the best of conclusions here. But the -- after number three, there's a closing part which is sort of -- it says that it should be noted several changes I was thinking of -- I mean these are mostly what I would view as positive outcomes from the process. So maybe we can think about rephrasing that. But, Wanda, I think you had added C and D and I just inserted B, the PER, which we had discussed at the last --

MEMBER MUNN: Yes.

CHAIRMAN GRIFFON: -- phone call meeting. And with the caveat that Stu and I had talked about the language. Stu, I think you were okay with this, several changes to the Dose Reconstruction Program in part due to findings identified.

MR. HINNEFELD: Right.

CHAIRMAN GRIFFON: That was what we -- so some of these PERs it was sort of

unclear whether it was already internally happening with NIOSH or it was a result of the audit.

MR. HINNEFELD: Right.

CHAIRMAN GRIFFON: So we agreed to that kind of phrasing.

MEMBER MUNN: You could probably do what you wanted to do, but inserting the word positive between several and changes, or --

CHAIRMAN GRIFFON: That's what I was thinking of, actually.

MEMBER MUNN: Or you could -- instead of saying, several changes, you could use the word improvement. In either case, I think it's what you're trying to convey.

CHAIRMAN GRIFFON: Have made improvements instead of several changes. All right, I'll make that change. And I'll open it up to others. Any comments on the letter itself? It's the third or fourth time we looked at this. So it should be, hopefully,

pretty close.

MEMBER MUNN: I think we should keep those.

CHAIRMAN GRIFFON: Okay. And then the -- then the question comes to the QC follow-up, and I think I'll turn this over to Doug just to describe what you did and the three documents that we have in front of us.

MR. FARVER: Basically the question comes down to do you want to take it from the first 100 cases, sets one through five, or do you want to take the findings from the first eight cases? So the first eight sets, 178 cases?

So I went through the eight sets, pulled out all the findings that appear to be quality-related or were marked as quality-related, and we counted the word quality. Now for the first five sets, there is a category column that is usually marked, procedural, quality, something like that.

So the first five sets, the

quality ones were pulled out and any that looked to be in obvious error, like the dose model was missing or something. So that was the five sets. And then the sixth, seventh and eighth set, I pretty much went through and eyeballed it and picked out ones that I thought were quality-related, the dose for 1947 was missing or something like that.

The one document has, I think, 208 findings over the eight sets. Then I broke it down into the -- I pulled out ten cases with the first five sets, and pulled out findings, once again, that I thought were more obvious. You know, the dosage missing, the photon dose was calculated incorrectly, things like that; something that was more tangible to look at.

Then I also picked out 11 cases for the one through eight sets. The reason for 11 cases is it gives a little better distribution of the technical elements. If you look at our table two of our audit report, there's technical elements like whether it's

photon or deep dose or shallow dose and so forth.

So I went and sorted it by those elements to see if we get a better distribution. This gave a little better distribution with 11 cases for the first eight sets than ten.

Also on the first five sets, there were several maximizing overestimate-underestimate cases. We didn't look at that many dose-estimate cases, as opposed to the later sets where it was more best estimate and that's why you'll see for the ones I pulled out for sets one through eight, it's more weighted towards the sixth, seventh and eighth sets because those were more best estimate cases.

CHAIRMAN GRIFFON: And I guess the reason I asked Doug to send us both options, and we could kind of discuss it here is -- I mean the -- I guess I can kind of argue either side of this. If we wanted to strictly stick

to the first 100 cases, then we should probably stick to cases from those first 100 cases.

On the other hand, if the -- the -- going through the eighth set kind of brings us up to where we've gone through with our resolution process. We haven't completed the eighth set, but it brings us sort of current as to where we are right now. And if we're looking to give information -- useful information to NIOSH, I think we would probably get better cases to look at by going through to the eighth set.

So that's -- as far as having useful recommendations to actually make a difference or improve the program, I think chances are better that if we went through the eighth set because, as Doug pointed out, we have many more best estimate cases come up in the seventh and eighth set.

MEMBER MUNN: Well, then there's also -- there's also the fact that -- that it

behooves us, I think, to maintain the information that we distribute on the most current level possible. When we -- when we report on the first 100 cases, and we're actually well beyond that, then we keep encountering comments, like, yes, but since then we've done.

CHAIRMAN GRIFFON: We've already done that. Right, right.

MEMBER MUNN: So it seems only logical to me that we would work from the electronic data, even if it does overrun the boundary of the original 100 cases.

CHAIRMAN GRIFFON: That was my feeling as well. I brought that up because I know it came up. I was looking at the transcripts from the last call, and there was some discussion about that, and I didn't know that we necessarily came to any conclusion. So I just thought we'd consider both options.

But my opinion was to go with the -- first through the eighth set, and I'm not

sure of the path forward. I think the Subcommittee can task SC&A to do this at this point, right? I mean, the full Board doesn't have to take an action to pass this. This is all under the auspices of DR review, right?

So if we're comfortable with the approach and the -- and the cases that are selected -- I looked at these, and I was looking at -- and the other thing that I liked about the one through eight, I think we had a better representation of the technical findings, although the scope sort of covered all the categories on the first through fifth, but I think we better cover the categories on the first through eighth set and I thought that was important that we sort of look at the variety of QC findings that we've seen, not all biased towards one or two types of findings.

So that would be my -- my notion right now is to have SC&A move forward with investigating these selected cases and then

document the first through eighth sets.

MEMBER MUNN: Well, if Mike agrees to that, the people who are here today get to make that decision.

CHAIRMAN GRIFFON: Well, that was a shorter discussion than I anticipated. All right, so we'll do that, John, if you're making task notes.

DR. MAURO: I'm doing that right now.

CHAIRMAN GRIFFON: That's an action item.

MR. KATZ: So what does the investigation involve?

CHAIRMAN GRIFFON: It's going to be -- Doug where do you see the -- this is the pulling the thread on each one of these findings, I believe. And actually we talked about going back to the dose reconstructor if possible via phone, I believe, if at all possible.

MR. FARVER: Well, I don't know.

I don't know what's available to look at, and I don't think you really know until you start digging.

MEMBER MUNN: We may have given you your last task for 2010.

MR. HINNEFELD: Well, I'm thinking there -- I would see some participation on our side.

MR. FARVER: Actually when this came out, I thought you would be doing this.

MR. HINNEFELD: Well, I kind of thought so, but I'm glad to have you do it. The -- it would seem to me there would be some participation on our side of trying to look to say, okay, how did this happen. How did this go out and what are the possible -- what were the failure points here and there something that need to be done to fix that failure point, or has there been something done in the interim that has fixed that failure point?

MR. FARVER: Right.

MR. HINNEFELD: Things like that.

I mean to me, a lot of this is knowledge that it seems to me that SC&A would have to discover, I think. And it should be -- we would have to go back and remember it. We would have to go back and reconstruct it and remember it, but it should be on our side, assuming these people are still -- still work for us.

So it almost sounds like it's sort of ours in terms of doing the bulk of the work. I don't -- and in fact, it could be that Doug takes a look, sees what he thinks the appropriate kinds of actions are and we have a discussion about what we need to look at here because of what we need to check out, and we can either assist with getting him that because at one point or another, we're going to gather it and present it to somebody for evaluation; did we do a decent job?

CHAIRMAN GRIFFON: We want to come to some consensus on what the root cause was.

MR. HINNEFELD: So to me, I'm

happy to start, as Doug kind of laid it out, getting a vision of what he would think would be done next, maybe looking at what's in the DR records because in the records there is usually quite a lot of files that don't actually show up, that they don't include in the dose reconstruction, but they're supporting files, some of them more than others. And so he may be able to see what's there, and then he undoubtedly will not find everything he thinks should be found, or he'll see, well, here's where a mistake was done, but I don't see any reason why this mistake was done. I need to get over to that side and hand this off to DCAS, and DCAS needs to then figure out why or how could this mistake have been made.

So I'm perfectly happy with kind of letting Doug structure it. And so, that way, at least we have a structure that sort of matches the expectation for delivery because I don't really know what the expectation for

delivery is.

CHAIRMAN GRIFFON: Right.

MR. HINNEFELD: And then a fairly healthy participation on our side in terms of sorting it out. You know, how did it happen, sort of thing.

CHAIRMAN GRIFFON: Right, right.

MR. FARVER: And we had talked about it in the past, about the QA checklists.

MR. HINNEFELD: Yes.

MR. FARVER: Now we might come to find that procedure wasn't even in place until the fourth set or something.

MR. HINNEFELD: Yes, and who knows what -- who knows what happened?

MEMBER MUNN: We did that --

MR. HINNEFELD: Yes, yes.

MEMBER MUNN: That was one of our first discussions.

MR. HINNEFELD: I think in part of -- see, another part of this where I think some of the discussion has to be -- has to be

our investigation to a certain extent is sometimes you just have to have a candid discussion with the person who made a mistake, and say, hey, there's no ramification here. And it's far easier for them to tell their colleague they made a mistake than to tell the Advisory Board's contractor.

So sometimes people -- sometimes people just make mistakes. And so -- so like I said, that's just an easier conversation, as much as we try to include you on here, it sometimes does extend too far beyond these rooms in terms of really having a collegial --

MR. FARVER: Not only why they made a mistake, but why wasn't it caught.

MR. HINNEFELD: Yes. So you have another conversation. How come this wasn't caught? So there's three people, essentially, you have a conversation with. Who made it? Who peer reviewed it? Who approved it?

MEMBER MUNN: You have to check with these people.

MR. HINNEFELD: Yes, it may get down to you have to -- you have to have a candid conversation about the utilization of the check. How faithful are you to the checklist on these reviews?

CHAIRMAN GRIFFON: Yes, and I think we're much more interested in if we identify a systems problem more so than a --

MR. HINNEFELD: If somebody just made a mistake, I mean -- yes. But figuratively there are supposed to be control points on that.

MEMBER MUNN: But if it's systemic, we need to identify it.

MR. HINNEFELD: Yes.

CHAIRMAN GRIFFON: Emily Howell has a question.

MS. HOWELL: I have a question. Do you have a proposed time line for when the review is going to be completed?

MR. HINNEFELD: Not by June 1st.

MS. HOWELL: No, I know that. I

was thinking more in terms of the ten-year review that NIOSH is undertaking because it in some ways dovetails with what you're looking at. I didn't know if this would -- if you anticipated the completion of it in a year's time or shorter.

MR. HINNEFELD: I was hoping shorter than that.

(Simultaneous speaking.)

MEMBER MUNN: It depends on what you find. It really does depend on what you find and how much individual time can be devoted to it. This is the kind of thing, which, until we at least get into it, I don't see how one can even begin to estimate a time line. That's why I jokingly said to Doug that we had just given him his 2010 job assignment.

DR. MAURO: Wait a minute. I just went through a very similar process, structurally a very similar process. We were asked to look at all the Site Profiles, all the proceedings that we ever reviewed for

surrogate data. A lot of respect, searching through the minutiae of these procedures, et cetera, for particular places, one was surrogate data, is not unlike searching through all the dose reconstructions, where were there what we would consider to be quality data.

And now, I hate to put Doug on the spot like this. It doesn't take that long. In other words, we were able to go through fairly quickly and it jumps out. We have our checklist. We have our reviews. And from our side, being able -- and as a judgment call of course, pulling out the places where we consider this to be quality-wide is a process that takes some time.

But I could tell you right now, we're going to have this thing done in a month. The surrogate data can be done in a month.

MEMBER MUNN: I might argue -- I might argue with you on one point, and that is

when we're talking about surrogate data, there's no question about what we're talking about. The words surrogate data.

DR. MAURO: They just jump off the page.

MEMBER MUNN: They appear there, and you can do a computer search for surrogate data. You can't do a computer search for quality.

DR. MAURO: I stand corrected.

MEMBER MUNN: You really can't, and it's one of the things that whoever sets up the framework for it needs to understand you're going to burn a lot of midnight oil and go through a lot of meetings to be pulling out and making actually intelligent decisions about is this or is this not a quality issue? Is this simply an oversight or is this something else?

MR. HINNEFELD: Now we're dealing with the selective ones, the selective findings?

MEMBER MUNN: Yes.

MR. HINNEFELD: Because it's a manageable number.

CHAIRMAN GRIFFON: Well, that's why we --

MR. FARVER: And I mean some of those might not have a resolution.

MR. HINNEFELD: Yes. Okay, so --

CHAIRMAN GRIFFON: But you did try to pick ones that were --

MR. FARVER: I did try to pick ones that were very tangible, dose was not there, the wrong year was entered, or something like that.

DR. MAURO: How about errors in calculation? What about a number that's five times the other number? Is that a quality issue? We had one before.

MEMBER MUNN: It may or may not be. That's where the judgment call is.

CHAIRMAN GRIFFON: Yes, yes. That may be an outcome, too, of the -- after you

look into it, you may say that we found -- we investigated this finding, and found that it wasn't a quality finding, really. It was this.

DR. MAURO: You know what? We run into the same situation on surrogate because our definition of surrogate is very narrowly defined.

CHAIRMAN GRIFFON: Yes.

DR. MAURO: And depending on how you define surrogate depends on what comes in or doesn't go in.

CHAIRMAN GRIFFON: Yes, yes.

DR. MAURO: You're doing the same thing here. What are you defining as a quality issue? What are the boundaries? Because I guess we all see that through a different lens, and someone may define a quality issue very narrowly, and that's going to be the hard part.

MR. FARVER: It was special when you had to select them out and you're kind of

looking at just a matrix.

MEMBER MUNN: Yes.

MR. FARVER: So that's why I kind of looked at where they missed a 1987 shallow dose. It wasn't entered in the IREP data. I mean that's something tangible we can go back and look at and it's probably something that should've been caught with the QA checklist because I believe you're supposed to sum up the different years.

MR. KATZ: The only question I have about the process, as sort of Stu was discussing, not knowing where this was going to start, whether it was going to start with DCAS or with SC&A, and if SC&A is identifying the cases that you have, then we'll -- but if SC&A is then to take the next step of going through the files and trying to turn over all the bones to try and figure out how it happened, it seems like that's inefficient. It seems like DCAS is better doing that part.

DR. MAURO: You know, I mean by

way of process, this is the Board's goal, and the contractor's, to say, listen, we went through the process on your behalf and in our judgment, these are the places where we have some quality problems. That's the rock we're going to stand on.

Now, certainly, there could be debate on what could be considered -- and that'll be judgment made by the Work Groups, but once we've identified this is where we think the quality problems are, then I think at that point, we're out of it. Then it goes over, and then -- then the dialogue starts, where Stu would say, I really don't think there's a quality issue. Here's why. And somehow, whether this is a one on one between SC&A and NIOSH or this is something that is a dialogue that is engaged by either work group, that's your decision.

MR. KATZ: So my point is I think I misunderstood what Stu said because I think I thought I understood Stu to say, it's great

if Doug actually goes through the case and tries to figure out how it happened. And it seems to me, that's much more efficiently done by --

MR. HINNEFELD: That's more efficiently done by --

MR. KATZ: -- you folks. And by Doug just spending the time to try to figure out how that occurred at the first step seems --

CHAIRMAN GRIFFON: Well maybe it does start there, then. I mean, you've got the selected cases. So at this point, if we return to NIOSH and say, at least you take a preliminary shot at that, my feeling is that a lot of this -- I want that dialogue between Doug or whoever and NIOSH, not on the subcommittee level, but then every Subcommittee meeting I plan on putting this on the agenda and it's getting a report back of where you're at or whatever.

And if you come back and if your

matrix maybe dropped off five of them because it turned out they weren't -- you know, there was no resolution possible or it wasn't a quality finding or whatever, and that is agreed on and you report back on that kind of stuff, then we'll proceed that way.

MR. HINNEFELD: You're thinking of a root-cause kind of thing.

CHAIRMAN GRIFFON: Yes, I'm thinking of a root-cause kind of thing.

MR. HINNEFELD: There are a number of root-cause tools out there.

CHAIRMAN GRIFFON: I'm sorry?

MR. HINNEFELD: I said there are a number of root cause tools out there --

CHAIRMAN GRIFFON: Right, right.

MR. HINNEFELD: -- that you could use for root cause analysis.

CHAIRMAN GRIFFON: My feeling is if NIOSH looks into that end of it and comes up with an opinion on that, and then we might want SC&A to look at that and say, yes, we buy

this, too, or, wait a second. I'm not sure. That way, SC&A would come back in.

DR. MAURO: Yes. How much of that is off-line? What I mean by that is I could envision --

CHAIRMAN GRIFFON: Well, when they come up with their final sort of, here's what we think happened, I think that's on-line. But in between that is off-line.

DR. MAURO: Okay.

CHAIRMAN GRIFFON: Right? Does that make sense?

MR. KATZ: Yes. You guys are going to have to --

DR. MAURO: And if you'd like an assembly for it, Doug can be doing this on a one-on-one basis or whatever.

CHAIRMAN GRIFFON: Yes.

DR. MAURO: Come back and say, this is the process we went through.

CHAIRMAN GRIFFON: Yes.

DR. MAURO: Like we always do on

any technical call. Make a report about a technical call and the degree to which any member wants to sit in on a technical call, that nature is your call and we have a recorder. Hopefully the ideal situation would be to bring back to the Work Group issues or whatever, and we're in agreement that this was a quality issue, and then NIOSH of course would explain what action was taken or not, and it becomes really clean.

CHAIRMAN GRIFFON: And I don't expect you to use a recorder. Or take minutes do you mean?

DR. MAURO: That's what I mean when I say recorder.

CHAIRMAN GRIFFON: Yes.

DR. MAURO: I think there's a point that we keep minutes --

CHAIRMAN GRIFFON: Keep minutes so we know the process, right? But we don't need to be -- it wouldn't work at the subcommittee level. I think it's much better to do it the

other way. That makes sense for a path forward now that I'm listening to more -- I think the ball is in NIOSH's court to start, but then extending that any time they need to talk to SC&A for clarification, for -- you know, just to move the process, then that can happen.

All right? And not a year, Emily. We're shooting for less than one year. I mean I really don't think -- I had in mind more like three or four months. But maybe that's a little ambitious, too.

MR. HINNEFELD: That's a little ambitious given where we are on our June 1st objective and other stuff. But I would hope to proceed somewhat apace. Whenever we start into this, we're going to disrupt people who are doing reconstructions. So we'll have to -- I'll have to work carefully with our contractor to -- to make progress on this and not disrupt what's kind of a delicate progress toward that June 1st objective.

So -- so it'll be a little cautious, and we'll need really close coordination on their side. I'll need to clearance through their -- I'll have to get their project management on board, and down to the people; get it down to the people who are going to be helpful on that. I've got a couple people in mind, and see what that does.

So it -- if this person really spent some time on this, what would that do to this other broader objective for Dr. Howard -- I really can't go to John and say, I didn't make it because we diverted things. I really can't do that. Brant has questions in his eyes. So I'm --

DR. ULSH: Well, are we proposing an alternative to Mark's three or four months? Maybe six months, until we get more information.

MR. HINNEFELD: I think six is more realistic. I would like to beat that just for program-review purposes. I just

don't know that I can. But I'll know more after some conversations with the contractors.

CHAIRMAN GRIFFON: And it may be that it overlaps with your other --

MR. HINNEFELD: It may be. It is relevant. You could even say, well, if you've got systemic quality problems, it's really worth your while to be rushing out of dose reconstructions given those systemic quality problems. So you can make the argument either way.

I mean I know what I talk to John about every Friday is are we going to make June 1st?

MEMBER MUNN: Well, one argument you can't deny, though, is the fact that to make estimates in any project without having discussed it with the folks who do the nitty gritty is a serious matter.

MR. HINNEFELD: Yes. All I would ask is that maybe at the next Subcommittee meeting, you come back and we discuss the time

line a little more, and we'll have a little more input by that time.

MR. KATZ: And six months is still within the time frame of the program review anyway.

MR. HINNEFELD: Okay.

MR. KATZ: You're not blowing the time frame for that with this.

MR. HINNEFELD: Okay.

MS. HOWELL: And I just wanted to clarify because we're up to like set 12 or something now, aren't we?

CHAIRMAN GRIFFON: Yes.

MS. HOWELL: So that eight, do we have like a -- what date or claim number does that actually go up through? Do we know?

MR. FARVER: Seventy-eight.

MR. HINNEFELD: Well, we can -- what are you interested in?

MS. HOWELL: I'm trying to -- because I want to be really clear that this process of reviewing the QA/QC is actually --

it's a snapshot in time that is in our past because it doesn't go up --

CHAIRMANAN GRIFFON: It's still in the past, yes.

MS. HOWELL: Right. So what -- do we have any idea what date? Is that like two years ago maybe?

MR. HINNEFELD: Well, I could find out. What I -- what I would propose to do would be to say what was the date -- would be the latest completion date for dose reconstruction of any of them in the first eight cases.

DR. MAURO: The eighth set I have -- I have some eighth sets here, and they're May 2008.

MR. HINNEFELD: Well, that was your review.

DR. MAURO: Our review?

MR. HINNEFELD: That was your review. So if that's the -- see, my point is that the technical work that is being

evaluated was done at the completion date of the draft dose reconstruction. Okay, that is how -- that is the latest date of the technical work that was evaluated in that eighth set review. So we can find that. I don't have it available now, but we can find that, and that would then be -- this would reflect the quality of work up through that date.

Now unless we can say in response to some of these, these things have been done in the mean time so that we feel like that mistake won't happen any more, unless we can make that statement, there's no reason to believe that it's any different today than it was then. Isn't that right QA thinking?

CHAIRMAN GRIFFON: Yes.

MEMBER MUNN: But it's a mistake that we made repeatedly. The work books themselves will do --

MR. HINNEFELD: I would think the work books would change a lot of these things.

I would think they would --

CHAIRMAN GRIFFON: The nature of our review though is I don't think -- because I did think of that, Emily, that we're up to the full set, and maybe we should -- we really can't bring up any -- include any cases in here that we haven't at least discussed at the subcommittee level. So I thought we'd go through the eighth set. Stop me if you want to -- anyway. All right, so, that'll be our path forward. NIOSH will start the ball rolling, and at the next subcommittee maybe give us a little bit of sense of the time line, if possible.

Anything else from that? All right, so we're good. We're good on the first 100 case report. We can move to the sixth set of cases. I'm going to pull the document up, but I believe it was only one finding left. Does anyone know -- I'm scanning through to -- 104.7?

MR. FARVER: Oh, 104.7.

CHAIRMAN GRIFFON: Is that right?

MS. BEHLING: 107.4.

CHAIRMAN GRIFFON: Okay, 104.7 has been resolved. I still have some yellow highlighting, which I should get rid of.

MEMBER MUNN: It is done, right?

CHAIRMAN GRIFFON: Yes, I believe it is done because the 11/5 indicates that one was transferred to a TBD-6000 group. Okay, let's see, 107.4, okay, is there any update from NIOSH on this?

MR. HINNEFELD: Brant stepped out for a minute.

MR. SIEBERT: Mark, Stu had sent it to the Subcommittee on January 7th to close out for this.

CHAIRMAN GRIFFON: Okay, January 7th?

MR. SIEBERT: Correct.

CHAIRMAN GRIFFON: Did you get that? We might have to find that one.

MR. SIEBERT: For the court

reporter, this is Scott Siebert by the way. Sorry.

CHAIRMAN GRIFFON: We got you covered.

MR. SIEBERT: Thanks.

CHAIRMAN GRIFFON: Scott, do you know the -- I got it here. SC&A sixth set 107-4 ORAU response, April 15th? No.

MR. SIEBERT: No, it's actually extension -- same thing, except January 2010.

CHAIRMAN GRIFFON: Oh. Yes, I'm not sure I have it on my drive, but it doesn't mean that you didn't send it. It just means that I have to find it in my email. SC&A, do you guys have it? Looking.

MR. FARVER: I don't have it. You say you sent a response?

CHAIRMAN GRIFFON: Yes.

MR. FARVER: I don't believe I -- I can't find it, and I don't remember seeing it.

MR. SIEBERT: Yes, Doug, you were

on distribution on the 7th of January.

MR. FARVER: I don't see it.

MR. SIEBERT: This was right before the phone call that we had to discuss the first 100 thing.

CHAIRMAN GRIFFON: Right.

MR. FARVER: I can try to find it on break.

CHAIRMAN GRIFFON: Scott, can you forward that one again, and maybe we'll --

MR. SIEBERT: I'm going to send it again right now.

