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

convenes

WORKING GROUP

ADVISORY BOARD ON

RADIATION AND WORKER HEALTH

PROCEDURES REVIEW

The verbatim transcript of the Working Group Meeting of the Advisory Board on Radiation and Worker Health held in Naperville, Illinois on Oct. 2, 2007.

STEVEN RAY GREEN AND ASSOCIATES
NATIONALLY CERTIFIED COURT REPORTERS
404/733-6070

C O N T E N T S

Oct. 2, 2007

TRANSCRIPT LEGEND

The following transcript contains quoted material. Such material is reproduced as read or spoken.

In the following transcript: a dash (--) indicates an unintentional or purposeful interruption of a sentence. An ellipsis (. . .) indicates halting speech or an unfinished sentence in dialogue or omission(s) of word(s) when reading written material.

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

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

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

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

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

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

(By Group, in Alphabetical Order)

BOARD MEMBERS

CHAIR
ZIEMER, Paul L., Ph.D.
Professor Emeritus
School of Health Sciences
Purdue University
Lafayette, Indiana

EXECUTIVE SECRETARY
WADE, Lewis, Ph.D.
Senior Science Advisor
National Institute for Occupational Safety and Health
Centers for Disease Control and Prevention
Washington, DC

MEMBERSHIP

GIBSON, Michael H.
President
Paper, Allied-Industrial, Chemical, and Energy Union
Local 5-4200
Miamisburg, Ohio

GRIFFON, Mark A.
President
Creative Pollution Solutions, Inc.
Salem, New Hampshire

MUNN, Wanda I.
Senior Nuclear Engineer (Retired)
Richland, Washington

PRESLEY, Robert W.
Special Projects Engineer
BWXT Y12 National Security Complex
Clinton, Tennessee

IDENTIFIED PARTICIPANTS

ANIGSTEIN, BOB, SC&A
BEHLING, HANS, SC&A
BEHLING, KATHY, SC&A
BRACKETT, LIZ, ORAU
BRANCHE, CHRISTINE, NIOSH
BURGOS, ZAIDA, NIOSH
CHANG, CHIA-CHIA, NIOSH
ELLIOTT, LARRY, NIOSH
FARVER, DOUG, SC&A
FIX, JACK, ORAU
GUIDO, JOE, ORAU
HINNEFELD, STUART, NIOSH
HOMOKI-TITUS, LIZ, HHS
HOWELL, EMILY, HHS
MAKHIJANI, ARJUN, SC&A
MAURO, JOHN, SC&A
NETON, JIM, NIOSH
OSTROW, STEVE, SC&A
SIEBERT, SCOTT, ORAU
SMITH, MATTHEW, ORAU
THOMAS, ELYSE, ORAU
WINSLOW, ROB, ORAU

P R O C E E D I N G S

OCT. 2, 2007

(10:00 a.m.)

OPENING REMARKS

DR. WADE: This is Lew Wade. This is a meeting of the work group reviewing procedures. This group is most ably chaired by Wanda Munn, members Gibson, Griffon, Ziemer, Presley an alternate. All members are in the room save for Mark Griffon, who we do expect.

Might I ask if there are any other Board members on the telephone? Any other Board members connected by telephone?

MR. GRIFFON (by Telephone): Lew, this is Mark Griffon. I'm online.