CHAIRMAN GRIFFON: Yes, forward it to everyone if you could.

MEMBER MUNN: What date did you say you sent it?

MR. HINNEFELD: The file has a January -- I sent it on Sunday -- what did you say, January 7th?

CHAIRMAN GRIFFON: Seventh, yes.

MR. SIEBERT: January 7th is when I sent it.

MR. HINNEFELD: January 7th. I thought it was January 2nd.

MEMBER MUNN: Okay, I've got it.

MS. BEHLING: Perhaps we can just talk about this a little bit, and maybe we can come to some resolution that way. If we can go back and just discuss what the initial finding was, and what discussion we've had since then, would that be of some help?

MR. HINNEFELD: I can start that, I think. I've got that up here now.

CHAIRMAN GRIFFON: Yes.

MS. BEHLING: Okay, because I can start that also. But go ahead, Stu.

MR. HINNEFELD: Well, the finding, I believe, is -- let me get that one up.

MS. BEHLING: I believe what we were questioning, not to interrupt you, Stu --

MR. HINNEFELD: I think it was under what circumstances would you choose an acute intake versus a chronic one. Is that this one?

MS. BEHLING: That's correct.

CHAIRMAN GRIFFON: Yes.

MS. BEHLING: In this particular case, the individual had urinalysis results, and the first one in 1955 was a positive, and then a year later, it was a positive. I believe that NIOSH initially treated this as a chronic exposure, and we were questioning whether it should have been treated as an acute, either a single acute or multiple acute exposures.

And although it doesn't have a large impact on this particular case, the question came to is there something -- and I believe your latest procedure on your bioassay procedure, internal bioassay procedure, does give more direction to the dose reconstructors regarding how to treat a situation like this.

CHAIRMAN GRIFFON: Right.

MS. BEHLING: Whether it's acute or chronic, or --

MR. SIEBERT: I'm sorry to

interrupt, but before we go all the way down that road yet again, the response that I wrote that was sent out in January, and I just sent out again, the actual thing NIOSH was requested to do was to look over the last few transcripts and determine what we had done on this and what the path forward was.

And with what I sent, the -- we had actually closed it out numerous times, except for the fact that we wanted to make sure it was transferred over to the Procedures Subcommittee for clarification in OTIB-60 on dealing with the issue. So I just want to throw that out before we got down to the nitty gritty of the issue yet again.

MS. BEHLING: I agree. I agree that that's probably the appropriate approach.

MR. SIEBERT: And I have sent that. Has everybody slash anybody received that yet?

CHAIRMAN GRIFFON: Yes, we got it. We just got it. And Kathy or Scott, you

believe -- Kathy, you said you think the most recent version of which of the internal dose guidelines? Is that what you're saying?

MS. BEHLING: Yes. Is it --

CHAIRMAN GRIFFON: Sixty, is that correct?

MR. SIEBERT: Sixty, correct.

CHAIRMAN GRIFFON: Okay, so you think the revision of 60 might account for -- or might have better guidance on this issue?

MS. BEHLING: I believe it does, yes.

CHAIRMAN GRIFFON: Okay, so maybe it does make sense to take it up in -- under Procedures if that is the case.

DR. MAURO: I've got to say I'm curious. What is the essence of the resolution?

MEMBER MUNN: I'm sorry, I was still trying to find it.

MR. HINNEFELD: The essence of this resolution for the dose reconstruction is

to transfer to Procedures --

DR. MAURO: Oh, no, but I mean when it goes to the procedure, obviously there's some language in the procedure that deals with these --

MR. HINNEFELD: Okay, so the essence of the language.

DR. MAURO: The essence of the language. What was the philosophy?

CHAIRMAN GRIFFON: Right. Don't keep a secret.

DR. MAURO: I want to hear.

MR. HINNEFELD: Scott, do you have that handy?

MR. SIEBERT: I'm sorry. I was typing. What was that?

MR. HINNEFELD: Do you have handy what is -- what there -- your response says there is some language in TBD or OTIB-60 that addresses this. It says it, "Addresses unmonitored and missed dose, but it's applicable to all exposure potentials." Would

be this situation. Can you kind of summarize that or kind of decide what that says?

MR. SIEBERT: Sure. Give me a second here to pull it up.

MEMBER MUNN: You got my attention when you said Procedures.

MR. HINNEFELD: Procedures, yes.

MEMBER MUNN: Now just a minute. I was looking at something else. So we are talking about OTIB-60. I guess I better make a note of that.

MR. SIEBERT: Okay. I'm looking at the section.

MS. BRACKETT: This is Liz Brackett. I'm the author of OTIB-60, so.

MR. HINNEFELD: Okay, Liz, have you been in on this entire discussion?

MS. BRACKETT: I came in during it, but I did hear the last little bit about resolving the issue, although I didn't hear the beginning of the particular issue we're closing out, but if -- this OTIB has not been

revised yet.

There is -- right now, as far as addressing chronic or positive results over time, it does say, "If the majority of results are positive and scattered throughout the intake period, use all results to do the intake assessment." And I thought that it said that -- to assume a chronic intake throughout the period, although I'm not seeing that specifically.

CHAIRMAN GRIFFON: No, that doesn't -- that gets pretty broad.

MS. BRACKETT: It is pretty generic because it's always going to be on a case-by-case basis. But I'm trying to think. I'm pretty sure that it said if you have a lot of positive results scattered throughout time, then just assume one long chronic intake throughout.

MR. SIEBERT: Yes, there it is. It's the third paragraph in section 5.4.1, missed dose determination. So to calculate a

missed dose, a chronic intake through the possible exposure period is assumed. And then in section -- back up to 5.4.3 again.

MS. BRACKETT: I've been working on modifying this so my section numbers are changed.

MEMBER MUNN: Yes, we've had quite a bit of conversation about that somewhere, where I was -- and I don't remember when.

MS. BRACKETT: Yes, we have discussed extensively, and I have been modifying this. But a number of different numbers have come up related to this OTIB, and I've been working on integrating all of them, and this one in particular giving more specific guidance on fitting positive data.

DR. MAURO: Could I just ask a simple question? On this particular case, what I just heard is that you got a measurement and -- I mean one measure made in one year; a year passes, and then you got another measurement.

MS. BRACKETT: Right.

DR. MAURO: Now of course it could be S or F. You got these two numbers. I could say, you know, chronic may not work when you're in -- I agree if you got one every two months, maybe chronic will work. You got one in a year, and depending on the chemical form, I do not have an intuitive feeling on which strategy would be the most appropriate in the circumstance.

It's almost as if you don't have enough data to do it, and you have to use your coworker model. I mean in a funny sort of way. Does my coworker model -- I would almost say, "Well, listen. Just do measurements, especially if it's M or S or M or F. You really don't have enough data to reconstruct this guy's dose if you don't know when -- what happened in between. What are you left with? You're left with a couple of numbers and a coworker model. That's how you do this.

MEMBER MUNN: And this is almost

the exact discussion we had at the November Procedures meeting.

MS. BRACKETT: Right, but I would say almost 90 percent of the cases minimum you don't have enough data. You don't know anything.

MEMBER MUNN: Yes, right.

MS. BRACKETT: You very rarely have an intake large enough that gives you enough data to do a decent fit. And so the dose reconstructor has to try all possible material types, and I did find a section -- I don't know what the magnitude of these results are.

So maybe this doesn't apply, but there is one set that says, "A single chronic intake can also be fit when there are only intermittent positive results that are relatively small. For example, within a factor of two of the MDA. This could be representative of a low level chronic intake to slow the MDA." And so -- so the guidance

is these results are not much above the MDA to fit one single chronic intake throughout the possible exposure because you don't know anything else.

MR. SIEBERT: Yes.

MS. BRACKETT: And you would try all the material types to come up with whichever gave you the largest.

MR. SIEBERT: That's the third bullet in the present guidance 5.3.2, which I also mention at the end of that additionally there is a section on handling positive results 5.3. It's in there as well word-for-word, which Liz just said.

MR. HINNEFELD: But our recommended response is that we could be -- this finding could be closed.

DR. MAURO: Yes, maybe this is a Procedure discussion.

MR. HINNEFELD: And it could be a Procedures discussion when we're prepared to talk in general about it, OTIB-60.

DR. MAURO: I think it is. I thought maybe it would be real nice to get a straightforward, "Okay, yes, that makes sense." And then tomorrow, we can move pretty quickly. But what I'm hearing is there's more to the story, and the fact is transferred over to Procedures, is where it should be.

Because this particular case, for example, when you have one sample one year and then another one a year later -- I don't know what you'd do.

CHAIRMAN GRIFFON: The other thing that interests me here is the -- the -- and I haven't looked back at the original findings. I'm looking at the matrix. Sometimes you miss some details.

But it says that, "The method is not scientifically sound nor claimant favorable," and I guess the question I would ask based on what Liz just said is if the -- did the dose reconstructor in this case, and 107.4 would be our case, is try all the

possible -- possibilities. Or did they just look at chronic and try the various solubilities for chronic and stop there? They didn't look at the possibility of multiple acutes. And if multiple acutes, would it result in a higher dose?

And in that case, I'm wondering if you have a -- sort of the findings --

DR. MAURO: This is a very forensic --

CHAIRMAN GRIFFON: You have the regular generic finding, which is that what's our -- is there any way that the OTIB-60 can be revised to give the DR more guidance in these kinds of situations? But this is a specific question of whether they gave them the most claimant favorable dose. Given that you were lacking information, did you -- did they make the most claimant favorable assumption?

MS. BRACKETT: Well, I mean they are not told to try every possible scenario to

come up with a single largest dose possible. That -- we would be spending six months on every case if that were the --

CHAIRMAN GRIFFON: Okay. I just wanted clarification on that.

MEMBER MUNN: Well, besides, it's unreasonable.

MS. BRACKETT: Right, and that's why -- I mean the OTIB pretty much tells them assume a chronic intake for such. That bullet that I read, that's what it says to do if you have intermittent positive results spread over time. Because it's the same as doing missed dose. We don't try to fit individual acute intakes between every -- you know, if a person had annual samples, and they were all below MDA, we would assume a single chronic intake unless there's evidence in their file that tells you otherwise that that something else should be assumed, and that would be the case for the positives also.

But if you just have low level

positive results, then the assumption of a low level chronic intake is -- is what you would do. Again, just because you don't know what else might've happened. If you had multiple acute intakes, it would look pretty much the same as one long chronic intake. And so that's the rationale behind assuming this one long chronic intake.

DR. MAURO: And Liz, I would argue on your -- in support of your position if you -- if you get a rating from a person where you got a strong positive result. Not MDA, not plus MDA, but ten times the MDA.

MS. BRACKETT: Sure.

DR. MAURO: And you got a measurement. And there should be some argument to be made that if that happens, and they don't follow up each month after, that doesn't make sense. And I would really be nervous about that. I'd say, "Why didn't they follow up?"

So there's a collection of common

sense arguments you would make. But I would agree with you if I take a measurement of a person and it's below or real close to the MDA, and then the next time I see a measurement it's below or close to the MDA a year later, that seems to make sense.

Why would you have an intensive program following someone that you're really not seeing anything and you have no reason to believe there's necessarily a problem? But if I see a positive hit, a strong positive hit, and I don't see any follow up measurements after that, I would get a little nervous.

I'd say, "Why didn't they follow up with this guy? This guy obviously is doing a job where he's taking something in. And we don't see another measurement for a year later?" This is kind of --

CHAIRMAN GRIFFON: Or are we missing data?

DR. MAURO: Are we missing data, or what's going on?

MS. BRACKETT: Is that the case here? Like I said, I don't -- I didn't know what the magnitude of these results were.

MR. SIEBERT: No. This case is way back early on in Savannah River where they're not marked as less than values, but they're actually less than the default MDA we have for the time frame.

CHAIRMAN GRIFFON: That's correct.

MR. SIEBERT: So since they're not marked as less than, we've kind of -- we've had to go back to the assumption that they're positive, even though I don't personally think that these are probably positive results or below the MDA of the time.

DR. MAURO: Take them at face value. Everything makes sense.

CHAIRMAN GRIFFON: That answers my question. I thought I heard positive results, but they're positive but they're not -- yes.

DR. ULSH: Okay, so given that situation for this case, what I heard earlier

was we're going to transfer this to the Procedures Working Group.

CHAIRMAN GRIFFON: Right.

DR. ULSH: Am I still hearing that, or are we going to attempt to resolve it now?

DR. MAURO: What I would recommend now is I would say set up the procedure and close this because that answer solves my problem.

DR. ULSH: Okay, so when we send it to Procedures, what are we asking that Procedures group to do?

MR. HINNEFELD: Probably -- well, during discussion of OTIB-60, what we want to do is see if there's enough clarity. Liz said she is working on this and other things. Presumably, TIB-60 is in abeyance in the Procedures vernacular until such time as we have a product.

CHAIRMAN GRIFFON: Okay. I think TIB-60 is already -- I think we're already

somewhere in there with looking at the chronic versus acute. I'm sure we are.

MEMBER MUNN: I don't know whether --

CHAIRMAN GRIFFON: We've discussed it many times.

MEMBER MUNN: I don't know whether it's TIB-60 or not, but this specific case and this specific scenario has been discussed literally for hours in Procedures.

DR. MAURO: But it sounds like there is a revision going on.

CHAIRMAN GRIFFON: Yes.

MR. FARVER: We could make it stronger than OTIB-60, because right now it says, "a single chronic intake can also be fit." It just tells about things that can be done.

CHAIRMAN GRIFFON: Right.

MR. FARVER: Now, if you wanted to make it a, "should," you know, like in the next bullet when you talk about the various

errors, if you don't have other errors, then you should use this number. Well, go ahead. If that's what your policy is going to be, if it's within a factor of two of the MDA, then you should use a chronic intake.

CHAIRMAN GRIFFON: Right.

MR. FARVER: Then say that.

CHAIRMAN GRIFFON: Right.

DR. ULSH: I'm trying to think of -- I mean you don't want to over proceduralize things.

MR. FARVER: I understand.

DR. ULSH: But you can't anticipate every few weeks.

DR. MAURO: I agree with that, but there's a philosophy. See, we just talked about the philosophy, and we were -- we were not that quantitative. It was really a -- and there's a place where you say, "Listen, when you get numbers that are this large." How large that is: more than a factor and two above -- I don't know. But they're going to

demand a certain explanation. Why wasn't there another measurement?

But in this case, taking on face value what I just heard, mainly that numbers that were reported in one year, each year, for all intents and purposes have the MDA in that area.

CHAIRMAN GRIFFON: What was throwing me off was positives --

DR. MAURO: Exactly. I reacted the same way you are. With that not being the case, this issue is closed.

CHAIRMAN GRIFFON: They were pseudo positive results.

MEMBER MUNN: They were pseudo positive.

CHAIRMAN GRIFFON: Right. I think we're done with it here, and we'll transfer it to Procedures.

MR. KATZ: And for Procedures, it doesn't really hit the agenda until you come out with the revised TIB-60. Is that what I

heard?

MR. HINNEFELD: Well, I have to go refresh my memory, but if we're working on a revision to OTIB-60, and it's including -- if it's in response to the review, then it sounds to me like it would be --

CHAIRMAN GRIFFON: I think that was already an issue TIB-60. So --

DR. MAURO: We could talk about it, and based on the discussion we have tomorrow regarding this matter, and if there's agreement in principal, even though it's not actually formally in the procedure, it's in abeyance.

MR. KATZ: No, I'm just trying to keep track of the agenda. That's good. Thank you.

CHAIRMAN GRIFFON: Are there any others in the sixth set? That closes out the sixth set, I believe.

MEMBER MUNN: Scott, did you -- was it you who said you sent that -- just

resent that message?

MR. SIEBERT: Yes, ma'am.

MEMBER MUNN: You must've sent that to my CVC address, and I don't have my toggle with me, which is going to be fun tomorrow. So, would you please send it to my AOL address?

MR. SIEBERT: My fingers are poised.

MEMBER MUNN: Thank you so much.

MR. SIEBERT: What's the address?

MEMBER MUNN: WIMUNN -- that's all right. The whole world knows it anyway.

CHAIRMAN GRIFFON: Okay. If that's okay, let's take a quick ten-minute break, just a comfort break, and we'll start with the seventh set when we come back.

(Whereupon, the above-entitled matter went off the record at 10:38 a.m., and resumed at 10:51 a.m.)

MR. KATZ: Okay, we are reconvening after a short break. It's the

Dose Reconstruction Subcommittee.

CHAIRMAN GRIFFON: All right, we are on the seventh set of cases. The first one I have open is the first one, 121.1. I indicate that remains the NIOSH action item from my last note. And Stu and Brant, I'm not sure, but we got at least two responses from this set for you. It's the 130 and 133 I think, or something like that. Not 121 I know.

DR. ULSH: Yes, I see where you have, "Remains a NIOSH action item." I don't think that we have a resolution yet. Scott, am I -- are you there?

MR. SIEBERT: This is Aliquippa Forge, and I believe it has to do with comparisons of OTIB-70 and 6,000.

CHAIRMAN GRIFFON: That's correct, yes.

MR. SIEBERT: No, I'm not aware of anything that you guys have yet.

CHAIRMAN GRIFFON: This is just

going to remain open, all right? And 120, that carries through for the next one, Stu, I'm sure. How about 122.1? The validity for the approach for the job in question. I think this was that particular worker, John. This must be one of your cases --

DR. MAURO: Yes. This was

CHAIRMAN GRIFFON: -- where you had a question whether he'd fit in the 95th. He was probably the job that was the extreme, or potentially extreme --

DR. MAURO: Furnace operator, yes.

CHAIRMAN GRIFFON: Yes.

DR. MAURO: This is Simonds Saw furnace operator. Whenever I hear furnace operator, I say to myself, "You can't use the" -- we've got a special problem here.

CHAIRMAN GRIFFON: Yes.

DR. MAURO: And expanded cookbook for using the geometric means. Yes, again, I thought about it conceptually. At Simonds Saw, for external exposure, for example, you

got all these film badges that were hiding; 20 film badges hiding. You got some readings coming from them. Take the geometric mean of those film badges, and say, "Okay, this is what we're going to find as the external exposure to workers based on film badge readings."

And the only concern I have is, well, that's fine for probably most workers, but this guy was a furnace operator. And the kind of environment he's in is a lot different than the rest of the workers, and as a result perhaps a higher end of the distribution from the film badge readings would make more sense. I believe that's where we are.

CHAIRMAN GRIFFON: Right.

DR. MAURO: And there was also some question that as a furnace operator, he worked all the time with billets as opposed to rocks. The cookbook -- I shouldn't call it a cookbook. The exposure matrix has a very standard approach, where it says, "Everyone is

going to be outside external exposure, at least one foot away for three-and-a-half hours a day to a reference billet, and to a reference rod."

Now, it turns out for him being the furnace operator, he's working only with billets. In other words, he's just cooking the billets to warm them up so they can be rolled. Those have an external dose that are higher. You know, MR per hour and a foot.

They're higher than rods, and maybe about a factor of, I don't know, maybe 30, 40 or 50 percent higher. So, in other words, what I'm getting at is in this particular case, we felt that the basic approach used in Simonds Saw was largely pretty good in terms of reviewing the Site Profile, but when you apply it to a guy who is a furnace operator, you got to start saying, "Well, wait a minute. We got to tweak this guy a little bit because we know these are the kinds of things we did; that one size does not

fit all, at least not for him."

And I think that's the essence of what our concern was here.

MR. FARVER: It is covered in 122.1 and 122.3.

CHAIRMAN GRIFFON: Right. Scott, did you -- well, I should say Brant, did you --

DR. ULSH: I'm going to defer to Scott anyway.

CHAIRMAN GRIFFON: Okay.

DR. ULSH: Scott, I don't think we have an objection on this one.

MR. HINNEFELD: This may be ours. I mean this was -- yes. It was an AWE dose reconstruction. It's not clear to me that ORAU even prepared it.

MR. SIEBERT: Simonds Saw I believe we actually did. Let me check. Yes, we did. However, I don't believe we have -- there's any responses on this.

MR. HINNEFELD: Yes. I think the

-- as a general sense, I think we get to this part at the end of the matrix. There's some sort of generic mini site profile findings at the end of 8 -- or 7.

MR. SIEBERT: That's in the eighth.

MR. HINNEFELD: Okay, but it's very similar. I mean the findings are essentially against the site profile and the exposure rate.

CHAIRMAN GRIFFON: The coworker model.

MR. HINNEFELD: Yes.

CHAIRMAN GRIFFON: It is, for this particular individual.

DR. MAURO: But this individual, to bring us to closure, is one more aspect to this particular case that we are left with.

CHAIRMAN GRIFFON: Yes.

DR. MAURO: And we talked about this before when I came in. There was thorium exposure also at Simonds Saw, and the approach

used in the exposure matrix was, "Listen, we have -- HASL came in, and did a DWE, daily wear exposure analysis, of thorium exposures, the operation of thorium activities going on."

They did it for one day. Okay, so, they went in there and did a nice job for one day, and they came up with the daily weighted exposure. Here's the exposure we expect people to experience, at least on that day.

Now, there were 36 days where thorium was processed at Simonds Saw. So, the question I raised was what do you do when you have a real nice DWE that represents typical exposures, people with you know -- you would expect to experience, so, in other words, pretty representative of all workers.

I call this a claimant neutral treatment of the problem, where you're assigning this worker the full distribution that was generated based on one set of measurements taken on one day. In my opinion,

when you only have one day's worth of measurements, and want to apply it to one particular worker, and you don't know whether this guy is at the high end or the low end of the distribution, I can't see -- I understand why DWE's are done. You want to understand what's going on at the site. But then to just use the DWE number for that one day, and use a geometric mean, so there is a real worker, there's a 50 percent chance you've underestimated his dose because he may not be the worker that's right at the geometric mean. He may be the worker that's at a higher end.

And that day, that one day, there was only -- we don't know where that date fits in on the 36 days. So, in my opinion, if I were doing it, I would say, "You know what? I'm going to push it up a little bit. I'm going to use maybe the 84^{th} percentile for this guy." And assume every one of those 36 days that he worked there on thorium, rather than use geometric mean, I push it harder as

being a way to give a little bit more of the -- well, maybe the 95th percentile.

I don't know whether he got the 95th percentile every day, 36 days, that's a little -- that's pushing it. But going with the --

MEMBER MUNN: It's not likely.

DR. MAURO: Yes, and I agree with that. But at the same time, using the geometric mean, that tells me you got a 50 percent chance that this guy has been underestimated.

MEMBER MUNN: You've also got a 50 percent chance he's been overestimated.

DR. MAURO: That's the truth. Now, what I bring to the Work Group is this is -- this is a philosophy. If we're going to be claimant favorable, I consider the approach you used to be claimant neutral. Now, then the Work Group has to be comfortable in that philosophy.

I believe, based on precedent, you

have been moving in a direction where you're trying to be more claimant favorable. That's why we see situations where when you're in a situation like this and not quite sure of whether this guy is a high-end guy or low-end guy, what you will do is you'll assign to him something closer to the higher end of the distribution, rather than the median.

I think that philosophy has been embraced.

CHAIRMAN GRIFFON: Is there a Simonds Saw site --

MR. HINNEFELD: There is. There's a Site Profiler. There is not a Site Profile Review. The Site Profile essentially specifies use --

DR. MAURO: Right.

MR. HINNEFELD: So, that's why, in my view, these finding are essentially against the site.

DR. MAURO: Against the site, right. They are.

MR. HINNEFELD: It doesn't give leeway the way John describes.

CHAIRMAN GRIFFON: But I'm asking if we have a Work Group set up for that.

MR. HINNEFELD: There is not.

DR. MAURO: It's very important. We've never reviewed -- the only review Simonds Saw got was the result --

CHAIRMAN GRIFFON: Yes, the result --

DR. MAURO: Yes, the result of two cases we reviewed. And this issue --

CHAIRMAN GRIFFON: I seem to remember it was probably on one of the slides of the ones we haven't done yet.

DR. MAURO: We haven't done yet.

MR. HINNEFELD: I mean I think arguably, these dose reconstruction reviews are pretty good reviews.

DR. MAURO: And we took a real close look at it -- so, I mean of all of the AWE's that we did of review on the Site

Profile, I would say the one that got the most attention was Simonds Saw because we did do two cases, and we did the Bethlehem Steel.

CHAIRMAN GRIFFON: I guess what I'm getting at is these are obviously broad issues. Is the coworker model representative for all workers?

MR. HINNEFELD: And this is something I think we can make some progress on getting a decent response back. Again, there's just so many conflicting activities. That's the point. That's why it hasn't been done.

CHAIRMAN GRIFFON: And maybe -- and I will -- I'm keeping a task list now, too. Because for the next meeting, I really would emphasize to NIOSH and SC&A, if it comes up, that we weren't --

MR. HINNEFELD: On the same step.

CHAIRMAN GRIFFON: Right. We could keep track of these. Okay, so, with that, it goes for 122.3 as well. That remains

an open item for NIOSH, same site. The next one I have is 122.7. Would that be the same? That's the thorium, right?

MR. HINNEFELD: That's the thorium, yes.

CHAIRMAN GRIFFON: Okay, okay.

MR. FARVER: Was that still open?

DR. MAURO: Yes, for the same reason. Oh, yes. One of the things that came out of the last meeting was NIOSH was going to provide SC&A with the HASL data, which gave the DWE data, and I have to say we try to track it down. Sometimes it's hard for us. You may have provided it to us, but we couldn't find it.

Now, I would also argue that when we do get it, we certainly could look at it, but I don't know if it's going to change anything. It's really a philosophical -- we could take a look at it though.

CHAIRMAN GRIFFON: I'll put that on the action to NIOSH to provide.

DR. MAURO: So, we do have the ball --

CHAIRMAN GRIFFON: It may be a matter of just giving us the site -- the reference notes. If it's in the site research data already, yes.

DR. ULSH: So, that one was -- this particular case was finding 122.1, 122.3 and 122.7?

CHAIRMAN GRIFFON: Correct.

MR. HINNEFELD: Yes. There are a couple of them on here that are -- there are a couple of findings that are resuspension findings. There are a couple that are ingestion findings.

DR. MAURO: Yes, and those are separate.

MR. HINNEFELD: They're generic. That's a generic thing.

CHAIRMAN GRIFFON: And then I'm going down a ways here to, what, 125.9?

MEMBER MUNN: Looks like it.

MR. FARVER: Let me clarify what's going on here. The employee's file contained incident slips where bioassay was in question, but those dates did not match the bioassays in the bioassay data. It raised the question why don't they match, or close?

CHAIRMAN GRIFFON: Any progress on that one?

MR. HINNEFELD: I don't think so. Do you know of anything?

DR. ULSH: I don't know of anything.

MR. SIEBERT: That's correct. There hasn't been anything on our side yet.

CHAIRMAN GRIFFON: Do you have any questions today, Scott, or any -- is it clear what the question is from SC&A?

MR. SIEBERT: Yes, yes. I think we know. There just hasn't been any motion forward.

CHAIRMAN GRIFFON: Okay, that's fine. Just making sure we have laid out the

problem adequately. All right, moving on. I'm editing the matrix, because I know if I don't do it now, it won't get done. 127.8 remains a NIOSH action item -- fission product dose from whole body counting data, when data is all or less than MDA. That's what I have.

MR. SIEBERT: This is still the usual discussion of OTIB-54 as it can pertain to whole body counts.

CHAIRMAN GRIFFON: Is this more of an OTIB-54 generic issue at this point?

MR. SIEBERT: I believe so.

CHAIRMAN GRIFFON: Yes, okay. I mean does it -- does -- I should ask like we always ask. Would the outcome affect this case? I mean is this -- I think we're talking --

DR. MAURO: Oh, you mean the PoC?

CHAIRMAN GRIFFON: Yes, as far as contributing to the overall outcome of the case, I think it's probably marginal error. I don't know, I should ask. Does anybody know

that before I close it out completely?

MR. HINNEFELD: I don't know.

DR. MAURO: Do we know the PoC? Do we have the case? Give us a second. As a rule, we're talking about the change in the mix of radionuclides, you're assuming that representative of the whole body count.

MR. HINNEFELD: Yes.

MEMBER MUNN: Yes.

DR. MAURO: Oh, yes, 46.9 is up there. The internal dose is not a big contributor though. So, in a funny sort of place.

MR. HINNEFELD: Yes.

DR. MAURO: We have a high PoC, but the internal dose is not the big player.

MR. HINNEFELD: What was the cancer? What was the --

MR. FARVER: Breast.

MR. HINNEFELD: Breast cancer. You won't get much to the breast from internal dose.

CHAIRMAN GRIFFON: Given the evidence that we shipped it to TIB-54 for discussion --

DR. MAURO: My intuition -- yes. I don't think this change in mix because of this discussion of OTIB-54 is going to really move the PoC too much because the contribution of internal is so small compared to externally.

MEMBER MUNN: Yes.

CHAIRMAN GRIFFON: Brant, did you have something?

DR. ULSH: Well, are we saying now that we're going to shift that over to the Procedures group?

CHAIRMAN GRIFFON: Yes.

DR. ULSH: Or close it here?

MEMBER MUNN: It's already happened.

CHAIRMAN GRIFFON: And the Procedures already have that anyway. So, it's closed on this matrix. Okay, 127.10, this is

the same case, and it's again internal dose --

MS. BEHLING: This is Kathy Behling. I'm sorry, I just joined you. I didn't get back on the line in time. And you're on 127.10?

MR. KATZ: Yes, Kathy.

MS. BEHLING: I'm sorry. I did look at this. In fact, I think this was an SC&A response that was needed. And in this particular case, I went back into the -- the EE's records, and the technical basis document, and NIOSH's calculations and response, and I do believe that they are indicating here that they used ruthenium-106 for their calculation, and that founds this particular case.

I do agree with them, after going back and really scrutinizing over all of these records again.

CHAIRMAN GRIFFON: Okay, I'll close that out then.

MR. SIEBERT: So, that was closing

out .10 as well?

CHAIRMAN GRIFFON: Yes.

MR. SIEBERT: Thank you.

CHAIRMAN GRIFFON: And .11, rust sample monitoring.

MS. BEHLING: I believe NIOSH was going to follow up on --

CHAIRMAN GRIFFON: Yes.

MS. BEHLING: -- potential radon exposure -- or radium exposure.

CHAIRMAN GRIFFON: Radium.

MS. BEHLING: Radium.

MR. HINNEFELD: I don't think we've got anything more.

CHAIRMAN GRIFFON: I think I recollect this case when we were -- possibly the individual could've been confused. It could've been a spirometery test or something. You know, something else other than a --

MR. HINNEFELD: Yes, something breath monitored.

CHAIRMAN GRIFFON: Right.

MR. HINNEFELD: A breath monitor for radium exposure is pretty uncommon.

CHAIRMAN GRIFFON: Right. I just wanted to verify that this site couldn't have had that kind of exposure, and then we could close it out.

MR. HINNEFELD: Right.

CHAIRMAN GRIFFON: Yes.

MR. SIEBERT: If I recall correctly, this is employment in basically like the `80s and `90s. So, that would be more surprising.

CHAIRMAN GRIFFON: Other than the later years too, yes. That would be surprising. What was the site again?

MR. SIEBERT: Hanford.

CHAIRMAN GRIFFON: Hanford. I mean if you could just pull the thread on that a little bit, there was no radon breath monitoring done at Hanford in those -- that time frame, then I think we can put this aside. Right, Doug?

MR. FARVER: Yes.

CHAIRMAN GRIFFON: Okay. So, we'll hold off for now.

MEMBER MUNN: It's probably more important with the --

MS. BEHLING: I think actually this case goes back to 1955 through `89. Hanford and PNNL.

MR. HINNEFELD: `55? That's back in the early --

MR. SIEBERT: Yes, you're right. I'm sorry. It goes through later on, but it does start early.

CHAIRMAN GRIFFON: Well, I guess the follow up is the same. Is there a source of exposure for this individual?

MEMBER MUNN: Well, the key really is how much of it --

CHAIRMAN GRIFFON: Well, yes. But if there was none, then that sort of negates any further follow up, right? All right, so it remains a NIOSH action item. I'll move to

129.5.

MS. BEHLING: 129.5 is again this again this fission product issue. And what we were questioning is this individual receives a whole body count, and NIOSH uses a radionuclide chooser spreadsheet, and selects the highest radionuclide -- the radionuclide that gives the highest dose, and we were just -- have been questioning for quite some time now if they're going to look into also assessing doses for other fission products that the individual might've been exposed to.

CHAIRMAN GRIFFON: Is there -- I think this is again referring back to TIB-54 Procedures Subcommittee, and thus the reason to keep it open here. Again, my question of how -- what's the PoC and the other --

MS. BEHLING: Okay, but I thought OTIB-54 mainly addresses urinalysis. Am I wrong on that?

CHAIRMAN GRIFFON: No, I thought Scott just said --

MR. SIEBERT: Yes. That's the outstanding thing we have discussing is whether it can be applied to whole body counting, and whether it should be.

MS. BEHLING: Well, it can be. It's just not written that way. I mean it gives ratios. And so, the ratios stand regardless of whether you're starting with: urinalysis or whole body count. But we just haven't taken the step yet of writing it. The primary concern was cesium-137 would be the nuclide. You'd probably want to key off of but that is often positive because of fallout levels.

And so, that would artificially elevate the other nuclides. And so, that's the issue that we need to deal with in applying it to whole body count. Okay, and I'm sorry if you had this discussion before and I didn't hear it.

CHAIRMAN GRIFFON: That's all right.

MS. BEHLING: But we didn't on this call.

CHAIRMAN GRIFFON: I think as the generic issue, it can be brought up. It can be further disused in Procedures, I believe.

MR. FARVER: Yes, PoC is 37 percent.

CHAIRMAN GRIFFON: Thirty-seven percent. What kind of a cancer?

MR. FARVER: Prostate-pancreatic.

CHAIRMAN GRIFFON: Okay. So, we'll defer this one to Wanda.

MEMBER MUNN: Now, if we can get TIB-54 closed in Procedures, are you going to pick up on that while you are sitting there Mark?

MR. HINNEFELD: I thought we're closing it.

CHAIRMAN GRIFFON: Once we defer - -

MR. HINNEFELD: Well, the rules for doing this reconstruction are far more

important than any specific individual dose reconstruction, except to the one person. Shift everything over there.

DR. MAURO: Well, let me ask you something. Let's say it turns out our review of OTIB-54 reveals some limitations. I'm not saying there are. In fact, if I recall, our review was fairly favorable. We didn't go into this business of the chest count or the urine count.

MR. HINNEFELD: Yes.

DR. MAURO: Well, let's say -- let's say something comes out of that, and everyone agrees, "Yes, we got to fix it." That's going to trigger a review of all these. So, I mean the PER is going to -- so, I mean in a funny sort of way, it could -- I mean if you close it here, it's going to open again when --

MR. HINNEFELD: If there's something that comes out of 54 review, then it'll be reopened again.

DR. MAURO: There's another layer of protection.

CHAIRMAN GRIFFON: Right, right. All right, 130.6 is the next one I have.

MR. FARVER: Brant, this is the file you sent and I tried opening it three or four times, and it kept telling me it's a zip file.

MEMBER MUNN: Yes, and I got a lot of ASCII.

MR. FARVER: Okay, so it's a zip file for you, too.

MEMBER MUNN: Yes.

MR. FARVER: Can you tell me what's in it?

MR. SIEBERT: I can walk you through this one.

MR. FARVER: Scott, I'll tell you my basic concern here is --

MR. SIEBERT: Yes, I know.

MR. FARVER: Okay.

MR. SIEBERT: You're thinking that

originally it was 46 rem, and then when we do all our reworks and responses and discussions, we were around 23 rem after adding the extra 3 rem for the fission product.

MR. FARVER: Right. I agree with the 3 rem. That's good.

MR. SIEBERT: Okay.

MR. FARVER: I just don't know how you got from 46 to 23.

MR. SIEBERT: Yes. The bottom line is the original assessment you guys were doing findings on was approximately 46 rem. Once we started looking at responses, we had already reworked the case by that point for I believe it was Super S plutonium, if I remember right.

But when it was reworked, it was determined that plutonium was not needed to be assessed and assigned in the claim. Now, the original assessment had it assigned, however it was all based on a single termination urine sample, and a single termination chest count.

And in normal processes, if we were doing a better estimate, as opposed to a huge overestimate, we would not be assigning plutonium based solely on a termination sample, especially this individual who worked in the D area and reactors.

So, tritium and fission products makes perfectly good sense. Plutonium does not. So, when we rework the claim, we assumed that that was more of a procedural termination sample, rather than exposure potential, which you guys are well aware that is not uncommon for us to deal with that.

DR. MAURO: And a negative result?

MR. SIEBERT: Correct. And once you pull -- that was about 25 rem of plutonium dose. It was in an original assessment that was not in further assessments because of that. When you throw that out, you're down around the 23 rem. That's where that 23 rem is coming from.

I did actually throw that back

into the assessment where we included the additional fission product, and put that additional plutonium in, just to see what our difference in PoC was, and the PoC stayed almost virtually the same. It went to 42.74 percent.

CHAIRMAN GRIFFON: So, it's still well below, yes.

MR. SIEBERT: No change in compensation decision.

MR. FARVER: So, you put the 25 back in, the plutonium back in?

MR. SIEBERT: Right. Just for seeing what the difference is for our purposes.

DR. ULSH: Just so we can discuss it.

MR. SIEBERT: Right.

MR. FARVER: And it didn't change the PoC?

DR. ULSH: Well, it didn't change the compensation.

MR. FARVER: Okay, it didn't change the PoC.

CHAIRMAN GRIFFON: It's still well below 2. It wasn't like it's 49.

MR. HINNEFELD: It was -- the 25 was in originally, and we added three additional. Is that right? By having the fission --

MR. SIEBERT: Yes. It didn't change the original PoC, which was based on the 46 rem.

DR. MAURO: So, even then it didn't change.

MR. FARVER: The original 3 rem would not change that, correct?

MR. SIEBERT: Correct.

MR. FARVER: I agree.

CHAIRMAN GRIFFON: As long as you're okay with the additional three, I think we're okay on that. The rationale for not including the plutonium sounds reasonable to me. And you couldn't open the document.

MR. SIEBERT: Are you using anything before Office 2007?

CHAIRMAN GRIFFON: Yes, because I could open it. So, it wasn't a problem on my end.

MR. SIEBERT: Yes, it's a .docx file. So, I may have to save those things in Office 97 through 2003 so everyone can use it. That's my fault.

MR. FARVER: I don't know. I went into my CVC account and tried to open it from there, and it just won't let me do it. It just told me it was a zip file.

MEMBER MUNN: Yes, and .docx sometimes works and sometimes doesn't on my system. I don't know why.

MR. SIEBERT: Call Bill Gates.

MR. FARVER: Sending him an email now.

CHAIRMAN GRIFFON: So, this one is completely closed. No referring to Wanda's group or anything?

MR. FARVER: No.

MR. KATZ: Sometimes with these kind of files, you have to save them first, and then open them.

MR. FARVER: I couldn't even save it.

MEMBER MUNN: I could save it, but I came up all ASCII.

CHAIRMAN GRIFFON: Okay, 131.4. Is this the one you have a response for, or no? No, that's 136. So, 131.4 remains a NIOSH action item: electron dose calculation.

MS. BEHLING: I believe in this case, we just didn't -- we couldn't reproduce their number, and we just -- we weren't sure. I think this is prior to OTIB-17, and we really weren't sure how they went about calculating the electron dose.

MR. HINNEFELD: We'll have to provide it then.

MEMBER MUNN: That's why it's still open.

CHAIRMAN GRIFFON: Okay, 131.6.

MS. BEHLING: This is again the same fission product question.

CHAIRMAN GRIFFON: Yes. Is there any difference on this one, Kathy? Or, is it the exact same kind of thing?

MS. BEHLING: Exact same thing.

CHAIRMAN GRIFFON: Okay, so we should defer again, I believe.

MS. BEHLING: Yes, right, the OTIB-54.

CHAIRMAN GRIFFON: Okay. This is not a borderline PoC or anything like that?

MS. BEHLING: Let me look. This is Savannah River, 46.4.

CHAIRMAN GRIFFON: What kind of cancer?

MS. BEHLING: Breast and kidney.

MR. HINNEFELD: Kidney could probably. Thorium, well, I won't swear there are any fission products --

CHAIRMAN GRIFFON: Do we have any

others? I'm just finding those right now. Well, I mean we have our --

MR. SIEBERT: Yes. Once again regardless sum up in a PER.

CHAIRMAN GRIFFON: Right. That's what I was just saying. We have our backdrop, which is the PER. I think we can still close it and refer to Procedures. I might put a note that -- well, I don't know if I want to put that note. Well, if it's modified -- yes, if anything comes of the review on procedures, then it's an action for the PER, right?

MEMBER MUNN: Should be.

CHAIRMAN GRIFFON: So, this won't be missed.

MEMBER MUNN: Can't see how.

CHAIRMAN GRIFFON: I don't see a problem with closing it. Does anyone else? Okay, then, it's closed. All right, 135.1.

MR. SIEBERT: I believe both 135.1 and .4 are in our house, and no action has been taken on them so far.

CHAIRMAN GRIFFON: All right. And 136.3, I think you sent something for that, right, Scott?

MR. SIEBERT: That's correct.

CHAIRMAN GRIFFON: Are you able to open that?

MR. FARVER: Yes.

MR. SIEBERT: Yes, that one I saved as a `97-2003 file.

MEMBER MUNN: Thank you very much.

MR. FARVER: The question I had was we had already determined that the bills matched the paper. That was down in the 41609 response, I believe.

MR. SIEBERT: Yes. After looking at the responses, I thought we had actually closed this out. But I redid the analysis to be sure.

CHAIRMAN GRIFFON: Okay.

MS. BEHLING: Is this a situation where you received more films or X-rays from the site?

MR. FARVER: That's what it looks like, according to the September response.

MR. SIEBERT: Yes, this is the issue that Rocky Flats -- we found that in the film folders, there were actually more X-rays for some claims than the paper record that they had sent us. And now, they are giving us all film -- they're going through all the film records instead of just the paper records.

In this specific case, the film records that they sent us was identical to the paper records that it was originally assessed against.

MR. FARVER: Okay.

MR. SIEBERT: So, this one was pretty much -- well, it should be closed out.

MR. FARVER: Should be closed.

CHAIRMAN GRIFFON: And you're in agreement with that, right?

MR. FARVER: Yes.

CHAIRMAN GRIFFON: Okay. All right, give me a second. 136.4?

MS. BEHLING: 136.4, this is one where we initially felt that NIOSH should've used a Type S absorption for their calculation for uranium. However, I did go back through all of Scott's files, and when you -- when you look at Type S versus Type M, and you plot it, and then compare it also to the lung count data, I do understand why the Type M was used, and that's more reasonable. So, I agree with their assessments.

CHAIRMAN GRIFFON: Okay. And .05.

MR. KATZ: Is four closed?

CHAIRMAN GRIFFON: Yes, four is closed. I'm sorry.

MS. BEHLING: Again, 136.5 is sort of a follow up on this Type S. But after reviewing things again, as I said, we do agree with NIOSH on this.

CHAIRMAN GRIFFON: Okay. What was the difference with the CATI? This talks about follow up on the CATI. Was there something specifically noted in the CATI that

--

MS. BEHLING: The individual in the CATI indicated that he was in a building that caught fire, and --

MR. FARVER: Between that and the TBD list, that same building has had depleted uranium and beryllium. You would suspect that the uranium would be Type S from the fire, but not a Type M.

MS. BEHLING: But as we said when we went back and looked at the bioassay data, and looked at the plots in the set, I do agree that the M is more appropriate.

CHAIRMAN GRIFFON: Okay, 137.6

MS. BEHLING: Okay, 137.6.

MR. SIEBERT: I believe all the 137's still stay in our house, and we just have not given responses on them yet. I believe that's correct. Stu?

MR. HINNEFELD: I don't recall. I don't know what the latest -- I'm not sure I'm looking at the latest matrix. Is SC&A on our

April 15th, 2009 response?

MEMBER MUNN: Well, they said in November they agreed with your determination on probability -- you were going to add the MDA. I was going to ask for the case file. It probably should've been included.

MR. SIEBERT: Yes, the first one is that we didn't -- I believe we didn't include the other IMBA runs to demonstrate that we ran everything.

MR. HINNEFELD: Yes.

MR. SIEBERT: And selected the one that was claimant favorable.

CHAIRMAN GRIFFON: Yes, I don't know that there's necessarily follow up on that, is there? It's just to show the worker -- or save all the runs or whatever.

DR. MAURO: This is the one that Kathy ran on her own --

MS. BEHLING: No.

DR. MAURO: I misunderstood then, Kathy.

MS. BEHLING: Yes, this is the Paducah case. This is different. Again, this is what Mark was saying. It's a show your work type of thing.

CHAIRMAN GRIFFON: For the first one, for 137.6. The other ones might be different.

DR. MAURO: Correct.

MS. BEHLING: The other one is different.

CHAIRMAN GRIFFON: Yes. So, let's -- for that one, I think we can close .6 out, right? If NIOSH is in agreement with that.

MR. SIEBERT: That's .4?

MEMBER MUNN: No, .6.

MR. SIEBERT: Oh, .6.

CHAIRMAN GRIFFON: I mean it sounds to me like NIOSH can see that, yes, we should've showed a different run from --

MR. SIEBERT: Correct.

MR. FARVER: And then they talk about --

CHAIRMAN GRIFFON: Yes.

MR. FARVER: -- procedure and things of that nature.

CHAIRMAN GRIFFON: I mean I'll just leave it there for now because the whole case is still open. But when we come back to it, I think the idea was that you're going to add these other draft runs into the case file. Right?

MR. HINNEFELD: Yes.

DR. ULSH: So, it means an action item for --

MR. HINNEFELD: Yes.

CHAIRMAN GRIFFON: And then like Scott said, the whole case 137 is still an open NIOSH action.

MS. BEHLING: I think 137.8, and I realize NIOSH -- it sounds like is not in a position maybe to address this today, but again, this might become one of those overarching issues with the skin contamination, and how to deal with potential

skin contamination, even though there weren't any records that indicated that this individual has skin contamination -- skin contamination.

There was a lot of other evidence that would suggest that, and again for consistency, we did have a case in the 8th set where just based on information that was provided in the CATI report, NIOSH did calculate a skin dose, assuming skin contamination. And in this particular case, they didn't.

The other thing I noticed about this was as I went back and looked at these records very closely, as there were a lot of bioassays that were marked as special. So, they indicate that there was some concern there, some problems that he had a lot of special -- just something to consider when we look at this case.

CHAIRMAN GRIFFON: Okay.

MR. SIEBERT: Yes, it does refer

back to .4, but .4 itself is closed, saying it's an overarching issue. So, I'm not sure what you want to do with it.

CHAIRMAN GRIFFON: Yes, I think we'll just see what you come back with with the overall case next time, and if we can close parts of it out, we'll do that. Does that make sense, Scott?

MR. SIEBERT: Yes, that's fine with me.

CHAIRMAN GRIFFON: All right. I think that brings us through the end of this matrix, actually. Even though we didn't -- we made some headway.

DR. MAURO: Six is off the table now, right? Sixth set is done?

CHAIRMAN GRIFFON: Yes.

DR. MAURO: So, that's a milestone. We have some residue on 7, but --

CHAIRMAN GRIFFON: Right.

MEMBER MUNN: And so, even though you still have 137.8 highlighted, you consider

that closed because it's an overarching issue, right?

CHAIRMAN GRIFFON: Well, I think I indicated that at least part of it is an overarching issue, but I wanted to see their runs first before we decided whether it was solely an overarching issue.

MR. HINNEFELD: I think we came in thinking we owed something.

CHAIRMAN GRIFFON: Yes, yes. I think we wanted to see the data first on the case, and then decide whether it was just an overarching issue, or if we need the results from this case, too. That's why I wrote it that way. All right.

DR. ULSH: So, we've reached the end of the seventh set. I mean there's a number of different criteria you could use to prioritize these things, but it sounds to me like the remaining open items from the seventh set are the highest priority.

CHAIRMAN GRIFFON: I would think

so because we've been on the seventh set for a while. Yes, yes.

DR. ULSH: Okay, we'll work towards that.

CHAIRMAN GRIFFON: Yes. If we want to take a minute just to get our bearings for the eighth set, if you wouldn't mind going to the eight set, let's open it up and see where we're at. Also, maybe we can lay out how we want to approach it because like for instance, I think Hans is on the line mainly for those three.

DR. MAURO: So, let's move those out.

CHAIRMAN GRIFFON: Let's figure out where we want to schedule those. So, the most recent matrix first.

DR. MAURO: Mark, I got a question. I know there are three of them. There's Bridgeport Brass, Harshaw --

MS. BEHLING: Huntington.

DR. MAURO: -- and Huntington.

Now, I know we went pretty far down the road on Harshaw because we provided an estimate to the responses, and then we, Hans, provided a response to those responses. So, I know Harshaw special Site Profile is very mature. I'm not quite sure where we are with regard to Bridgeport Brass or Huntington, whether or not there's been a response for those or not. I have to say I don't recall whether you've written a response to those the way you did for Harshaw.

CHAIRMAN GRIFFON: Well, let me ask this. For Harshaw, you said you provided a response to NIOSH's response.

DR. MAURO: Yes.

CHAIRMAN GRIFFON: Is NIOSH in a position to discuss that today, or --

DR. MAURO: Have you seen it?

CHAIRMAN GRIFFON: -- did you recently get it?

DR. MAURO: This goes back a ways. April. Well, I got it here. Hold on. Let

me see.

DR. ULSH: Scott, does this ring any bells while John is looking?

MR. SIEBERT: Harshaw stuff? Honestly, I don't know if that's in your guy's -- not off the top of my head. Sorry.

CHAIRMAN GRIFFON: John, I have a direct response to SC&A comments. That's the NIOSH --

MR. SIEBERT: Yes, and we responded to that.

CHAIRMAN GRIFFON: It's dated 11/5/09. Or no, maybe that's when I saved it. I shouldn't say that. When did you send it because I'm not sure I have that.

DR. MAURO: Let's see.

MEMBER MUNN: We got Harshaw.

DR. MAURO: Okay, April 2009. I have a report here called, "SC&A follow up, NIOSH's responses to Harshaw Site Profile review findings." That is my understanding of the last place we left it, where we -- you

folks provided us with formal responses to all of the issues we raised on our Harshaw mini Site Profile review, and then we reviewed that, and submitted a White Paper dated April 2009.

And Hans, I believe wrote that. I reviewed it again. Several issues have been resolved, as far as our report goes, but there are several still on the table. That might be a good place to start. If you folks don't have it -- Kathy, do you have the --

CHAIRMAN GRIFFON: It may not be worth starting if nobody has looked at it.

DR. MAURO: Yes, yes. But this isn't one we put to bed because there's some that have been resolved.

CHAIRMAN GRIFFON: Well, we may want to all look at it, though.

DR. MAURO: Okay.

CHAIRMAN GRIFFON: Maybe I can ask for one set. Can you bring it around again because I can't seem to find it.

MEMBER MUNN: I've got it.

DR. MAURO: You've got it? Great.

MEMBER MUNN: Yes, I've got it. And if I've got it, I know everybody else has it.

CHAIRMAN GRIFFON: Somewhere.

MEMBER MUNN: Let me show you where I got it from. It was sent on the date of 11/5.

CHAIRMAN GRIFFON: It is a Word or --

MEMBER MUNN: It is a zip file. It has three files in it. The first 100 cases, Bridgeport review follow up, and a while paper.

CHAIRMAN GRIFFON: White Paper Harshaw?

MEMBER MUNN: Harshaw TBD review.

CHAIRMAN GRIFFON: Okay, I do have that one.

DR. ULSH: Did you say 11/5?

MEMBER MUNN: 11/5/2009.

CHAIRMAN GRIFFON: April 2009 is dated on the paper.

MEMBER MUNN: The paper is dated April. It was sent to us in November.

MR. HINNEFELD: It may have been sent earlier too.

MEMBER MUNN: It probably was.

DR. ULSH: We might've gone through this exercise before.

CHAIRMAN GRIFFON: Okay, I do have it. It is a PDF document.

MEMBER MUNN: Right.

CHAIRMAN GRIFFON: I have it, but it's -- maybe we can start this.

DR. MAURO: We could tell our story.

MEMBER MUNN: It's only 28 pages long.

CHAIRMAN GRIFFON: Let's do that briefly, and then we'll break for lunch. Let's do that.

DR. MAURO: Understand the issues

where we are.

CHAIRMAN GRIFFON: All right.

DR. MAURO: In fact, if Hans is on the phone, I mean he's -- don't want to take it from Hans. He did all the hard work. Is Hans there?

DR. BEHLING: Yes, I'm here.

DR. MAURO: You want to tell your story? Or, do you want me to do it?

DR. BEHLING: Can you tell me exactly? I just picked up where we are here.

DR. MAURO: Okay, yes. Hans, I have in front of me a report that you drafted. I seem to recall you drafted. It's dated April 2009, where there -- there were a number -- it turns out that -- we had originally, when we reviewed the mini review of the Harshaw Site Profile, which was attached to Appendix 2 to the 8th set, we had a total of six findings in that original review.

Then -- and NIOSH then submitted -- on January 22nd, 2009, NIOSH submitted a

White Paper responding to our six comments, okay? And the bottom line is when they came back to us, we review that, and then we submitted this report dated April 9, 2009. In the 30-second sound bite, where we are is we consider findings 2 and 3 out of the 6 conditionally resolved. In other words, we feel the response is satisfactory.

DR. BEHLING: Yes.

DR. MAURO: Finding 6, we found a five-fold mathematical error. NIOSH looked at it and agrees, and they have to fix that. However, the issues that still remain where I guess we agree to disagree is findings numbers 1, 4 and 5.

DR. BEHLING: That's what I have too, John.

DR. MAURO: Yes. So, that's where I -- that's where I am right now. Do you want to talk about 1, 4, 5?

CHAIRMAN GRIFFON: That's a good summary, I think, at this point. Because

Brant, you guys aren't ready to discuss the response to the response. So, let's just take good notes on this on what we have to -- the main things I think you should focus on is where there's disagreement obviously. DR. MAURO: And that's 1, 4 and 5.

CHAIRMAN GRIFFON: I mean work group members may also look at those and think you closed, and not agree. But for now, we'll focus on this disagreement. So, 1, 4, and 5.

MEMBER MUNN: It really starts at section 3.

CHAIRMAN GRIFFON: Yes.

MEMBER MUNN: Page 3.

CHAIRMAN GRIFFON: Yes, and I see Brant making notes. So, for Harshaw, focus on 1, 4 and 5 for the next meeting. I'm not sure there's much reason to go into it, because we'll do the same thing next meeting, right?

DR. MAURO: Yes, we'll regroup again.

CHAIRMAN GRIFFON: Do you want to

start either the Bridgeport Brass or the Huntington?

DR. ULSH: Mark, before we do that, if I could just ask a quick question?

CHAIRMAN GRIFFON: Yes.

DR. ULSH: It sounds from John's summary like there's at least agreement between NIOSH and SC&A on 2, 3 and 6.

DR. MAURO: Right.

DR. ULSH: But is there agreement from the subcommittee on 2, 3 and 6?

CHAIRMAN GRIFFON: Well, that's what I'm saying. I don't think we've had a chance to do all of that. But I said at least for now, focus on where there's disagreement between SC&A and NIOSH.

DR. ULSH: Now I'm with you.

DR. MAURO: That doesn't mean --

CHAIRMAN GRIFFON: That doesn't mean that -- yes, you'll necessarily agree.

DR. ULSH: I understand.

CHAIRMAN GRIFFON: I'm not going

to try to sit here and read now. I think it's fair to say we -- let's just hold on for now because it's likely they'll be closed.

DR. ULSH: Okay, thanks.

CHAIRMAN GRIFFON: All right. Do you want to go to Bridgeport or Huntington?

DR. MAURO: I'm ready.

CHAIRMAN GRIFFON: Or, do you want to --

DR. MAURO: I understanding is we have never engaged those.

CHAIRMAN GRIFFON: I don't think so.

DR. MAURO: I'm not sure. And it turns out there are a number of findings, and I could -- we can buzz through them. There are only five on Bridgeport Brass, and I can give you the essence of each of them, if that helps.

CHAIRMAN GRIFFON: That would be great.

DR. MAURO: All right, finding 1.

Okay --

CHAIRMAN GRIFFON: Hold on. Let's just get that.

DR. MAURO: Okay, you want to find it?

CHAIRMAN GRIFFON: Let me find the document that you're talking about. Is this Bridgeport review follow up doc?

MEMBER MUNN: Right.

DR. MAURO: Yes.

MEMBER MUNN: Correct.

DR. MAURO: It should be attachment 1 to the 8th set.

CHAIRMAN GRIFFON: It's the White Paper, but it's not in a PDF form. Okay. Right, okay. Go ahead, John.

DR. MAURO: Okay, if you recall, the Bridgeport Brass is really two.

CHAIRMAN GRIFFON: One second. I'm sorry. Brant, do you guys have this document?

DR. ULSH: No, I'm sorry.

CHAIRMAN GRIFFON: I want to make sure NIOSH has these pieces before we --

DR. ULSH: This is SC&A's report on Bridgeport Brass dated April 2009?

CHAIRMAN GRIFFON: Yes.

DR. MAURO: Well, our Bridgeport Brass is in our -- delivered to the Board has a date of May 2008.

CHAIRMAN GRIFFON: No, I see a document prepared by SC&A, April 2009.

DR. BEHLING: John, the White Paper was April 2009.

CHAIRMAN GRIFFON: Yes.

DR. BEHLING: We're talking Bridgeport Brass now.

MEMBER MUNN: Yes, we are.

CHAIRMAN GRIFFON: Yes.

DR. MAURO: Okay. Now, looking at -- I'm looking at the attachment. I actually have the hard copy in front of me that I took out of my three-ring binder. And the front page, on the bottom of the front page, the

cover page, says, "May 2008." Let's see if the footnote says something different. No. I mean --

DR. BEHLING: John, I think we're really talking about the White Paper that I prepared that supplements the 2008 --

DR. MAURO: Oh, well, then you're ahead of me. I'm off base then, because I was working from the actual original mini Site Profile review that was attachment --

CHAIRMAN GRIFFON: Let me just get our bearings here. In the White Paper that Hans was talking about, on page 2, right before finding number 1, it says, "Under task 4, the Board directed SC&A to conduct a more comprehensive review of ORAUT-TKBS-30, SC&A issued its report entitled, `Review of Bridgeport Brass Technical Basis Document, Havens Lab and Adrian Plant,' to the Board's Subcommittee on Dose Reconstruction and NIOSH in May of 2008, as attachment 1 to the eighth set of the dose reconstruction audit reports."

"In our review, SC&A identified five findings, which are briefly summarized below." So, I think you went further into this.

DR. MAURO: I'm dated then. Hans, you got it. I'm -- I'm behind the time on this one. So, thanks for correcting that.

CHAIRMAN GRIFFON: Okay, so, Hans, if you could, give us an overview, maybe at least five findings.

DR. BEHLING: Yes. Contrary to what was stated earlier, we did review those. And I think we resolved a good number of the five. I think it's really finding number 2 that remains unresolved. And I think a couple of those were really Harry Chmelynski's issues.

DR. MAURO: Oh, the correlation issue?

DR. BEHLING: Yes.

DR. MAURO: Yes. I know it well. We could use Harry on the line to help.

CHAIRMAN GRIFFON: Maybe we could get him for after lunch.

MR. KATZ: He's here. He's here.

DR. ULSH: Okay, hold on. Findings 1 through 5, all of them except number 2 are resolved. Is that what you said?

MEMBER MUNN: Well, you can see that under paragraph 2.1. Finding 1, NIOSH agrees with the finding and will conduct --

DR. ULSH: Okay.

DR. BEHLING: I have -- just in my notes, I think we have conditionally resolved findings 1, 4 and 5. And I guess number 2 is the one that's an issue that Harry needs to discuss.

MEMBER MUNN: That was the only one that NIOSH rejected and --

CHAIRMAN GRIFFON: Yes, the only problem is that when you say -- I mean we have -- we have agreement. Here's the problem when you're -- this is kind of a mini-Site Profile question, but I'm looking at the

bottom of the matrix, and actually we did it. Hans is right. We did discuss this at one point, actually on 11/5/09. There's some highlighted things in the matrix.

And on finding 5, just for example, it says, "NIOSH agrees, and will modify the site matrix table 5.1." But we haven't heard how -- I'm not sure we've heard how NIOSH will modify the table.

MR. HINNEFELD: Yes, I don't believe we have.

CHAIRMAN GRIFFON: So, if this is like a mini site, I think we have to see that through, and understand what -- what are you going to do to it. So, there's several items down there. Maybe that's the place we start when we -- I think we might want to break for lunch, and come back and start at the bottom of the matrix, finding numbers 1, 2, 3, 4, 5 for Bridgeport Brass, supplement it with the White Paper that Hans is talking from, and discuss this a little further. Is that okay,

Hans?

DR. BEHLING: Yes.

CHAIRMAN GRIFFON: Can you join us at 1:00?

DR. BEHLING: Okay.

CHAIRMAN GRIFFON: All right, let's -- if it's okay with everyone, let's take our recess now, and reconvene at 1:00. We'll start with Bridgeport Brass, and then we'll do Huntington, and then we'll go back into the regular findings.

(Whereupon, the above-entitled matter went off the record at 11:52 a.m., and resumed at 1:13 p.m.)

MR. KATZ: Okay, so Dose Reconstruction Subcommittee, and we're reconvening after lunch. We're on the eighth set. Sorry for being a few minute late coming back. I think we'd like to pick up on the -- at the bottom of the matrix, or the end of the matrix, there's Bridgeport Brass findings, 1 through 5.

Maybe we can take our discussion from there, and as the White Paper pertains to that, I think we can discuss that. John?

DR. MAURO: Yes. So, you want to go through the Bridgeport Brass White Paper, and close out those five -- where we are? Then we can go through the cases. Or, do you want to go through the cases first? I misunderstood.

CHAIRMAN GRIFFON: Bridgeport Brass first.

DR. MAURO: Right. The attachment as opposed to any cases that are -- I don't know, there may be some Bridgeport Brass cases. Yes, in fact the first one is -- the first case in the 8th set is a Bridgeport Brass.

CHAIRMAN GRIFFON: Okay. I was looking at the attachments. So, let's start with that.

DR. MAURO: Yes.

CHAIRMAN GRIFFON: So, either you

or Hans.

DR. MAURO: Hans sounds like he's out in front of me on this because he has that update. Hans, are you there?

DR. BEHLING: I think for those who have either the White Paper on their computer, or in hard copy, I think we can just look at page 3. I think Mark had referenced before we had -- we broke for lunch.

I think on page 3, or section 2, that is entitled, "Draft Responses," I think we've come to closure on a number of these, and I think the first one that I believe still remain an open issue is the response to finding 2, that NIOSH has rejected. I think that really belongs to Harry Chmelynski. If he is on the line, I think Harry should comment on that.

CHAIRMAN GRIFFON: Hans, if you wouldn't mind, could you just start from number 1? Because I don't have any resolution in the matrix at this point for number 1.

DR. BEHLING: Okay.

CHAIRMAN GRIFFON: So, maybe we discussed it, but I didn't have it down.

DR. BEHLING: For number 1, the summary finding was that the Site Profile would benefit from additional analysis that demonstrate that the fault intake rates adopted in the exposure matrix are claim favorable for early operational time period in different job categories, and the NIOSH response to that was additional analysis of this finding is necessary, and will be provided upon completion.

So, I take that NIOSH is going to obviously provide some additional data for that.

CHAIRMAN GRIFFON: Okay, so it's not really closed. And you say down further on page 4, "Findings 1, 4 and 5 are conditionally resolved, pending data analysis by NIOSH that address those findings and meet the approval of the DR Subcommittee." So, I

think that -- from that standpoint, we need to see that analysis.

DR. MAURO: The key was the data seemed to be pretty rich internal, post-1960. Pre-1960, it's a lot more limited. And the question becomes can you use the richer data set for internal post-1960 for both Havens and Adrian, to reconstruct the earlier dates.

MR. HINNEFELD: Right.

DR. MAURO: I think that's where we go with that.

CHAIRMAN GRIFFON: And I'm assuming that NIOSH is just looking at -- I mean you don't have necessarily a response.

Okay. So, I'm just -- Hans, I'm not in disagreement with you. I'm just putting it --

DR. BEHLING: No, I'm sorry when I spoke to the effect that it might already be closed. I wasn't really aware if NIOSH had actually provided with the additional data that they had promised, and also the closure.

But as you just mentioned that's not the case.

CHAIRMAN GRIFFON: Yes, that's fine. Okay, so we can move onto finding number 2 if you want now.

DR. BEHLING: Is Harry on the line?

MR. CHMELYNSKI: Yes, I'm here, Hans.

DR. BEHLING: Okay, I guess this is yours, Harry.

MR. CHMELYNSKI: Okay, this started many years ago. I don't remember. But I was reading the technical basis document on page 48, for Bridgeport Brass. And it has two sentences, one referring to Adrian, and one referring to Havens.

And these sentences say that when the dose was simulated for the workers that the 26 two-week period doses were simulated using crystal ball and assuming correlation. And the same sentence is repeated again for

Havens on page 48.

And I was interested in that because when you do a crystal ball simulation, first you want -- you can specify the correlation, but right here it never tells you what the correlation is that they used. So, that raised my curiosity. And what I did was I reconstructed the simulation, and what I found was they didn't use any correlation.

What they did was they took 26 measurements, and they summed them up using the assumption that they were all independent. And that's -- and I could reproduce the numbers in the table, and the technical basis document using that assumption, that assuming correlation.

So, that's where this all started. The -- the answers differ by a factor of 2 when you do the simulations. The factor of 2 assuming 100 percent correlation, which I know is unreasonable, but it's the highest you can get, so it's an upper bound, and the answer

that was presented in the technical basis document was half of that. It's the one you get with you have no correlation.

And the response that NIOSH gave was essentially to repeat what I just said, although they never mentioned the word correlation. They said that we used 26 two-week measurements, and we added them up in the simulation, and this is the answer you get. And that's where, as far as I remember, it was left. I don't know if anyone has any more that has been said since then, but I'm not aware of it.

MR. HINNEFELD: No, I think we were next in line to owe something on this. I don't believe we added anything since we had it, since we got this -- this review. So, I don't know if anything additional was prepared. But think about this just a minute.

Remind me here again on the correlation, the correlation being that a particular individual is likely to be higher

in the population in general, as opposed to randomly distributed in the population of doses for a given read out period. Is that the correlation?

MR. CHMELYNSKI: Yes, from one read out period to another, if that worker is remaining in the same job, it's likely that he will remain relatively high or relatively low during the next reading period also.

MR. HINNEFELD: Okay, and the treatment of the data influences the distribution of the -- or the total distribution is later on then.

MR. CHMELYNSKI: Right.

MR. HINNEFELD: Okay, all right. I am a babe in the woods in statistics. I'm just trying to make sure I got an idea of the issue.

MR. CHMELYNSKI: And all I'm pointing out here is it was stated that the correlation was used, but we couldn't verify that it was. And indeed, it looks like none was used.

MR. HINNEFELD: Yes.

MR. CHMELYNSKI: So, that's where it's been since then, I think.

MR. HINNEFELD: Okay.

DR. ULSH: Is that pretty much the basis of the finding is the treatment of correlation? Is that the issue?

CHAIRMAN GRIFFON: Yes. Reluctantly, I'm pursuing this question, but do you have an opinion on whether a correlation should've been applied, or not?

MR. CHMELYNSKI: Yes. Personally, I believe that -- I have had some years working in a factory back when I was a young man, and generally, you worked at the same place day after day, week after week, maybe year after year.

CHAIRMAN GRIFFON: Yes.

MR. CHMELYNSKI: Luckily, I didn't have to stay there very long, but that's been my experience.

CHAIRMAN GRIFFON: Okay, so for

the data set too, you believe that it probably should have.

MR. HINNEFELD: I'd say that's probably not an unreasonable position, yes.

CHAIRMAN GRIFFON: Okay. All right, I think we have enough for now. NIOSH has to look at that, and give us further assessment on that. Go ahead onto finding 3, Hans.

DR. BEHLING: Yes. Finding 3, just for those who may not have the document in hand. Finding 3 dealt with exposures to localized parts of the body, such as the hands and forearm from non-penetrating radiation for some workers, which would possibly not be properly assessed by film badges worn on the chest. That was our finding.

And NIOSH's response to Finding 3 was, "In principle, NIOSH agrees with the basic concerns, but believes that the dose reconstructor will recognize the need for making necessary dose adjustments."

I guess that is perhaps not as obvious to SC&A as it is to NIOSH. And I think in our write up, we talked about the fact that these people may have handled uranium metal, and of course contact doses for doing so to -- to the hands might be as high as 230 milligrams per hour, and so forth, and would potentially not be necessarily documented by a film badge worn on the chest.

So, at this point, I'm not sure what NIOSH intends to do, if anything in raising that to a higher level of awareness.

CHAIRMAN GRIFFON: If you notice, in the matrix, there is a resolution. At least indicated something on 11/5/09, that NIOSH will check to see where/if the approach is outlined within NIOSH procedures. And I think someone said that possibly TIB-13 may address this issue.

So, I think you were going to check back to see if there was actually enough guidance out there for the dose reconstructor

to -- at least that seems -- based on what Hans said, that seems like what that's saying there. So, I think it would remain a NIOSH action item check.

MR. HINNEFELD: Yes, it is.

CHAIRMAN GRIFFON: Okay, if there's adequate procedures to give the dose reconstructor direction on how to proceed.

DR. MAURO: I'd like to add a little to that. Two things I want to report. NIOSH -- the strategy NIOSH has opted is to take two data of non-penetrating film badge readings, and pick off the upper 95^{th} percentile, and came up with something: the fault value as the surrogate, which I believe is 1.8 milligrams per hour.

There are two aspects to that we want to keep in mind. One is of course that value represents we believe uncorrelated data, because the comment Harry made about penetrating, but also non-penetrating. And second, we found that 1.8 milligrams per hour,

when you compare that to a contact skin dose of over 200 milligrams per hour, is a big difference.

So, by not taking into consideration the possibility of, you know, only use the added distance reading on a film badge, the person may very well handle material, even for a relatively short period of time.

So, it's not a small difference. It's a big difference. There was another point I wanted to bring up. It's during our one-on-one session when we had these meetings, one of the things that came up, which was unusual but we included, had to do with a particle settling -- when you're working in an environment where there's lot different particles, material settling on the skin, on the neck, around the ears, and whether or not you'd want to try to factor that into your dose.

Because the 1.8, you know, you got

particles of uranium. It may only be there for the day, because then you shower. But this is one of those places near Paducah where they had these kind of -- where there's evidence that airborne particles of uranium. A lot of these AWE facilities have that at issue, and I don't think we've ever really engaged that. You know, the direct deposition of particles on bear skin.

And I think in some cases, you may have looked at that. You see things like bar skin. In other cases, you haven't. I think that may be a generic issue that needs to be cut across the board, and how that can be dealt with. It's a big deal when it comes to skin dose.

DR. ULSH: Okay, is that a part of Finding 3?

DR. MAURO: It is part of Finding 3. Finding 3, if you -- I have the report in front of me. That's why I brought it up. It's mentioned in Finding 3.

DR. ULSH: Okay.

CHAIRMAN GRIFFON: And I know we at least raised this last meeting, because I can remember the discussion about it can be difficult to -- yes, especially if you don't know, it can be difficult to quantify.

DR. MAURO: We did some generic -- in another venue, we ran some calculations if you had different size particles, relatively small particles, of uranium deposit on skin. So, I mean this is -- you can -- in theory, one could argue if the situation exists, the only thing I'm not sure of -- let's say a person has skin cancer on the back of his hand, all right?

I'm not sure how you deal with this. Do you assume that, "All right, I'm going to reconstruct the dose through skin?" Okay, and the way you normally do it is using OTIB-17, which is based on a full over here. So, you come up with your number, and you got your dose, and you do your calculation.

But now you say, "Wait a minute. Wait a minute. At this site, it's not unusual that he's doing grinding, and he doesn't have gloves or whatever, that you can get some maybe on your face. And if the cancer is there now, what do you do?"

I assume that particle of uranium is what did it. That particle landed here, sat there for a day, delivered whatever dose that might be, and you reconstructed those -- that little spot. I'm not sure, and I owe it -- it's sort of like one of these problems that turn your brain into a knot. How do you deal with that? Do you assume that that cancer was due to that dust particle that went right there?

And I'm not -- and we really never engaged this conversation. How do you deal with that kind of problem. I'm not even sure how the risk coefficient for skin works.

DR. ULSH: Well, actually, that's an interesting point. When you said that, the

thing that I was thinking of was hands and face. I mean the skin background rate doesn't break it down to different areas of the body.

DR. MAURO: Yes, for good reason. For good reason. How does the risk coefficient work for skin cancer? And apparently, there's -- it's treated a very special way in Iraq, and quite frankly, I don't fully understand it. And it goes toward this issue. So, anyway, this has been troubling me for some time.

CHAIRMAN GRIFFON: Okay, now, what you just said, John, also reminds me that sometimes in the matrix we can lose sight of some of the details in the full report. You know?

DR. MAURO: Oh, yes.

CHAIRMAN GRIFFON: We often got to remind ourselves to go back to the full body of the report. Because I would've missed that one completely, yes.

DR. MAURO: That might be one of

the generic issues, because we discussed this before, and I think you may -- it may be in the box of generic issues.

CHAIRMAN GRIFFON: At least that part may be.

DR. MAURO: Yes, that part. Oh, yes, that part.

MEMBER MUNN: It really ought to be because we're not going to find any sites where you don't have exposed hands and skin.

DR. MAURO: Well, you don't always have particles settling. I mean no doubt a lot of these AWE's this -- these parts apply.

MEMBER MUNN: Anywhere there's any kind of machining, grinding or any kind of fuel activity going on.

DR. MAURO: Yes.

MEMBER MUNN: But then the big question then becomes but is it any different than if that person were my uncle, who had significant amounts of skin cancer all the time, and didn't have anything to do with --

DR. MAURO: It's like smoking.

MEMBER MUNN: Yes.

CHAIRMAN GRIFFON: All right, let's look at number 7 -- or is it 4. Did I skip over 4? Sorry.

DR. BEHLING: Are we on number 4?

CHAIRMAN GRIFFON: Yes.

DR. BEHLING: That is probably on par with Finding number 2. The -- the finding was that the Site Profile would benefit from a "leave one out," analysis of the data, and that again goes back to Harry. And there response, NIOSH's response, was that NIOSH agrees with the finding, will conduct additional analysis.

So, Harry and NIOSH I guess need to -- to weigh in on that issue.

MR. HINNEFELD: Yes, we don't have anymore to provide.

CHAIRMAN GRIFFON: Yes.

DR. MAURO: This is --

CHAIRMAN GRIFFON: I remember

this discussion.

DR. MAURO: This is an important and interesting idea because it goes to the coworker models. One of the biggest problems we always encounter is you got a group of work groups that have data. Let's say it's internal data. And then you're going to use that data set to build a coworker model, which is going to apply to other workers that may have had different jobs, or to other time periods.

And always the question is what makes you think that that group of workers uses surrogate in its narrow sense, for that site, those workers, to another group of workers? And Harry basically came up with an answer.

It says there are ways of dealing with that kind of problem, and it's called the leave one out approach. And Harry certainly could explain it, but I found it very valuable because what it does is it strengthens the

ability to build a coworker model that is compelling; that you considered, explicitly considered, yes, we're going to apply that data to perhaps a group of workers that might be a little different, and perhaps a little different time period at the same facility.

And the leave one out approach that Harry describes in some detail in the report is a way to get at that, and try for a more -- give you a stronger case that you can do what you're doing.

MR. HINNEFELD: Yes.

CHAIRMAN GRIFFON: Okay, do you need any further description of Harry's --

MR. HINNEFELD: No.

CHAIRMAN GRIFFON: He went over it last time.

MR. HINNEFELD: He went over it last time, and you go back to the original write up. Just like everything else, it's written pretty clear.

CHAIRMAN GRIFFON: Okay. So,

we'll look at number 5.

DR. BEHLING: Okay, number 5, I think we have a partial resolution and a partial outstanding issue. Number 5 deals with residual contamination levels and inhalation exposures. And in Table 5.1 in the write up TBD, there was a 100-fold error, which I believe NIOSH has fully acknowledged.

But in addition to that particular error, which I assume was perhaps a type error, I also have identified a couple issues that are discussed in section 3 of my White Paper, called, "A New Issue Concerning Finding Number 5." And one of the things that I identified was the original or the corrected value of approximately 7 picocuries per day as an inhalation was based on a resuspension factor of 1E minus 6.

And I raised that as an issue because in another document, I questioned that generic resuspension factor 1E minus 6, and concluded that for many facilities such as

this, perhaps an E minus 4 might be appropriate, and I support that in -- in -- on page 5, by talking about the reason number 2, for those of you who have it.

And if you look at the actual data, you find that the estimates that were derived in -- or the measurements that were taken in -- let me quickly read here. In 1976 were -- 15 years later were actually three times higher than the predicted dose, the predicted air concentration, in 1961, meaning that among other things, the decay factor of 1 percent per day was totally ignored in the value because it applies for all times around a time dependent air concentration.

And I believe NIOSH did acknowledge this, and promised to look into that.

MR. HINNEFELD: Yes, this is actually kind of part and partial of the general resuspension question that's out there. The generic resuspension.

DR. MAURO: Regarding the -- this goes to our TBD-6000. We've really made some very important progress in one regard. When all is said and done for the residual period, there were two big questions that we were struggling with, and it cuts across the board for every residual theory that is worked on at any site.

One is calculating how much material has deposited on the surface, and then once it's deposited on the surface, which of course will contribute to your direct radiation exposure, but also to resuspension, we originally took a position that, and this has an across the board affect, the way in which you calculate the amount of activity that is deposited on the surface, so you get your Becquerels per meter squared, was based on a model where you had a certain dust loading, and you had this .0075 meters per second.

I was always critical of that

because I felt that the stuff that's on surfaces is not from that. It's from these lost particles that are always flowing out. But you -- in our last TBD-6000 meeting, the -- - the -- we found that that works. That works when you allow a year's worth of that stuff falling to the surface, you get Becquerels per meters squared that is borne out by actual material measurements at many places we were in.

CHAIRMAN GRIFFON: This is the Adley report?

DR. MAURO: The Adley report, right, exactly. They had the plates laid out, and son of a gun. I have to say, I was surprised that it worked. But we still have -- - so, that issue at so many places has been resolved. But the resuspension factor that you folks continue to use: 10 to the minus 6 per meter, and that's not good enough. Five or 10 to minus 5, or maybe even higher 10 to minus 4 is much more appropriate, unless you

know for sure that the site is clean.

In other words, you know there's not contamination. But that's not the case. Most of the AWE sites we're dealing with some -- you know, there's activity on the sites. And people are moving around, kicking it up, and 10 to minus 6 doesn't work there.

MR. HINNEFELD: Okay. It's just part of the broader response that we owe.

DR. BEHLING: And then as I said, I'm not sure to what extent the other issue that I addressed on page 5 and 6 is really remedied by revising the resuspension factor. It could be, but the resuspension factor and the value that was cited there has to be a dynamic value because obviously we have to take into consideration the vacation factor, whatever that may be. And there, we also had previously mentioned our concern about a 1 percent removal rate as a generic value.

But in the particular cases we're talking about here, on page 5, I quote

directly from the document. And we ended up with a 1961 air concentration that is three-fold lower than the one in empirical value that we estimated in 1976.

So, obviously, we have a problem here with regard to the absence of a dictation value.

CHAIRMAN GRIFFON: Okay, I mean I'm not sure on this one whether it just falls on the generic issue yet, or if it's still a question as it pertains to this particular site.

MR. HINNEFELD: Yes. We already owe several --

CHAIRMAN GRIFFON: Yes.

MR. HINNEFELD: So, I mean if we --

CHAIRMAN GRIFFON: I'll just keep it on here for you now.

DR. MAURO: In general, a lot of the work that we're doing now was done before OTIB-70. OTIB-70 is -- whereby you know the

story.

MR. HINNEFELD: Right.

DR. MAURO: There is a lot of granularity to OTIB-70. There's one particular strategy that you've adopted in there that I think is -- solves an awful lot of hills regarding residual period. And if -- and if that approach is used, which we talked about on the phone, the details, it's the perfect solution to just so many of these residual questions.

Rather than going to the flush route measurements that were taken in 1978, 1980, and assuming that represents the airborne and dust -- for the entire residual period, go -- go to the end of the operations period. Take a look early in the residual period. See what you got there, and let that start it, and then let it drop down to the period, and there's a solution. It's a universal fix.

CHAIRMAN GRIFFON: Can I ask --

we're going to Finding number 6, and that speaks directly to the resuspension of -- is that different than number 5 that we're talking about?

MEMBER MUNN: Are we back on the matrix?

CHAIRMAN GRIFFON: Yes.

MEMBER MUNN: Okay, I'm not there.

CHAIRMAN GRIFFON: Maybe if it's just broken out.

MEMBER MUNN: The original --

CHAIRMAN GRIFFON: That's the second part of 5 or something. I don't know.

MEMBER MUNN: The original attachment matrix, or our matrix? The matrix you're working on --

CHAIRMAN GRIFFON: It's the summary -- it's the matrix with the attachment that says at the tail end of it --

MR. HINNEFELD: I don't see a Finding 6.

CHAIRMAN GRIFFON: Attachment 1.

MEMBER MUNN: I have attachment 1, but I only have five findings.

CHAIRMAN GRIFFON: I don't know if you're working from -- what I might've done is taken that second part of 5 and made it a separate finding. It's a new 5, because I think Hans was calling it, "New finding related to 5." And I might've put it in the matrix as number 6, because it's a separate finding.

DR. MAURO: So, on to 5. My understanding of the original 5 was this is a 100-fold -- I lost track here.

DR. BEHLING: Yes, that's correct, John. I think NIOSH acknowledged that 100-fold error.

DR. MAURO: On the second half of that now, let's call it 5A or whatever.

CHAIRMAN GRIFFON: I called it 6. That's where the confusion --

DR. MAURO: And -- and --

CHAIRMAN GRIFFON: And that would

be the resuspension factor.

DR. MAURO: Yes, and Hans, could you give it to us again, the essence of this?

DR. BEHLING: Yes. The essence is that if you apply the 1E minus 62 suspension factor, which was used to derive the air concentration for 1961, you end up with one picocuries per cubic meter, but then there was an empirical measurement 15 years later, that has it 3 picocuries per cubic meter, and of course you have not only a three-fold difference between what was assumed for 1961 based on the resuspension value that is basically an assumption, and an empirical measurement taken 15 years later, which is three times higher, but you also -- that discrepancy between one versus three, and being separated by 15 years doesn't even account for the depletion values.

So, you realize that you have to come to the conclusion that the resuspension factor 1E minus 6 may be off by several orders

of magnitude to make those two values match. Am I --

DR. MAURO: I got it. In fact, what we really have is the marriage of two --

DR. BEHLING: Yes.

DR. MAURO: One generic, and one applicable to this particular problem.

DR. BEHLING: Right. The use of 1E minus 6 is -- I think here you have empirical data that suggests that the 1E minus 6 resuspension factor cannot be correct because you have an air measurement 15 years later that suggests the value that is three times higher, without even considering the depletion rate.

But NIOSH's use of 1 percent per day, if you were to apply that, you would probably end up with a resuspension factor that instead of 1E minus 6 would be 1,000-fold or even greater.

CHAIRMAN GRIFFON: And this is exactly where, in the resolution I have now,

it's kind of come together. I think that factor of 100 thing is resolved. I think NIOSH agreed with that, and then this is like the 5A. In the resolution, we say, "Global issue regarding the use of the resuspension factor, and NIOSH will follow up on the use of the site specific information to derive a site specific resuspension factor."

So, I think that's the two parts you were talking about. One is the generic, and one is site specific. So, that is in this current matrix. It's the one that I emailed. People aren't working from the same one.

DR. MAURO: You could almost think of the example as it applies to this problem as a demonstration that that basic strategy was adopted really doesn't hold up. And it's one of those places where we actually have data that shows the 10 to the minus 6 doesn't work, the 1 percent per day doesn't work. It seems like real world, didn't work here.

CHAIRMAN GRIFFON: So, for

purposes of our matrix here, going back to the matrix for the attachment, I'm showing that the one -- for Finding 5, I'm showing that NIOSH agrees and will modify site matrix table 5.1. That's the factor --

DR. MAURO: That's the 100 --

CHAIRMAN GRIFFON: And then I'm calling the next one 5A, because I think that's easier to correlate back to the White Paper, instead of calling it 6. And that's the resuspension factor, and the site specific and generic. And especially for this -- for our purposes here, I think you need to look into the site specific one. We had all these generic issues that we are going to have to send down the line, but at least address that site specific question that Hans is outlining. Does that make sense?

All right, then we are onto -- well, I'd like to go to the final set, the main Site Profile.

DR. MAURO: Huntington?

CHAIRMAN GRIFFON: This is Huntington, right? Yes.

DR. MAURO: That's the last one. I don't think we've ever engaged that one at all. I'm assuming this is unlike the last two, where we did have a chance to discuss. Did we ever discuss Huntington? I don't have it. I guess that's a question for everyone. Do you recall? Is that in your matrix? Were there some responses? I don't have -- I don't have it if there are.

It turns out in our report, we had 11 comments. No, 12 comments. I don't know if we've ever talked about those before.

MR. HINNEFELD: I don't know that we've had any conversations. I'm trying to recall. I know that that document has been revised. I think it was sent for review. Maybe not. I know there was an early on dose reconstruction.

DR. MAURO: Oh, yes. We've discussed this --

MR. HINNEFELD: And there has been -- and there has been some stuff on that. To me, it hasn't been done -- let me see what I can find.

CHAIRMAN GRIFFON: So, where do we stand with Huntington? Are you going to --

DR. MAURO: I could give you the 30 seconds --

CHAIRMAN GRIFFON: Yes.

DR. MAURO: -- of where the issues are, and you guys could -- there's 12 of them, but we could buzz through them very quickly.

CHAIRMAN GRIFFON: All right, let's go through Huntington, and then I'm going to ask to go back through Harshaw because I found Harshaw on the matrix.

DR. MAURO: Do you want to --

CHAIRMAN GRIFFON: And I just want to review that because I looked --

DR. MAURO: Do you want us to go back?

CHAIRMAN GRIFFON: Before we just

said Harshaw 1, 4 and 5, I told Brant the focus should be there. But then when I'm looking back, Finding 2 in Harshaw, my resolution says NIOSH should further assess the data. So, I want to go back through those, but do Huntington first.

DR. MAURO: Okay. I'm looking at our Huntington report, and I have the summary in front of me. I don't know if everyone has it, but I'll -- I'll boil it down.

MEMBER MUNN: Do you have a clue as to what page --

DR. MAURO: Well, it's part of the 8th set, and it's attachment 3 to the 8th set of dose reconstructions, if that helps any.

CHAIRMAN GRIFFON: So, it's on the tail end of the matrix?

DR. MAURO: The end of the -- yes.

CHAIRMAN GRIFFON: Like page 60 I'm showing, but that could vary.

MEMBER MUNN: Go ahead.

DR. MAURO: Okay, I'm going to

group them a little bit to make things go quicker. The first two comments have to do with when -- when this was done, this work was developed. The data that was used I believe all came from Oak Ridge Gas Distribution Plant. In other words -- let me back up a little bit.

What the Huntington Pilot Plant did was it received nickel barriers, diffusion barriers, from Oak Ridge Gaseous Diffusion Plant, shifted to Huntington, where they processed those barriers to separate out the enriched uranium because there was plenty of uranium sort of embedded in this permeable barrier that was used as part of the enrichment process.

And they would separate out the enriched uranium, and return it back in again for use because there was a lot of valuable material. Now, the -- so, therefore, the whole process was, "Okay, let's reconstruct the doses to workers who were involved in

receiving these barriers, and processing them to separate out the enriched uranium."

Now, the first comment -- the first two comments we have really go toward the only -- the information that was used and the amount of material that was processed was based on looking at the records of Oak Ridge Gaseous Diffusion Plant. So, I'm looking at the records of the Oak Ridge Gaseous Diffusion Plant, and what was shipped from there, barriers from there, to Huntington Pilot Plant.

The first question we have is we believe that both Portsmouth and Paducah also sent barriers there for processing, which changes the throughput. To the degree which that might or might not affect the Dose Reconstruction Matrix? Perhaps not, and perhaps it does.

So, I guess 1 and 2 go toward the document. I guess 1 really goes to -- gives us a little bit more of the story of what they

did, and where they received their material from, and how much and why do you know that. And second, what about Paducah and Portsmouth, in addition to Oak Ridge.

So, 1 and 2 are sort of like coupled. I want to hear more about the story, and is a richer story, and whether or not it may have some bearing on the exposure matrix. It may not. It may turn out the way in which you've done it doesn't really change, the throughput doesn't change anything. It's hard to say, but that's the first -- those two coupled issues, 1 and 2. Simple as that. I'd like to hear a little bit more about that, and whether you think it might change anything if you factor in the others.

CHAIRMAN GRIFFON: John, do you have evidence that the material went from Paducah and Portsmouth, or are you just saying --

DR. MAURO: We have -- no.

CHAIRMAN GRIFFON: Okay.

DR. MAURO: In the write up, we have information that shows that we believe, but it may not change anything.

CHAIRMAN GRIFFON: Right, I understand. I just wondered if that was hypothetical, or if you have --

DR. MAURO: Well, I'd have to go look at the wording.

CHAIRMAN GRIFFON: That's fine.

DR. MAURO: Yes.

MEMBER MUNN: You have some reason to believe that this happened.

DR. MAURO: We have some reason to believe that they were because --

MEMBER MUNN: Whether it's hard data or not.

DR. MAURO: Yes.

CHAIRMAN GRIFFON: Yes.

DR. MAURO: And even if they did, the -- and if it didn't, it didn't. If it did, whether or not it could have an affect on your exposure matrix.

CHAIRMAN GRIFFON: Got you. Okay.

DR. MAURO: Number 3, Number 3 is one that could have a pretty significant affect on your exposure matrix for internal exposure. The way in which the internal dose is calculated is knowledge of the dust loading of nickel in the air.

Think of it like this. The reason there's airborne radioactivity at this facility is nickel, with it's associated enriched uranium, becomes airborne. And there's lot of measurements made at this facility, where they measured the number of milligrams per cubic meter of nickel with airborne dust loading of nickel in the air.

They know the specific activity of how much uranium is associated with the nickel. So, now you know how many milligrams of uranium there is in the air, and what happens is that the -- when you look at the data of the measurements made, you have it as a function of time.

Okay, now, it turns out that they used all the data from early in operations to later in operations to come up with the average dust level of nickel in milligrams per cubic meter. Now, it turns out the time period that this applies to is really the earlier years, and you look at the data and find out the dust loading was much higher in the early years.

Our recommendation was that rather than use the overall average dust loading that was experienced over the entire life of the facility, which turns out to be 0.05 milligrams per cubic meter, nickel, you probably want to use the dust loading that is applicable to the time period of interest of this site profile, where it's 0.2 milligrams per cubic meter, which is four times higher.

So, our finding is that you probably want to increase potential internal exposure from uranium by a factor of 4 because -- for that reason. That's what number 3 is.

So, in other words, the universe of numbers that you use to derive the dust loading included recent data, and old data.

The recent data really doesn't apply to this. It's the old data that applies to this dose reconstruction because it's Site Profiled, and if you do that, the dust loadings were higher in the earlier years. So, there you go. That's the nature of the finding. Now, you go and take a look at that.

MEMBER MUNN: And we know it was higher in the earlier years because we have readings?

DR. MAURO: we have readings. We actually have it by date, and it's in the report. The measurements made by date, and we point out where the break point is, and this break point is the time period you should be using. Not the later ones. Okay, and it makes a four-fold difference. And you can take a look. It's all laid out. Take a look at it and see if you agree.

The next one, item number 4: The dust loading that is -- once you come to your dust load, milligrams or whatever number you decide you're going to use, that's the general air sample. And we all know that general air samples are different than breathing zone samples, and I don't think you have breathing zone samples here.

So, there may be a need for an adjustment factor to go from general air -- underestimate by several fold. This is certainly something that should be aired out.

Now, it may turn out the nature of the operations here is -- you see, this is the difference between breathing zone and general air samples.

MEMBER MUNN: Which do you prefer.

DR. MAURO: Yes, that's right. Now, you see, this whole business in IRCP Publication 3575 where they make a distinction between breathing zone and air samples: that experience occurs mainly because very often

the dust that's being generate is the workers working with these machines something, and the dust that is over here is a lot different than what the air sampler over there is reading. And you see some big differences.

The nature of the work here may not be like that, and it may turn out the general air sample is a pretty good measure of the breathing zone sample. I don't know the answer to that.

MEMBER MUNN: Or higher.

DR. MAURO: I would say I don't know. I don't know. But I think it needs to be looked at is all I'm saying, and that could have an affect. The case needs to be made wide so it's okay to use general air samples, as opposed to maybe -- we have in the past, by the way, when we ran into this problem; there is a lot of literature on the difference between general air and breathing zone. And so, there are adjustments that could be made that might counter that.

But all of a sudden, we're talking some big changes, though. Because if you do apply the factor of 4, the difference because of the nickel dust loading for the older years, and then you also apply another factor of whatever for -- now we're talking maybe a factor of 10 there. Could be as much as a factor of 10. We're talking some pretty big changes in the internal dose.

Let me keep going. We're not done yet. We're on number 5 now. No, 5 confounds it further. You worked with the median numbers, the dust levels. I always argue that -- let's say you had good numbers for nickel loading, and you accounted for breathing zone. Okay, let's say you thought it was all taken care of.

Next question is once you have that information, do you use -- do you use the median of all that data, or do you use some high end value? All I could say is that the difference between -- the number -- the

difference between using a median and the, let's say, 95th percentile is another factor. If you want to be claiming favorable, you really want to use the median of your airborne dust level.

I will add though that -- so, I mean I just laid out three layers, and that was number 5 I just mentioned. You know, whether you use the median or the 95th. Three days of places where, in theory, you could substantially increase the doses, internal doses.

On the other hand, NIOSH elected to use -- assumed the uranium that's in that nickel was 39 percent enriched uranium, when in fact the evidence shows that it really was only 4 percent enriched uranium.

Now, the reason that's important is because everything is on a milligram basis. So, I mean if it was a DPM basis, then it would make no difference. So, in that regard, you're extremely conservative by a factor of 4

at the bottom of 39, ten-fold. So, there are some more setting effects here. So, if you were to go with the 4 percent, you got the idea. I wanted to make sure that's laid out. Let me keep going.

CHAIRMAN GRIFFON: Why did NIOSH think 39 percent as opposed to --

DR. MAURO: I think that was the highest number that was ever handed, but the overall average over the long period turned out to be closer to 4. And they will be claim favorable --

CHAIRMAN GRIFFON: The 39 number came from --

DR. MAURO: Yes, 39 came from -- that was the highest. Now, this has some play -- I forgot to mention --

CHAIRMAN GRIFFON: At case 25, is that right?

DR. MAURO: I think it was the Oak Ridge Gas Diffusion plant was --

CHAIRMAN GRIFFON: Case 125?

DR. MAURO: Okay, there you go.

CHAIRMAN GRIFFON: But not at Paducah or Portsmouth, by the way.

DR. MAURO: Is that right?

CHAIRMAN GRIFFON: Portsmouth could run higher.

DR. MAURO: Is that right?

MR. HINNEFELD: Portsmouth could run.

CHAIRMAN GRIFFON: Yes, not Paducah.

MR. HINNEFELD: I don't think Paducah.

DR. MAURO: Okay, well, then -- so, therefore there's commingling of issues here.

CHAIRMAN GRIFFON: Yes, yes. Okay, but on average, I don't think any of them would approach the 39.

MR. HINNEFELD: Yes. I hear more and more as we have done revisions. So, it would be a matter for us to go through those

revisions. Hopefully, we've addressed these findings.

CHAIRMAN GRIFFON: You're right. At the end of the day, these pluses and minuses may balance out, but they should be sorted out.

DR. MAURO: Oh, number 6. Six is a separate one. I don't think you explicitly addressed ingestion. I'll be the first to agree that ingestion there isn't important. It should be the dose, but most of the other Site Profiles talk about ingestion pathway. I don't think this one did at 6. Can we go onto 7? Number 7 goes to surface --

CHAIRMAN GRIFFON: Can I just back you up on 6 again?

DR. MAURO: Sure.

CHAIRMAN GRIFFON: I'm catching up. What was 6?

DR. MAURO: I'll read it. "The TBD does not mention possible exposure through ingestion pathways, nor justify why they may

not be significant compared to the inhalation pathway."

The second half of that phrase I know that the ingestion pathway is never significant compared to the inhalation pathway. But you always do include the ingestion pathway in all your exposure matrices. Apparently, you didn't do that.

CHAIRMAN GRIFFON: Okay.

DR. MAURO: Seven: This goes toward residual exposures. Basically use -- the TBD uses 1980 post decontamination radiation survey data to estimate exposures from surface contamination during plant operations, which was 18 years earlier.

So, I'm sort of like troubled by why would you -- there's no reason to believe that host decontamination measurements would be meaningful to -- to reconstruct doses 18 years earlier during operations. So, there's a disconnect here that you may want to take a look at.

I would make a suggestion, by the way. I don't think you had -- I don't think there was any data on surface contamination levels during operations at this facility, or maybe even immediately thereafter, of nickel, milligrams per square meter of nickel on surfaces.

Our suggestion would be to either run your deposition model, using the dust loading that's appropriate to determine what the build up might've been on surfaces, or go to other -- other nickel melt refining operations where you may have data, rather than using the 1981 post DND data to try to come up with it. There's probably better places to go to get good numbers, or at least claim favorable.

Bird cages, number 8. One of the things they did there was they -- once they separated out the enriched uranium, they put them into these little containers that -- I forget what size they were, and put them into

bird cages. These were little devices to keep the critical mass under control, and there were these arrays. I think five -- five by five, two deep.

So, one, two, three, four, five. You know, five by five, and then there were maybe 25 of them altogether. And you came up with, "Okay, that has a potential to cause external exposure." And I think you made some calculations to determine, okay, if a person were to stand one foot away or one meter away from these bird cages what his internal exposure might be from this enriched uranium that's sitting in there.

We ran the numbers, and we got different values that you do. A big higher. Not that much higher. Maybe a factor of five-fold higher, but we got higher numbers than you did. And it's all laid out. All our calculations are in our report.

So, for some reason, we're getting numbers different. It may be because our

experience has been that often we use microshield or MCNP. Microshield and MCNP get the same numbers when you're dealing with strong gammas. Well, when you're dealing with weak gammas weak photons, MCNP gives you much better results than microshield.

So, if you ran microshield, maybe that's what happened here. Something goes wrong with microshield when the energy is alone.

MEMBER MUNN: What do you mean?

DR. MAURO: The microshield underestimates the doses from low energy photons. It does not model it well, yes. But it does -- but MCNP does, and we've seen it time and again.

CHAIRMAN GRIFFON: Is that acknowledged in the literature in any way?

DR. MAURO: Yes.

CHAIRMAN GRIFFON: Yes? Okay.

DR. MAURO: Yes.

CHAIRMAN GRIFFON: I mean it's not

just your impression?

DR. MAURO: No, no. This is our acknowledgment in the literature. Not only that, we've run it so many times, and we see it all the time. It's a flow out with microshield low Ns and photons, X-rays. It falls apart.

CHAIRMAN GRIFFON: Okay.

DR. MAURO: Nine: let me take a look at that and see where we are. Well, I don't know if this really applies here. We -- we reviewed a case in number 9. We talk about an actual couple of cases that we reviewed as part of the DR process. You know, we're on the DR Subcommittee, and we noticed that there's a three-fold difference between the dose reconstructions for medical exposures that are -- were performed in those cases, and those that are in OTIB-6. You know, Katherine's OTIB on X-rays.

I think that you might be higher. Let me see. Three times greater. So, there

-- you're coming in -- now, there may be good reason for it. It may turn out that the -- for the type of X-rays that were being delivered at that time, the workers at Huntington were different than what's the default values in OTIB-6, and there's good reason why you're coming in with three times higher X-ray doses for specific cases than what OTIB-6 would give you.

But anyway, I was just bringing that to your attention. This case was maybe overestimated.

Move onto number 10. Oh, number 10 is related to that, and this is a recurring thing that when it comes to AWE facilities, you usually don't assume photofluorography examinations. If it's pre-1970, the OTIB-6 records recommends that you assume photofluorographic examinations did occur once a year to DOE facilities, specifically.

When it comes to AWE facilities, we're not -- we noticed that you typically

don't do that. You typically assume there's a chest X-ray, and not a -- and that turns out of be a big difference. We're talking about anywhere from tens of milligrams per examination versus rems for examination.

There may be good reason. I don't know if we talked about this before, but there may be good reason why you don't automatically assume the AWE's using photofluorography, where in DOE, we did. But right now, you'll see a recurring theme in every one of our dose reconstruction audits for AWE facilities when you use just chest X-rays for reconstructing medical exposure.

We always say, "Why didn't you also assume photofluorographic?" And usually, they're silent on that. Now, there may be good reason for it.

MR. HINNEFELD: The thought process is that at DOE facilities where there's -- there was this need to go through a large number of people with some regularity,

and they would have these high volume photofluorography machines, which were done -- they were done to generate high volume things, and if an AWE even had a chest screening program, they were likely done at a local clinic, which would be like they shoot a chest X-ray. That's the reason why the defaults are different for the two. I can't really defend it anymore than having said that.

DR. MAURO: Well, I mean there's -- at least -- because we haven't heard that before.

MR. SIEBERT: That's correct. I talked to Elise about this, and we are planning on updating some of our documentation to clearly state that. There actually is a back door discussion of it in OTIB-52, construction workers, that gives that general direction, but we are updating some documentation to get that a little more clearly defined.

DR. MAURO: Okay. We're almost

done. Number 11: The TBD estimates residual contamination exposure in the standby period. The standby period is post operations but before decontamination. But you use the 1980 host decontamination measurement data for dose reconstruction.

It goes -- it's sort of similar to what you talked about earlier. It doesn't seem like you should be using post decontamination measurements to reconstruct doses pre-decontamination, even though they're both during the post operation period. Okay?

Last, number 12: Same thing. I don't know what the distinction is, quite frankly. We're talking about the same subject here.

MEMBER MUNN: Make that 3 that are really talking about the same thing.

DR. MAURO: It looks that way, doesn't it?

MEMBER MUNN: Yes. The bottom line question is why use the post

decontamination data --

DR. MAURO: I got to say off the top of my head, I can't tell the distinction why. I recall 111 and 112. They're both external, and they both deal with residual decontamination. There might be some distinction here, but I have to go read the main body to see why we made these two separate ones. But we may want to take a look at that when we're working through that.

MEMBER MUNN: Well, Finding 12 is certainly more detailed than the others.

DR. MAURO: Sure is.

MEMBER MUNN: It looks like it's the same issue three times.

DR. MAURO: Yes.

CHAIRMAN GRIFFON: And I was going to ask if Hans or Kathy would know that.

DR. MAURO: Don't know.

CHAIRMAN GRIFFON: Did you work with -- I mean this is more yours, right?

DR. MAURO: Yes. I mean if I -- I

got to tell you, if I went back and read the -- read -- I did read all this before, but it also gets to be a blur after a while. The difference between 11 and 12, there is -- there is some -- I'm looking at the summary on 12, and there's a lot more granularity to it: comparing tables and inconsistencies.

MEMBER MUNN: Yes.

DR. MAURO: So, I think maybe 11 could be looked at more as a general overarching concern regarding the use of post decontamination data for pre decontamination time periods. And then 12 actually gets into some specifics regarding tables that are in the report that don't seem to make sense, and it's related to that issue. And that's it for Huntington Pilot Plant.

MEMBER MUNN: You might as well throw Finding 7 in there when you're looking at that, if that really is the same. The same issues, but --

DR. MAURO: You know what happened

when we reviewed this document?

CHAIRMAN GRIFFON: Yes.

DR. MAURO: I remember I just would go chapter by chapter, and say, "Oh, here's this chapter. What do I have to say about this?" Sometimes, later chapters are related to the previous, and you'll have the same thing come out again.

CHAIRMAN GRIFFON: Yes.

MEMBER MUNN: They could be combined.

CHAIRMAN GRIFFON: Okay, at this point, I wanted to go back to Harshaw and the matrix. Let's just run down these. I don't want to discuss them in any depth, but before we had said that based on Hans' discussion and the -- the SC&A White Paper that the main areas of difference between SC&A and NIOSH were findings 1, 4 and 5. I believe I wrote that down correctly.

When I looked back at the matrix, I wasn't quite -- wasn't quite in agreement,

and I just wanted to step through this one at a time, just to make sure we have some consistency. So, this might be a little redundant from what we just talked about, but I just want to make sure I have the most current version of the matrix.

So, Attachment 2 is in the matrix, Attachment 2, Finding 1 for Harshaw. And this says NIOSH will further consider SC&A concerns. I have that updated from -- as of today.

Then for Attachment 2, Finding number 2, apparently based on what Hans said, SC&A is sort of in agreement now, but this matrix says as of 11/5/09, we were asking NIOSH to further consider the data set. Is it reasonable and representative? Now, is that --

DR. BEHLING: Mark are you talking to me, or --

CHAIRMAN GRIFFON: Yes, I'm asking in general.

DR. BEHLING: This goes back to what we had -- I had erroneously misstated in -- in the previous case. We came to some conclusion, but not the remedy itself. I think on behalf of Finding 1, it was not resolved, but for Finding 2, we had at least verbally come to some agreement as -- or on my hand written scribbles on the margin, I put down, "Conditionally resolved."

But I think again it depends on the response that NIOSH will provide the Board, or the Board -- that will determine whether or not we can close it out.

CHAIRMAN GRIFFON: Okay, so, I think it still stands as a -- I don't think the priorities will change for -- Brant, just to clarify for you. I mean I think the main sort of I guess points of contention are still going to be 1, 4, and 5, but number 2, I think w still did want to see this assessment at least the subcommittee did, as to whether coworker model is representative, right?

Covers all the workers of concern.

MEMBER MUNN: Yes.

CHAIRMAN GRIFFON: Right. So, I'll leave it on the matrix as an open item. But as far as prioritizing, I would focus more on the -- the 1, 4 and 5 still. Does that make sense to everyone?

MEMBER MUNN: Yes.

CHAIRMAN GRIFFON: And that goes for 3 as well. I can see that. Now some of this comes back to me. SC&A agrees Mark Griffon wants more time. I know I put a place holder in there somewhere. And this is a radon surrogate model. So, obviously, we've been batting a few of these around over the last several years. Months, years.

MEMBER MUNN: Years.

CHAIRMAN GRIFFON: Okay, years. Time flies when we're having fun. You know?

MEMBER MUNN: I know. You're just enjoying yourself too much.

CHAIRMAN GRIFFON: Yes, exactly.

So, again -- and -- and this -- let me refresh my memory. This is a surrogate -- complete surrogate set, right, that you're using for the radon model? Does anyone know?

MR. HINNEFELD: Let me think a minute.

DR. BEHLING: It's from the Mallinckrodt data.

MEMBER MUNN: We used the Mallinckrodt data.

CHAIRMAN GRIFFON: Mallinckrodt?

MR. HINNEFELD: That would be a surrogate.

CHAIRMAN GRIFFON: Which I wonder if that even meets the criteria. I don't know. So, I think I want to look at that.

MR. HINNEFELD: I don't know what they had at Harshaw. I don't know what their feed material was.

MEMBER MUNN: Both of them.

MR. HINNEFELD: Well, it's going to get worse.

CHAIRMAN GRIFFON: Yes, that's what I was just going to say.

MR. HINNEFELD: I forget what their material was. Harshaw was a mess, but you know that.

CHAIRMAN GRIFFON: I mean Jim Neton constantly uses Mallinckrodt.

MR. HINNEFELD: Yes. Well, I mean if you go back to surrogate, the things that determine that kind of thing into play is the generation rate. So, how much radium was in the stuff you were handling -- and so those are things that come into play, and whether Mallinckrodt is sufficiently similar, or -- yes, that's a good question.

DR. BEHLING: I don't know if anybody has the document, but the issue really centers around something that was resolved at least in our minds. By using Mallinckrodt data, they excluded certain data that were considered inappropriate, namely the scale house data that had some very high radon

levels.

And so, the justification on the part of NIOSH was that because they were facing processing, those high values could be excluded because that -- that issue was not appropriate here for Harshaw, and we did not process.

MR. HINNEFELD: So, in other words, it's essentially surrogate use. Not really the model use.

DR. BEHLING: Yes, surrogate use.

DR. MAURO: Yes, I remember. We originally were concerned that you left -- there was certain data left out when you -- Mallinckrodt, but later on you justified --

CHAIRMAN GRIFFON: So, there was good rationale. We didn't have -- they didn't use Congo at Harshaw, but they did at Mallinckrodt.

DR. BEHLING: And all we actually asked was to remedy the TBD itself by rewriting it, and I think in my -- my White

Paper, I had quoted the original statement, and suggested a revised statement that addresses that particular issue.

MR. HINNEFELD: Okay.

DR. BEHLING: But otherwise, I think we're in agreement.

DR. ULSH: So, Mark, does this one -- number 3, does this stand that SC&A and NIOSH are in tentative agreement, but you would like --

CHAIRMAN GRIFFON: Yes. I think it stands that --

DR. ULSH: Yes.

MEMBER MUNN: I think it's very clear the way it's written.

CHAIRMAN GRIFFON: All right, then.

DR. ULSH: And that relates specifically to the appropriateness of using Mallinckrodt surrogate data at Harshaw. Okay.

CHAIRMAN GRIFFON: Then Finding 4, I just have a very brief NIOSH follow up on

this. And this is one, Hans, that you still -- 4 and 5 you still have outstanding concerns.

DR. BEHLING: Yes. I think really what it comes down to is the complexity by which Tables B-5 through B-8 are to be used for doing dose assessments.

CHAIRMAN GRIFFON: Can you repeat that, Hans? I'm sorry.

DR. BEHLING: Well, the recommendation for the dose reconstruction is to make use of Tables B-5 through B-8, and they're quite complex and very difficult to work with. And I personally believe that some clarification needs to be made in making them more functionally usable.

CHAIRMAN GRIFFON: Okay.

DR. ULSH: So, what were those tables again, please?

CHAIRMAN GRIFFON: 3-5 and 3-8.

DR. BEHLING: B, B as in Boy-5.

CHAIRMAN GRIFFON: Oh, B-5.

DR. BEHLING: Yes, through B-8.

And there's a lot of subjective interpretation in the use of those tables, and again, I have certain sympathy for the dose reconstructors if they are being asked to actually make use of those tables. I think they could stand some clarification or simplification to make it less subjective.

CHAIRMAN GRIFFON: Okay. Thank you, Hans. Now, let's see. I have Finding 5, but then I also have 6 and 7 on this matrix. You only go up to 5 apparently. Anyway, let's do 5 first here. This I deriving beta photon doses from the film badges. I guess this still remains a NIOSH action, right?

DR. MAURO: Is this the betas, the packaging and the tenuation?

CHAIRMAN GRIFFON: I don't know. Ask Hans.

DR. BEHLING: Yes, I'm trying to catch up here myself to refresh my memory here.

DR. MAURO: I think it had to do

with calibrating the film badges, and the fact that the --

DR. BEHLING: That's correct. Yes, John, go ahead.

DR. MAURO: I'm recollecting the packaging was such that you might have shielded out more of the betas than you thought, and I'm not sure about soft X-rays.

CHAIRMAN GRIFFON: Yes, it does say, "Follow up on the adequacy of the beta dosimetry calibration at the site."

DR. MAURO: And that has to do with the -- we currently looked at the kinds of film badges that were used, and the -- I guess we really got into the details of this thing, and it looked like they were unusual in that they shielded out more beta than we thought.

In other words, it was not -- the adjustment factors for a tenuation of the betas were not taken into consideration for this particular type of film badge.

MEMBER MUNN: How significant are the --

DR. MAURO: I don't know.

CHAIRMAN GRIFFON: And then here's where, John, we have a couple more in the matrix that are not -- I think you -- I don't know if you only went through five in the White Paper, but there is a sixth here, and actually, this says, "NIOSH agrees and will modify the said matrix. NIOSH needs to review it's calculations of inhalation intakes of Type S range throughout the bioassay data. We believe the important numbers are low by about a factor of 5."

This is a question of the intakes derived from the urinalysis.

DR. MAURO: Yes, I think. My notes say they agree, and they were going to fix that.

CHAIRMAN GRIFFON: Yes, it says, "NIOSH agrees, and will modify the site matrix." So, I think that was closed, but we

need -- I guess we need to see the numbers if we're going to see the modification. But at least in abeyance, I guess to use the Procedures Work Group terminology.

DR. ULSH: Okay, I got behind. Sorry. Tell me that again real quick, Mark.

CHAIRMAN GRIFFON: It was a question of -- there was a question of the intakes derived from urinalysis data?

DR. ULSH: Okay, and this is number --

CHAIRMAN GRIFFON: It's table -- Finding number 6.

DR. ULSH: Okay, got you.

CHAIRMAN GRIFFON: And NIOSH had agreed at the previous meeting, the 11/5/09 meeting.

DR. ULSH: Got it. Thanks.

CHAIRMAN GRIFFON: And then the last one I have is the -- Finding 7 is the Monday morning sampling, which --

DR. BEHLING: Yes, that was

actually identified as a new finding in section 3.2 of the White Paper, and again, we talked about this one on many other instances where the Monday morning versus Friday afternoon prove to be obviously some very different values. And in viewing several Site Profiles, the values in the case here, I quote a ten-fold, and other documents were similar assessments made between Friday and Monday morning.

The difference is less drastic, but still it leaves a factor of 2 to 3. So, that's an issue that was brought up as a new finding in the White Paper.

MEMBER MUNN: For all of those discussions we've had about this issue and procedure, do you have site specific about --

DR. MAURO: It does sound like something we talked about in the procedures. And it really comes home to a roost here because they deal with Type F, S and F at Harshaw.

MEMBER MUNN: I thought --

DR. MAURO: And if you were doing the Monday-Friday problem, you got a real problem with F.

MEMBER MUNN: I thought -- well, that's why I asked the question. Was all that discussion that we had only site specific? Because we were --

DR. MAURO: We did. It just came back to me.

DR. BEHLING: Yes.

DR. MAURO: What happened was this: there was a generic issue.

CHAIRMAN GRIFFON: It's not so much the Monday/Friday thing either. It's the two days off.

DR. MAURO: Yes.

CHAIRMAN GRIFFON: We got hung up on the Monday analysis.

DR. MAURO: Yes. And where we left it is NIOSH's argument was, "No, no, no, no." We have lots of evidence, and this

might've been from another site. This actually might've been like a Y-12 thing or something.

CHAIRMAN GRIFFON: Yes.

DR. MAURO: I don't know, but --

MEMBER MUNN: That's why I was asking the question. I think it was --

DR. MAURO: Yes, we did talk about it, and the place where I remember is, "Well, no, we have lots of records that show people have their bioassay taken on Tuesday, Wednesday, Thursday, Friday, and it wasn't just the Monday/Friday thing."

MEMBER MUNN: No.

DR. MAURO: And then we look into that, and I remember Bob Barton saying, "Well," and here's where things get a little fuzzy. There was still the two day hiatus. Person may have taken Monday and Tuesday off, and went back to work on Wednesday. So, you still had the hiatus. And I think we left it that we agreed to disagree. They -- there was

a time period where everyone agreed the Monday/Friday was real.

But then later on as time went on, they may have gotten away from that.

MR. HINNEFELD: What I acknowledged was, when I started working with the uranium plant in the early `80s or the mid `80s, a sample that was taken with less than two days off was considered suspect because of the interpretation that was used at the time kind of figured more sampling that quickly after exposure.

DR. MAURO: Right.

MR. HINNEFELD: But where I worked, the capacity was such that you couldn't collect all your samples after people had two days off. So, you collected everyday, and you would have reinvestigation levels. And so, if you got an early sample and you reinvestigate, you would get a later sample, or you would get a two-day off sample. Something like that.

So, that's what we did where I worked. Now, I don't know about all uranium plants, what they did.

CHAIRMAN GRIFFON: And it is kind of a generic issue, but I think we have discussed it on -- because we have to sort of look at --

DR. MAURO: Well, you could almost -- as far as a site that's mostly S --

DR. BEHLING: John and Mark, I think the real question that NIOSH needs to answer is how does IREP deal with that particular data input when you have urine data that you don't identify as either -- excuse me, as either being a Monday or a Friday sample, and -- and if it turns out that you're -- you're --

CHAIRMAN GRIFFON: Or upper end. Yes, okay, I was going to say.

DR. BEHLING: If it turns out that IMBA interprets all samples as end of day, or end of a work day sample, when in fact it was

a two-day hiatus, then it's obviously going to misinterpret the actual body burden. I think that's the real crux of the question.

MS. BRACKETT: This is Liz Brackett. IMBA assumes a constant chronic intake when you -- when you run a chronic exposure. So, it doesn't have the ability, unless you put in five days a week. You know, unless you keep putting in multiple intake periods, it assumes constant chronic over 24 hours a day, seven days a week.

We did do some calculation on what it would be if it were five days a week, and two day's break. And in fact, Type S, as in the longest, retained. If gives you the least problem. There's only a factor of 1.2 that -- that you'd be off for a constant chronic intake.

DR. MAURO: F as in Frank?

MS. BRACKETT: S as in Sam.

DR. MAURO: Okay.

MS. BRACKETT: F as in Frank that

the adjusting factor is 2.9. That's the largest one.

CHAIRMAN GRIFFON: Do you have that analysis? That might be useful for -- to put into this discussion.

MS. BRACKETT: Yes.

MR. HINNEFELD: We may have it.

DR. MAURO: We did it also, but I remember F had a factor of 10, or 3. M was 3, F was 10.

MR. HINNEFELD: When we discussed this, and this was in our Y-12 discussion -- I'm sure this was in the Y-12 discussion. I don't think it was Fernald. It was Y-12. I think it was a Y-12 discussion. We talked about it, and at that time, we identified that we had different numbers than you guys.

We've never gone back to resolve that. "How come we got one number and you got another?" That would be something we could do, and we could pull out those files that we ran. "Here's what we did. This is how come we

think the number is this." I mean we can do that.

CHAIRMAN GRIFFON: I think that might be useful, if you can talk to Liz and --

MR. HINNEFELD: Yes, I mean the magnitude question: does it fix the original question, which was --

CHAIRMAN GRIFFON: Right, right.

DR. MAURO: And another on the -- that started to come back is the reality is the intakes are not chronic. The intakes are episodic that occur. So, though it's modeled as it was uniform, the reality in the real world is that --

CHAIRMAN GRIFFON: You're smoothing.

DR. MAURO: Yes. And then the question becomes, "Okay, so, if the intake was on a Monday, or maybe another one on Wednesday, and then you took a sample on Friday, or you took your sample on Monday," in other words, I think that the argument was

being made that the concerns that we raised are buffered by the fact that the reality of the current situation is that it is not a chronic situation. It's really erratic. And it's really not trackable, so you have to make simplifying assumption.

The question is are the simplifying assumptions claim favorable?

DR. BEHLING: John, I think they would be because throughout the -- the various time periods when this was done, sometimes at the end of the shift, sometimes with two day hiatus, that was recognized by the AEC, and they came across with strong recommendations as to implement a two-day hiatus in order to put -- to standardize this whole protocol.

Now, if -- if IMBA does not take that into consideration, then perhaps at least a Type F; you may be off by at least a factor of 3, as Liz Brackett has just mentioned.

MS. BRACKETT: Well, one thing to remember is that if you're doing missed dose,

for example, this wouldn't apply for positive results. But missed dose, the dose reconstructor only used the last sample result. So, it would only make a difference as to whether that one result that is used to do the calculation was collected after a few days period of time off.

So, that's something that would have to be looked at. It's very specific to the case. But we do have calculations, and I agree we do need to figure out why the difference. I think it might be because you come to some equilibrium after a while, and I think if you looked at just one week, if you looked at five days versus seven days, I think in that one week, the factors probably would be larger.

Then, as you went out in time a year or two years, it's going to come down to a smaller difference, and I believe that's where our values come in is assuming it's been a relatively lengthy chronic intake, as

opposed to a one-week one. I'm not certain, but that would be my guess.

DR. BEHLING: Yes. And I agree, Liz, because obviously if you have a very large sizeable body burden that contributes to the urine excretion after a certain number of years of employment, the difference between an end of shift or two day hiatus would be mitigated by that larger body burden.

MS. BRACKETT: Right.

CHAIRMAN GRIFFON: Okay. I mean the best I can capture that is that NIOSH will be -- provide their analysis files for us, and we'll move the description along that way. There might still be a site specific question of whether there's any indication that this type of sampling was prevalent at the site.

But I mean the other option may be in the absence of knowledge is there a way to correct for it? Or, I've done a favorable correction factor or whatever.

MR. HINNEFELD: I just comment

with respect to -- Hans made a point, and I think this -- I don't remember this specifically, but it sounds like it could've very well been ADC said, "Hey, you guys maybe should use two day off samples." I think that's what Hans said.

CHAIRMAN GRIFFON: Right.

MR. HINNEFELD: If your lab can't do that, if you don't have the capacity in your lab to do that, you still wouldn't do it. You would collect samples when you could take them. You'd consider them screening. And if you have a reinvestigation level -- reinvestigation level, you would make sure you collected a two-day off sample stat.

DR. ULSH: Okay, I have down that we're going to provide the analyses that Liz referred to, and that might speak to why SC&A and NIOSH have different numbers. But my understanding that that analyses wouldn't address the larger issue of this time off --

MR. HINNEFELD: I think that we

came in here owing a response.

CHAIRMAN GRIFFON: Right, right.

MR. HINNEFELD: So, we still owe that response.

MEMBER MUNN: And because this keeps coming up again and again in different venues, it's the same issue, the same problem, and we have the same people who are going to have to address it one way or another. It is feasible to ask that we put together not an extensive but a brief White Paper that addresses these primary issues that do seem to come up again and again? First at one place and then another.

If we -- is it feasible? I'm not asking for an action item. I just am asking the question.

MR. HINNEFELD: I don't know, but I think the proper vehicle to do that would be in our response that we already owe on Finding number 6 or 7, or whatever it is. Seven.

MEMBER MUNN: I agree.

MR. HINNEFELD: And if --

MEMBER MUNN: I'm just asking.

MR. HINNEFELD: And rather that just write a few lines here, we could write a White Paper and provide it in that response. I think that could take place, if we can do that. I'll have to go back and --

MEMBER MUNN: Yes, yes. And it would -- I know it would certainly be simpler if we had a single focal point for addressing the question.

MR. HINNEFELD: Yes.

DR. MAURO: Not to stretch it out, but it seems to me this is really a play, and it's F - we're dealing with UF6.

CHAIRMAN GRIFFON: Right.

DR. MAURO: You're not dealing with UF6. Even if you're dealing with M, and there's a protracted exposure to M, you're going to build up a body burden, and the difference between Monday and Friday because of the protractor build up is not going to

really change things that much.

So, the antennae should go up when we have a site where people have been working with F, and there are sites like that, Harshaw being one of them. I know that they -- there are a couple of them that their whole job was to convert from UF4 to UF6.

MEMBER MUNN: Yes.

DR. MAURO: And there are people whose job was to work with the UF6 when I guess it evaporates off.

MEMBER MUNN: Yes.

CHAIRMAN GRIFFON: Okay, I think we're at a good break point. Take ten minutes. We're through the three mini Site Profiles, for lack of a better word. I think we'll step back into the matrix and sort of plug away for a little while.

(Whereupon, the above-entitled matter went off the record at 2:43 p.m., and resumed at 2:56 p.m.)

MR. KATZ: Okay, this is the Dose

Reconstruction Subcommittee. We're getting started back up again.

CHAIRMAN GRIFFON: All right, I'm impressed that five people are still on the line hanging. Anyway, we're going to go for about one more hour here, and we're not going to get through the eighth matrix, but I figure we could continue our progress on the 8th matrix.

I just asked NIOSH this, but Scott, are you on the line?

MR. SIEBERT: I am.

CHAIRMAN GRIFFON: I'm assuming that -- and Steve said he doesn't think that you had any responses to some of the early -- we went up to 155 in the matrix, and I don't know if you had forwarded any response from NIOSH to us. I don't think I've seen any, but I just wanted to check.

MR. SIEBERT: That would be the beginning of the 8th set, right?

CHAIRMAN GRIFFON: Yes.

MR. SIEBERT: Let me check. I'm pretty sure there have not been.

CHAIRMAN GRIFFON: Okay.

MR. SIEBERT: I'd have to check to be sure, but I'm -- off the top of my head, I'd say probably you are correct.

CHAIRMAN GRIFFON: Okay, that's fine. That's fine. So, what we'll assume is that everything highlighted in my matrix is still an open action up until 156. And then I just wanted to take -- instead of starting over again and rehashing those ones we've been through already, let's take the first cut through from 156 on.

And so, that would start with Finding 156.1. Maybe we can do the same approach. Have Doug sort of give an overview of the finding, and then just so NIOSH has an idea.

DR. MAURO: While Doug is looking for that, could I make three requests?

CHAIRMAN GRIFFON: Three?

DR. MAURO: One-on-one for the 13th set we are -- I'm sorry the 12th set. The 12th set of dose reconstruction audits reviews are in the pipeline, and ready -- we're not far away from being ready to do our one-on-ones. I just want to alert. Maybe you could alert the Board at the 31st meeting.

CHAIRMAN GRIFFON: Yes. Did we get team assignments? That would be up to the Chair.

DR. MAURO: No. I wanted to remind.

CHAIRMAN GRIFFON: I'll take that as an --

DR. MAURO: Number two: for the May meeting, we're ready for the 13th set of 30. In other words, the next set of 30; by May we should be pretty well cleared of our 47 we're moving out right now, and we're ready for a new set of 30.

CHAIRMAN GRIFFON: So, we should start our selection?

DR. MAURO: And finally, a troublesome problem: PERs. We delivered a procedure -- and the reason I'm bringing this up here is because there's a crossover between the procedure and the DR Subcommittee. We have submitted to the board a while back our procedure for reviewing PERs. It never was formally reviewed by the Procedure Subcommittee, and approved and recommended or whatever to the Board.

As a result, we sort of have been in limbo in terms of getting new PER reviews. We really can't move forward with new PER reviews without our PER procedure being approved. Does that seem to make sense?

Now, the way to do that is we did deliver, though, a PER review on PER-12. But -- and the report went out. It's in the hands of everyone. But the problem is the last part of that review is to review some selected cases.

We recommend that -- I believe

Hans recommended at least seven, maybe 11 cases, to represent the complete cross section of all the different kinds of things that need to be looked at from PER 12, and the question becomes is that -- the selection of those cases, is that a Procedure selection, or is that a DR Subcommittee --

CHAIRMAN GRIFFON: I thought we said the DR Subcommittee.

DR. MAURO: Okay. So, then we --

CHAIRMAN GRIFFON: But I -- I'm not sure.

DR. MAURO: That's another thing we need to know, but right now that's sitting in limbo, and we'd sure like to get to work on that.

CHAIRMAN GRIFFON: Do you recall, Wanda, what --

MEMBER MUNN: We did not reach that decision actually.

CHAIRMAN GRIFFON: Right.

MEMBER MUNN: But the purpose of

the time that we have set aside for PERs tomorrow is specifically to identify what we have to do, who is going to do it, and how we're going to do it.

CHAIRMAN GRIFFON: That's fine. We'll discuss it tomorrow.

MR. KATZ: The overall procedure, including that issue.

CHAIRMAN GRIFFON: Can I ask one thing though? Didn't you -- when you were describing the PERs, you first said that you couldn't do any reviews until you got the approval on the procedure. And then you said you did one.

DR. MAURO: Yes. What happened is we started our reviews. In fact, the first thing we did was we wrote the procedure, and then implemented it. So, we reviewed PER-12, and simultaneously delivered to you what we believe to be a good procedure to the review PERs. So, we actually did one using our draft procedures.

CHAIRMAN GRIFFON: Okay.

DR. MAURO: But the reality is, and it was unintentional, to see what really works.

CHAIRMAN GRIFFON: Okay.

DR. MAURO: Like we always do.

CHAIRMAN GRIFFON: That's fine.

DR. MAURO: But now we're at the point where we hold off until you guys are happy with the procedure.

CHAIRMAN GRIFFON: So, the short answer is we'll discuss it tomorrow at length?

DR. MAURO: Okay.

MEMBER MUNN: The short answer is I hope we resolve it tomorrow. That was my intention.

CHAIRMAN GRIFFON: Resolve, not discuss.

MR. KATZ: To recommend to the Board?

MEMBER MUNN: Yes.

MR. KATZ: And you could be

recommending at the end of the month.

MEMBER MUNN: Hopefully.

CHAIRMAN GRIFFON: Okay.

DR. MAURO: Thank you.

CHAIRMAN GRIFFON: Now, back to 156.1. Can you tell us the site when you start, too?

MR. FARVER: Savannah River Site.

CHAIRMAN GRIFFON: All right.

MR. FARVER: Worker was a laborer. Worker worked at several facilities including 773A, 200F, 221 FB line, and the finding has to do with work location. Failed to properly address all work locations, documented records. Really this talks more about neutron exposure.

MEMBER MUNN: Yes.

CHAIRMAN GRIFFON: Yes. Was it a neutron area? Is that the kind of question --

MR. FARVER: Yes. They do a good summary in their response. Basically, the concern was they used 200 F area which uses a

representative facility in 1998 and `99.

The employee was monitored for neutrons in 1998 and `99, and all zeros. Really, this comes back to 156.5, where it talks about failure to explain/account for missed neutron dose.

CHAIRMAN GRIFFON: Okay, so they overlap. MR. FARVER: Really, if you close one you close the other.

CHAIRMAN GRIFFON: Well, the question is -- I don't know if you had time to review their response enough to make a --

MR. FARVER: Yes. First, I disagree with revision 1 TLD, revision 2 TLDs; beta gamma and also separate neutron dosimetry. Because if you look back at the records, it's a separate dosimeter number -- and it's issued for 1998, cycle 11 and 12. It's November-December. Whereas the other dosimeters were -- it looks like 1, 4, 7, 10 and then approximately a monthly one in 11 and 12.

And for those years, according to the TBD, the beta gamma was issued quarterly, and the neutron issued monthly, and it was two separate dosimeters, beginning in 1995. This goes back to the original finding down there on -- on this neutron dose, missed neutron exposure, when he obviously was monitored for neutrons --

CHAIRMAN GRIFFON: And I wonder if this -- I'm looking at 156.2, and it looks like this is a compensable case. I wonder if that's why they sort of didn't dig any further. I don't know.

MR. FARVER: Well, they didn't know it was compensable at the time.

CHAIRMAN GRIFFON: Sure.

MR. FARVER: Are we going to talk about the PoC later on?

CHAIRMAN GRIFFON: Okay.

MR. FARVER: NIOSH determined a PoC of 40 -- high 40's. I don't remember exactly what it was.

CHAIRMAN GRIFFON: Okay, so, it was a closed site.

MR. FARVER: But then DOL came up with a different number, pushed it over 50. That finding has -- and that has to do with apparently two different versions of the IREP software.

CHAIRMAN GRIFFON: Okay.

MR. FARVER: So, they didn't know it was compensable at the time.

CHAIRMAN GRIFFON: So, they were assuming --

MR. FARVER: They came up with 46.144, and then DOL's final decision was 50.95.

MEMBER MUNN: I'm still not sure exactly what you're saying here. You're -- is SC&A's position that in 1998 and 1999, there should be some neutron dose incorporated in --

MR. FARVER: Well, number one, he was monitored for neutrons.

MEMBER MUNN: Yes.

MR. FARVER: So, there should at the very least be a missed dose, or unmonitored dose for over here.

CHAIRMAN GRIFFON: I think that's the essence of it, right?

MR. FARVER: Yes.

MEMBER MUNN: Even though he may not have been in a neutron area at that time? Your position is if he was badged for neutron than he should be receiving that, whether he was -- he should be receiving that dose --

MR. FARVER: Yes.

MEMBER MUNN: Whether he was actually in that area --

MR. FARVER: Yes. He was badged, so, we're going to assume that he was in those areas. He was badged for neutrons.

MR. HINNEFELD: The response says that although there's -- essentially, it says even though there was a neutron number there, it was all one badge, and a neutron badge. And what you're saying is that's not the case.

MR. FARVER: That's not the case. There were two dosimeters.

MR. HINNEFELD: There were two separate badges, and since he wore a neutron badge, he was specifically badged for neutrons.

MR. FARVER: Yes.

MR. HINNEFELD: Okay, so that's your point.

MR. FARVER: Yes.

MR. HINNEFELD: Have you submitted your write up of what you just --

MR. FARVER: No. It's the first time we've talked about it.

MR. HINNEFELD: Okay, all right. So, then, you will send that to us so we can kind of clip it in there.

MR. FARVER: Okay.

MR. HINNEFELD: I mean Mark can capture it, but -- I mean Mark can capture it, but if you've got something written.

CHAIRMAN GRIFFON: I missed some

details in my little summary here, yes.

MR. FARVER: I probably have a better version on my computer.

MR. HINNEFELD: Whenever, but it's just -- we'll have to go back. I mean that's information where there currently wasn't -- we didn't see it was available to us when we wrote the original response.

CHAIRMAN GRIFFON: Yes, especially for something like this where we're trying to track the details. I think a response would be good.

MR. FARVER: I can send you responses.

CHAIRMAN GRIFFON: I'll do the resolution stuff here, but I'll count on you to provide the details.

MR. FARVER: Yes. And in our case write up, we even show a copy of the dose report that has the different dosimeter numbers, cycle numbers.

CHAIRMAN GRIFFON: Go on to the

next one.

MR. FARVER: That will take care of 1 and 5. Now I'll go on to number 2. Properly covert a photon dose to organ dose. Okay, 2 and 3 are essentially the same thing, 56.2 and 56.3. And this was the spreadsheet issue that we've discussed before, and they fixed that. So, those two findings are closed.

CHAIRMAN GRIFFON: Say that again?

MR. FARVER: It was a workbook --

CHAIRMAN GRIFFON: All right, NIOSH corrected the workbook?

MR. FARVER: Yes.

CHAIRMAN GRIFFON: NIOSH corrected workbook error, and --

MEMBER MUNN: Geometry?

CHAIRMAN GRIFFON: -- no further modification on the case because there was -- it was eventually approved.

MR. FARVER: Right. This was

compensable.

CHAIRMAN GRIFFON: Compensable, sorry.

MR. FARVER: But these are old actions because this was a -- one of the earlier problems with the Savannah River with the workbooks.

MEMBER MUNN: Point 2 and point 3.

CHAIRMAN GRIFFON: All right and that applies for 156.2 and 156.3?

MEMBER MUNN: Correct.

CHAIRMAN GRIFFON: Okay, 156.4?

MR. FARVER: NIOSH may not have used appropriate data for determining PoC has to do with -- there's different reports when you start looking at the Savannah River dosimetry data. They don't all have the same numbers on the reports. Basically, that was one of the concerns, and --

CHAIRMAN GRIFFON: So, NIOSH, you're saying that you selected a one because it was supported by the individual cycle

reports and it was claimant favorable, right?

MR. FARVER: Yes. After looking back at that, we agreed.

CHAIRMAN GRIFFON: But I guess my -- the bigger question I would have is this a broader Savannah River problem? I mean it's a minor issue here for this case. It doesn't even affect it because it's compensable, but it is an ongoing concern on the use of this data, especially where we're using this data for coworker models. I mean that may come up in the Savannah River Work Group, too. So, that may be more of a Site Profile issue.

MEMBER MUNN: Well, it wouldn't affect this.

CHAIRMAN GRIFFON: No, it wouldn't. That's what I'm saying. It doesn't affect this case.

MEMBER MUNN: And SC&A agrees, so --

CHAIRMAN GRIFFON: Agrees with what?

MEMBER MUNN: With the NIOSH point.

CHAIRMAN GRIFFON: Agree with what I just said?

MEMBER MUNN: Well, they just said they agreed with the NIOSH --

MR. FARVER: We have questioned this before about the different types of records.

CHAIRMAN GRIFFON: I mean has this come up before with Savannah, though?

MR. FARVER: Yes.

CHAIRMAN GRIFFON: I'm trying to remember. Yes. That's my point.

MR. FARVER: Those are consistent with what they use. Some of it is because some of the external data includes tritium doses.

CHAIRMAN GRIFFON: Yes, right.

MR. FARVER: And when we brought up about the tritium doses. But as long as you're using a - I forget which record it is -

you're okay.

CHAIRMAN GRIFFON: I guess I just don't want to lose track of this when we look at the broader like -- you know, how it's used in coworkers models and stuff.

MR. HINNEFELD: Well, it might be something to make sure gets specifically on the plate of the Savannah River --

CHAIRMAN GRIFFON: Site Profile?

MR. HINNEFELD: Yes.

CHAIRMAN GRIFFON: Yes, okay.

MR. FARVER: Just want to recognize that the different records contain the different values.

MS. BEHLING: Excuse me, this is Kathy. I've seen this many times, and every time I've seen it, usually the dose reconstructor goes in and compares the two records, and even in the workbooks under the individual year, if one disagrees with the other, they will highlight it or put it in red, and they've always used the most claimant

favorable values.

MR. SIEBERT: That is correct, Kathy.

MR. FARVER: Yes, usually that's done. Correct. Okay, so we can close that. 156.6: improperly converting the assigned neutron dose to organ dose. This is the workbook problem, similar to the photons, converting the organ dose. And that was corrected in the workbook update. That one we can close also.

CHAIRMAN GRIFFON: You're saying NIOSH made the correction in the workbook?

MR. FARVER: Yes, the workbook is correct.

MR. HINNEFELD: And this is the same geometry for neutrons.

MR. FARVER: Yes.

CHAIRMAN GRIFFON: Okay, and that's closed. Okay, 156.7?

MR. FARVER: Fission products: calculation of method underestimates fission

product dose. This is the -- expect the ongoing full body count fission product question.

MR. SIEBERT: That's correct. It's the same issue.

DR. ULSH: Is the resolution the same? I think it was OTIB-0054, right?

CHAIRMAN GRIFFON: So, this predates the 54, right? They used the radionuclide chooser.

MR. FARVER: Right. This was the chooser, radionuclide chooser.

MR. SIEBERT: Well, that doesn't necessarily mean it pre-dates OTIB-0054. Once again, OTIB-0054 does not presently apply to whole body counts.

CHAIRMAN GRIFFON: Oh, okay. I apologize. Okay.

MR. FARVER: It's the same one from the seventh set.

CHAIRMAN GRIFFON: Okay, so it's being deferred to TIB-0054, and its

application 2, whole body count results; is that correct?

MR. SIEBERT: I believe so.

MS. BEHLING: Yes.

CHAIRMAN GRIFFON: So, is this being moved to the -- like we did before, moved to the Procedures Committee for OTIB-0054? It's the same findings so it won't add work load, Wanda.

MEMBER MUNN: Yes. Got it.

CHAIRMAN GRIFFON: All right, transfer to Procedures.

MR. FARVER: And then for 156.8, this is where we questioned the -- did NIOSH derive and the DOL derive PoC? They're different. NIOSH gives a good explanation, or gives an explanation. I wouldn't say it's good one. It's an explanation.

MR. SIEBERT: Dang, Doug.

MR. FARVER: I'll give you an inch. I have to be tough on you, Scott.

CHAIRMAN GRIFFON: So, where are

we at with that?

MR. FARVER: Okay, it's okay. They explain why there's a difference.

MEMBER MUNN: Acceptable response.

MR. FARVER: Yes. It's almost good.

CHAIRMAN GRIFFON: Because NIOSH isn't even supposed to be calculating PoCs, right?

MR. HINNEFELD: Anything we do doesn't count. Yes, a lot of that change in lung model was where we adopted the NIH change when it was more favorable to the claimant, and when it wasn't, and the NIH change wasn't more favorable then we stuck with the old version.

CHAIRMAN GRIFFON: Okay, and then we have an observation. Doug, would you like to make an observation?

MR. FARVER: I'll make an observation. This should be reevaluated for insoluble plutonium.

DR. ULSH: Wait. Is this still on 156.8?

MR. HINNEFELD: Well, it's 156 observation.

DR. ULSH: All right.

MR. FARVER: Since NIOSH was overruled, and the case was compensated, there's no need to rework it. So, closed.

CHAIRMAN GRIFFON: Okay. I guess that's closed. It's an observation anyway.

MR. FARVER: Yes.

CHAIRMAN GRIFFON: Yes, I'm just wondering. It might be relevant in terms of our PER reviews. I mean are you basically making a claim that in their PER review they kind of missed one, right?

MR. FARVER: No.

CHAIRMAN GRIFFON: No?

MR. FARVER: No.

MEMBER MUNN: I think one could easily make the case that -- that the issue should've been stated that the case should

have included evaluation for exposure to Super S rather than reevaluate it.

MR. HINNEFELD: Well, when the case was done, Super S wasn't developed.

MR. FARVER: I believe that's correct.

CHAIRMAN GRIFFON: There's already over 50 --

MR. HINNEFELD: There was already over 50, and so we wouldn't --

CHAIRMAN GRIFFON: Right. I just wanted to be clear on that.

MR. FARVER: That is typically one of the standard observations we'll put in the Savannah River.

MR. HINNEFELD: Yes, and pretty much all of them have it.

CHAIRMAN GRIFFON: Okay, 157.1? Now, there's no NIOSH response.

MR. HINNEFELD: I don't think we provided anything on that yet.

CHAIRMAN GRIFFON: Right. Do we

want to move ahead? Are there other ones that have - yes, there are.

MR. HINNEFELD: Yes.

CHAIRMAN GRIFFON: 157.1, 157.2, I think you owe initial response on those. I mean do you want to restate the finding, Doug, so we're at least all on the same page? Might be helpful to Brandt, especially.

MR. FARVER: On 157?

MEMBER MUNN: Point 1 and 2.

MR. FARVER: Oh, 1 and 2? We'll do that.

CHAIRMAN GRIFFON: Seems like one where you're going to have to have the data in front of you --

MR. FARVER: Yes. I want to get the right case number. Hang on a second. Sorry, I lost my spot.

DR. ULSH: Page 20 if that helps. Twenty out of 66.

MR. FARVER: Okay, well, what I'll do is I'll pull up our case report.

MR. SIEBERT: On the PDF, it's page 39 of 245, Doug.

MR. FARVER: Thank you. After a while, they all start looking alike.

MR. SIEBERT: Oh, I know.

MEMBER MUNN: Only after 3:00.

MR. FARVER: Okay, found it, 157.1, failure to properly account for external photon dose for all years of employment. I couldn't tell you offhand. I mean I'd have to go back and then look at this.

CHAIRMAN GRIFFON: Okay.

MR. FARVER: But it has to do with those years they did account for, and then there's years they didn't account for. We believe there's years they should've accounted for. And that's what it comes down to.

MR. SIEBERT: Right. It's the counting of missed badges, and badges that are in the record, and badges that are blank in the record and things like that.

MS. BEHLING: Also, I believe, Doug, that there were some medical records that we found for years when we -- he was either a part-time employee at that point, like in 1952, and we were curious as to that he should've probably been monitored during that period also.

So, there's several years of his employment here that we're questioning. Should he have been monitored during those years?

MR. FARVER: Yes. Actually, that's down at the 157.4, medical dose. But yes. So, for 157.1, 157.2, those are still open.

CHAIRMAN GRIFFON: Yes.

MR. FARVER: 157.3, failure to provide or define the system assignment of neutron dose, and -- oh, this goes to -- after 1970 neutron doses are assigned based on neutron dosimetry. So, yes, we agree with NIOSH's response.

Well, what the findings was saying is that just because -- after 1970, they should've been assigned neutrons based on an N/P ratio. But no, there is a document that says, after 1970 for Savannah River, it's based on neutron dosimetry.

CHAIRMAN GRIFFON: So, it's consistent with all the other --

MR. FARVER: Yes.

CHAIRMAN GRIFFON: Okay, so SC&A agrees with NIOSH?

MR. FARVER: Yes.

MR. KATZ: So, 157.4 is closed?

CHAIRMAN GRIFFON: Yes, closed.

MR. FARVER: 157.4 is where Kathy mentioned about the medical exposure, and I believe NIOSH agrees, but it doesn't affect the compensability.

MR. SIEBERT: This was the year, the changeover year, of 1970. And the original assessment used the later version, which would've been the later -- the post `70

value, which would've been six millirem versus the pre and `70 value, which would've been 100 millirem.

CHAIRMAN GRIFFON: Okay, so it doesn't affect the --

MR. FARVER: It doesn't, but this is --

CHAIRMAN GRIFFON: That's fine.

MR. FARVER: Well, it's -- it kind of relates back to, should this have been caught or not?

CHAIRMAN GRIFFON: Yes, but NIOSH agrees with the finding, and it's closed for our purposes.

MR. FARVER: Yes, it is.

CHAIRMAN GRIFFON: All right, 157.5?

MR. FARVER: Very similar, extract the uncertainty value in the X-ray dose, and it's also -- that's closed. We agree with that and their response.

CHAIRMAN GRIFFON: And moving on?

MR. FARVER: 157.6: this is failure to account for internal dose from all fission products. This is the ongoing fission product issue, OTIB-0054.

CHAIRMAN GRIFFON: Right.

MR. FARVER: I think it's closed.

CHAIRMAN GRIFFON: Got it. Let's transfer to --

MR. FARVER: And then the one observation talks about the highly insoluble plutonium, standard observation.

CHAIRMAN GRIFFON: So, NIOSH's response on this observation this time says, since it wasn't over 50, you expect the case will be returned." Right?

MR. SIEBERT: Yes, I can look it up real quick and determine if --

CHAIRMAN GRIFFON: Yes. Has it been? I mean I'd like to -- it'd be nice to know.

MR. SIEBERT: Let's see. Considering we just turned in a version of

this case 20 days ago, I'm going say it includes Super S plutonium. So, yes, it has been reworked.

DR. ULSH: Scott, are you saying that you verified in fact that it did include Super S plutonium, or are you just --

MR. SIEBERT: Well, based on the fact that we did it 20 days ago, I'm sure it did.

MR. HINNEFELD: What we'll do is since we've asked for SC&A to submit a written input, we'll provide written input on this. We'll actually go verify it, see what's been done.

CHAIRMAN GRIFFON: And we don't know the PoC status after Super S was incorporated. I mean I'm just wondering because the -- we usually say it's not going to contribute a lot, but did this bring it real close? Or, what's the case? Do we know?

MR. HINNEFELD: Well, I mean we need to figure it out.

MR. SIEBERT: That's kind of hard to say if that's not the only thing that changed.

MR. HINNEFELD: Yes.

DR. MAURO: What is it now, though? Is it 43.4? I mean 46.4.

MR. HINNEFELD: At the time it was done, it was 46.4.

DR. MAURO: So, you didn't knock it out of the park.

CHAIRMAN GRIFFON: Yes.

DR. MAURO: Was the internal dose a dominant --

MR. FARVER: Yes. That was 41-42.

DR. MAURO: Out of the 42?

MR. FARVER: Out of 45.

DR. ULSH: Do you know what the target was? I mean what kind of cancer.

MR. FARVER: Yes, pulmonary.

DR. ULSH: Lung cancer.

CHAIRMAN GRIFFON: All right, so, we'll leave it at that for now. Okay, 159.1?

MR. FARVER: 159 was your question on DOE dose record, and this is another Savannah River case, and it has to do with the different dose records, previous ones. And in NIOSH's response, they say they used the 3HP EAH because it's claimant favorable.

And all we do is we point out the different dose records in here in our report; as long as they choose the one that's most claimant favorable, that's okay.

CHAIRMAN GRIFFON: Okay, so it's the same regulation as before.

MR. FARVER: Yes, we closed that one.

CHAIRMAN GRIFFON: Closed, and then --

MR. FARVER: The only comment I have is have the records been compared for accuracy? We've got different records with different values. Have you looked at them?

CHAIRMAN GRIFFON: There was no further action for this --

MR. FARVER: No further action. Same way with --

CHAIRMAN GRIFFON: We discuss that in the Site Profile follow up.

MR. FARVER: 159.2 is the same, same thing. That's the different dose records. Sometimes there's different values, different cycles. I'm okay with this. Just make sure all of you understand the dose records and which one C is.

CHAIRMAN GRIFFON: I see that as slightly different than the other one, though. But some of them are kind of -- interpretation of this --

MR. FARVER: Yes, this one has counting up of cycles.

CHAIRMAN GRIFFON: Right.

MR. FARVER: Zeros. Cycles I guess it is.

CHAIRMAN GRIFFON: But it's closed.

DR. ULSH: So 159.1 and .2 are

both closed for the same -- okay.

MR. FARVER: And if we go to 159.3, and 159.4, this has to do with the Savannah River workbook error that we've talked about in previous cases. That's been corrected. So, 159.3 and 159.4 can be closed.

CHAIRMAN GRIFFON: Okay, 159.3 and 159.4 are both closed.

MR. FARVER: Yes.

CHAIRMAN GRIFFON: Okay. Who says we don't make progress?

DR. ULSH: It's after 3:00. We're making a lot of progress.

CHAIRMAN GRIFFON: 159.5?

MR. FARVER: 159.5: we thought there was a missing 1989 neutron dose. Apparently, it depends on which file you look in. A lot of times these dosimetry files or the DR files will have many different files, and some of those are working files that were used, or used to calculate certain portions.

And although it was not in the one

file, it was used in the EDCW tool to calculate the final dose. So, it was just -- it was there. It was just kind of hidden, and then we didn't catch it. So, we agree with their response.

CHAIRMAN GRIFFON: 159.6?

MR. FARVER: 159.6 showed a -- properly account for all missed neutron doses. Really, this comes down to counting cycles in the end, and NIOSH agrees whether it has a relatively low impact.

DR. MAURO: Would this be a quality issue going across these kinds of things?

MR. FARVER: Normally, I would say that, except there was discrepancy up above about counting zeros, and for Savannah River, I guess it's a little tougher because you've got these different reports. So, it is a matter of what report you're counting. But yes, if it was some other site, I would probably write this us as a qualify concern.

MR. HINNEFELD: Was this a large number of cycles and a fairly small difference?

MR. SIEBERT: The difference between eight and --

MR. HINNEFELD: Ten and eight.

MR. FARVER: Yes, two cycles.

MEMBER MUNN: Nothing spectacular.

MR. HINNEFELD: No, but it's puzzling. If it were the difference between 298 and 296, I'd say that -- who cares?

DR. MAURO: Is that a quality issue? That's not a quality issue.

MR. HINNEFELD: But eight and ten is a countable number.

DR. MAURO: Right.

MR. FARVER: The only reason I let this one go is because there's many different records of Savannah River.

MR. HINNEFELD: Yes.

MR. FARVER: And unless you're counting the same records, you might not get

the same numbers.

MR. HINNEFELD: And granted, two cycles of missed doses --

CHAIRMAN GRIFFON: Right, right, right. And it doesn't have any -- I mean we closed the finding. It doesn't necessarily mean it goes as far a qualify finding.

DR. MAURO: I raised this question because I know that --

CHAIRMAN GRIFFON: When we look at these in aggregate, we might say, "Yes, this is worth following up on."

DR. MAURO: I've seen a lot of these DR audits, and they'll print out 300 pages, which who knows how many zeros on it. Someone has to sit there and count zeros. Now, is it a quality issue because one person counts 200 zeros or 203 zeros? How many times do you have to count the zeros to decide if it's the right number? I have a hard time calling that a quality issue.

MR. FARVER: No, I understand

that. But we can -- we can close that one. There's no further action.

CHAIRMAN GRIFFON: Yes.

MR. FARVER: And 159.7 goes back to the fixing the work book for neutrons, just like they did for photons. So, that's closed.

CHAIRMAN GRIFFON: All right. So, this is the same TIB-54?

MR. FARVER: Well, 159.8 we will get into --

CHAIRMAN GRIFFON: No, I was reading -- I'm sorry. That's what I was reading.

MR. FARVER: Yes, 159.8 is the underestimating fission product dose.

CHAIRMAN GRIFFON: Right. All right, 159.9?

MR. SIEBERT: Just to make sure I didn't miss this, .8 was closed?

CHAIRMAN GRIFFON: Yes, transferred.

MR. HINNEFELD: Transferred to

Procedures.

MR. SIEBERT: Right, the OTIB-54. Okay, thank you.

CHAIRMAN GRIFFON: Right.

MR. FARVER: 159.9: plutonium was not included in any of the environmental dose calculations. And the response says it was included in the chronic missed dose. It was not included in the environmental. Correct. Well, they assessed it once. They didn't assess it twice. Closed.

MR. HINNEFELD: Yes.

DR. MAURO: Let me ask, just for my edification. The environmental doses is a contributor, you're saying that by calculating --

MR. FARVER: They calculated a missed dose for plutonium. So, they don't calculated an environment dose for --

DR. MAURO: Oh, you capture it because of the missed dose.

MR. HINNEFELD: The missed dose is

based no the bioassay. And so, if they had any environmental --

DR. MAURO: Yes, got it. Got it. Thank you.

CHAIRMAN GRIFFON: And then the Super S question, right? And this is being reassessed apparently.

DR. ULSH: Observation 159 then?

MR. HINNEFELD: Yes.

MR. SIEBERT: Yes. This one was reassessed just about six months ago. So, we'll also respond there.

DR. ULSH: So, it's the same thing that we're going to supply written documentation --

MR. HINNEFELD: Yes.

DR. ULSH: Okay, got you.

MR. FARVER: Move onto 160.1: DR reports do not properly account for all reported proton dose. They said they first received a couple hundred millirem from 1952, and it was not included in the IREP data. Saw

those missing years. And so, this one really -- this would be a QA concern.

MR. HINNEFELD: Yes.

MR. FARVER: How could that hear not be accounted for. I don't know how we're going to fix it. It's just something that would just fall under your category of quality.

CHAIRMAN GRIFFON: Right.

MR. FARVER: But we could close the findings.

CHAIRMAN GRIFFON: Yes, it's closed. That one is a more clear quality assurance, I think.

MEMBER MUNN: Probably a simple matter of waiting for something. Going away for 15 minutes, and coming back and taking --

MR. FARVER: Well, the QA check should have caught that.

CHAIRMAN GRIFFON: Right.

MR. FARVER: 160.2 is similar for neutron dose, 1952. Because the 1952 is

missing the neutron dose, based on an N/P ratio was missing. Makes sense.

DR. ULSH: So same thing as 160.1 and we substitute neutron?

MR. FARVER: Yes. Closed. 160.3 has the fission product issue that keeps coming up. So, we will refer that to Wanda.

DR. MAURO: I got a question. I don't want to slow -- it's getting late. But okay, let's say we find out that we missed a year, and the year includes both the photon and because of neutron/photon ratio, we missed the neutron. So, therefore the dose has been underestimated. These are numeric issues. It's not a procedural issue.

It's an issue unique to this case, and would not be picked up on a PER. Do we know that -- so what do you do? Do you redo this guy's case because you missed some doses? Is that what happens?

MR. HINNEFELD: Well, I mean we won't send a new dose reconstruction.

DR. MAURO: Well, what do you do when -- now you know this guy might have been underestimated.

MR. HINNEFELD: What we would do is we would -- if it's close -- I mean this is 200 millirem of photon and probably something less than that for neutron. Most of our N/P ratios are less than one. So, I mean that almost doesn't --

DR. MAURO: Okay, in other words, the tracking of closure. What I'm getting at is that -- maybe we haven't had this conversation before. If there's no way to document that, "Yes, we did find there was some quality issues that did result in some degree of underestimate of the dose, and the documented that we looked at it and confirmed that it does not change the conclusion in terms of compensation."

CHAIRMAN GRIFFON: But we've had this discussion before.

DR. MAURO: We did? Then I forgot

about it.

CHAIRMAN GRIFFON: That oversight is in case -- set five was it? Remember when you reworked several --

MR. HINNEFELD: Yes, we reworked several. They were close.

DR. MAURO: What is the venue --

MR. HINNEFELD: It's kind of a judgment in the group.

DR. MAURO: But where does it -- does a record show that we put this one -- that this issue has been addressed, put to bed, and the claimant in fact was given appropriate consideration? Where is that? It seems to be something important. We've got -- there's a record that -- that this person, "Yes, you're right. We did underestimate. We looked at the degrees on the estimate. Certainly not anywhere near enough to change the convert." And then you put a period at the end of the sentence. It seems to me that we'd sit around a table and agree to that.

MR. HINNEFELD: Yes.

DR. MAURO: Because it's intuitively obviously to us. But is this something that needs to be put on a record?

MR. HINNEFELD: Well, there's -- if following that school of thought, John, there's something to be said for publishing a final matrix. You know, after all the discussions are done, we've come to agreement and closure.

DR. MAURO: Oh, that's the trick.

MR. HINNEFELD: And having a final matrix as, "The record."

DR. MAURO: Yes.

MR. HINNEFELD: Now, before that goes to -- we have to think about going public. It would certainly have to be reviewed for Privacy Act because we're not as careful on these as we are in some others, and especially as we include more and more information about the case, we can get into Privacy Act considerations.

CHAIRMAN GRIFFON: Haven't we already published a lot of matrices?

MR. HINNEFELD: I'd be hard pressed to find the five things we call the final matrices for the first five plants.

CHAIRMAN GRIFFON: Well, they went to the Secretary.

MR. HINNEFELD: Well, there were reports to the Secretary.

CHAIRMAN GRIFFON: With those as attachments.

MR. HINNEFELD: Those are attachments. Okay, so, then those would be -- those were the -- the matrices were attachments to the report to the Secretary, then I would say that would be the published --

CHAIRMAN GRIFFON: That's the public record.

MR. HINNEFELD: That's the public record. And so, the public record of this matrix --

DR. MAURO: So, the matrix and the transcript represents the documentation?

MS. HOWELL: Not really.

MR. HINNEFELD: No.

MS. HOWELL: Not unless the new one is posted on the website. But the Secretary can do whatever. So, you would send something unredacted to the Secretary.

MR. HINNEFELD: Yes, right.

MS. HOWELL: It would only have been reviewed for privacy matters if it has been posted on the website.

MR. HINNEFELD: So, what we have now is a record that's not public. The official, to me -- we have an official, final matrix, and this is missing a -- and there's an argument to be made, and maybe we haven't even really talked about this, but from DCAS standpoint, there's an argument to be made to put these out there in public because the reviews are public. The initial reviews are on our --

DR. MAURO: The transcripts.

MR. HINNEFELD: Well, and your reports. Those are public, and those are on the website, and they all say drafts, and there are disclaimers on there. But they're all drafts. And so, if anybody asks, "Well, what's the final outcome of this?" The final outcome of this is the final matrix, which summarizes these discussions we've had.

DR. MAURO: We have had this conversation before. You're right.

MR. HINNEFELD: And so, when they are published, and whether it's a letter to the Secretary or something, that's an argument for us, saying that we should do a privacy redaction on these things, and put them up there as -- really as part of your report to them. We don't have to write anything else.

Your report then to the Secretary then can become public on the website. And so, when someone asks, "What's the outcome of these -- from these drafts?"

CHAIRMAN GRIFFON: I was under the impression that they were released to the public. Emily, I thought that you reviewed at least the first five through your office. I'm not sure.

MS. HOWELL: I reviewed matrices, but I have no idea if they're for this Subcommittee.

CHAIRMAN GRIFFON: Right.

MS. HOWELL: I mean most of the ones that I can remember are actually from SEC things. CHAIRMAN GRIFFON: Yes.

MS. HOWELL: So, unless --

CHAIRMAN GRIFFON: No, but I know --

MS. HOWELL: -- it's either OCAS, or you as the Subcommittee directing, I mean they are Board documents. You're correct. They probably should be up there. But I'm not sure that they currently are.

MR. HINNEFELD: I'll go check on

that. Yes, I think that certainly they should be there.

CHAIRMAN GRIFFON: Yes, it's a good question. Just doing a final report to the Secretary doesn't necessarily mean it's been dispersed to the public.

DR. MAURO: We did have this conversation already in the context of Site Profile reviews.

CHAIRMAN GRIFFON: Yes.

DR. MAURO: And the question was SC&A, after you go through it and have your Site Profile review, you go through the issues resolution. Do you reissue a final version of your Site Profile manage? The answer is no, and the reason is because the record of the Work Group meeting, and how the issues were resolved, whether that's Procedures or Site Profile, constitutes the -- the process and the record of how issues are resolved.

Because that -- otherwise, the costs would be astronomical to redo a Site

Profile. So, I just had to be reminded.

CHAIRMAN GRIFFON: Okay, but the other part of your question I think was important, which is how do we -- I mean in the matrices, assuming we clear those first five or whatever, or we -- we release multiple, in the final resolution column, we often say, "Does not affect the case." You know, no effect on the case. And we do often -- but I think we make a pretty -- I know sometimes we review it quicker, but I'm assuming when we do this here, that SC&A has looked pretty closely at it, and NIOSH has.

Any time I think Stu has been involved in this, like we've had somewhere where pretty close to more like --

MR. HINNEFELD: Certainly if they're close. I mean there are some --

CHAIRMAN GRIFFON: This has the potential to overturn, and we ask you to look --

MR. HINNEFELD: I mean, like a 100

millirem increase in a dose -- I mean it's intuitive, that won't change the outcome.

CHAIRMAN GRIFFON: Yes.

MR. HINNEFELD: That's intuitive. So, we may not do --

CHAIRMAN GRIFFON: But I mean I think it's a waste of research to require NIOSH to, just for the record, reconstruct a dose.

DR. MAURO: No, that's a good point. I just wanted to make sure --

CHAIRMAN GRIFFON: We haven't done that in the past is all I'm saying.

DR. MAURO: Yes, this is good.

DR. ULSH: Okay, but since I haven't been around for those three previous discussions, here's my concern with a combination of what John said and what Stu said: We look at these things right now and they are minor because -- I think you said 30 percent and that is not a big deal.

There's -- that doesn't

necessarily ensure that some issue doesn't come up down the road, where we're going to pick this case up again. And unless we have some notation in that case file that, "Yes, there's an issue here that if you ever open this again and redo it, you should take this into account."

CHAIRMAN GRIFFON: Well, I'm assuming that you've flagged -- any cases that are being reviewed, you flag. And if they come up again --

MR. HINNEFELD: That's for us to figure out.

CHAIRMAN GRIFFON: That's a good point, but that's an internal thing. Yes, I agree, because you've got to keep track of these. I agree. You're right.

MS. BEHLING: Mark, I guess another question I could have that just came to mind as we were going through these is I assume if we go back to Finding 160.1, and we look at just that specific issue in this 200

millirem we're talking about, and NIOSH's response is that, "Okay, this will not affect the compensability decision," I assume they've looked at all of the findings associated with 160 --

CHAIRMAN GRIFFON: Right.

MS. BEHLING: -- for just this particular issue.

CHAIRMAN GRIFFON: And I think that's where we're making the judgment too here on the subcommittee level. Like if -- and well, we just said that before when we had the fission product one come up, and then finding later we had another internal dose issue.

MS. BEHLING: Exactly. And so --

CHAIRMAN GRIFFON: It's sort of these things in aggregate, obviously.

MS. BEHLING: Right, and that's what I wanted to ensure is happening.

CHAIRMAN GRIFFON: So, whenever we have doubt I think we want to stop, pause and

if need be, ask NIOSH to show us some numbers.

MS. BEHLING: Okay, because we're on the first finding, and if they've just reassessed it based on that one finding, obviously we're going to go onto 2 and 3 and have additional findings that may impact this case, and that is looked at in aggregate. Yes, that was my only question.

CHAIRMAN GRIFFON: Right, right, right. So, was that a general question, Kathy, or specific to case 160?

MS. BEHLING: Well --

CHAIRMAN GRIFFON: I mean do you know something that I don't know about? This case, is it close, or?

MS. BEHLING: It's very close.

CHAIRMAN GRIFFON: Okay, I got you.

MS. BEHLING: This case is almost 49 percent. It's 48.7 percent. Now, it's -- I believe it's a prostate cancer, but it's close.

CHAIRMAN GRIFFON: Okay.

MS. BEHLING: The only thing that, in this particular case, I am questioning under finding 160.2 is it looks as if this has been returned to be reworked.

CHAIRMAN GRIFFON: Right, yes. In the bottom of your NIOSH response, it says, "Claim has been returned for rework using current methods."

MR. SIEBERT: This claim is presently in our pool to be worked.

CHAIRMAN GRIFFON: So, for this particular one, I'm going to put, instead of no effect on the case, I'm going to say it's currently being reworked. I think that's better. I'm glad we had this discussion.

DR. MAURO: And as Brant correctly points out, when it's being reworked, for the reasons its being reworked is neutron, it's probably important that we don't forget about the year that may have been missed on protons ever.

CHAIRMAN GRIFFON: Well, and the

policy is when you rework your case, you work it across the board, right?

DR. MAURO: Yes, but I don't know if that necessarily means that --

CHAIRMAN GRIFFON: I know.

DR. MAURO: -- everyone goes back to this matrix and takes a look at sort of the findings. So, yes.

CHAIRMAN GRIFFON: But I'm saying that's something they -- that's something that NIOSH has to keep an eye on. Right?

DR. MAURO: Yes.

MEMBER MUNN: Well, it might not have gone back to the matrix, but surely it would include your original findings sheet.

DR. MAURO: Yes, if you go back to that. I guess that's what I'm getting at. I can see when you're in the PER process, for example, and you turn in the machinery to deal with it, and you go back to all the issues that are at play. Some of the issues that are at play are built into the record of our

matrix for this Work Group, for this Subcommittee. The degree to which you folks incorporate that into your process is a question, I guess.

MEMBER MUNN: Your findings sheet would have everything --

DR. MAURO: The findings would be there if they were looked at.

MEMBER MUNN: Yes.

DR. MAURO: I got to say, I'll be first to acknowledge that I noticed that when Site Profiles are being revisited every couple of years. The folks that do the Site Profiles don't always look at our Site Profile Reviews when they're in the process of reviewing. So, one of the things I guess I have a concern about is that there's a process going on with the Board here, where there's a lot of interaction with SC&A, the Board and the Work Groups, to the degree to which that actually makes it into the machinery.

CHAIRMAN GRIFFON: Yes, I got you.

I see your point. We've all -- Stu is taking notes. Okay, I think we're going to call it a day.

MR. FARVER: Oh, you should do one more.

DR. MAURO: We're closing 160 out. Great.

CHAIRMAN GRIFFON: I'm close to catching a flight here. You really wanted to do one more? You were on a roll?

MR. FARVER: No, there is one more in 160.

MEMBER MUNN: 160.4.

CHAIRMAN GRIFFON: Go ahead. Do 160.4.

MR. FARVER: Okay, the dose report does not account for internal doses from the uranium. The employee submitted ten uranium bioassays. The DR report says, "Uranium as discussed below," but it doesn't discuss it, and there are no calculations for it.

So, they don't calculate a dose.

They don't include a dose. And so, this also has an affect on the PoC, and it's also the key reg concern. And they say it does not affect compensability. But if we go back and consider all these findings in total, do they? I don't know.

MR. HINNEFELD: Okay, well, at the very least --

CHAIRMAN GRIFFON: Yes, okay.

MR. HINNEFELD: We need to check this out.

CHAIRMAN GRIFFON: All right, that's a wrap. Thank you all. Thank you all on the phone for sticking it out today. And we made some good headway.

I will send the final preliminary follow up report, that First 100 Case Report, out to all of us, and actually, I think I can forward it to all of the Board for discussion. At least I'll raise it in the Work Group updates on the phone call meeting, and then we'll have a further discussion at the full

Board meeting, and focus on set seven for the next set of priorities.

MR. SIEBERT: Hey, Mark, this is Scott.

CHAIRMAN GRIFFON: Yes?

MR. SIEBERT: Could you also send out the updates you just made to the eighth matrix?

CHAIRMAN GRIFFON: I will. I will.

MR. SIEBERT: That would be very helpful. And the seventh, I guess, would be good, too.

CHAIRMAN GRIFFON: Yes.

MR. KATZ: So set seven and continue with eight right?

MR. SIEBERT: Thank you.

CHAIRMAN GRIFFON: Okay. Thanks a lot, everybody.

MR. KATZ: We're adjourned. Thank you everyone on the line.

(Whereupon, the above-entitled matter went off the record at 3:57 p.m.)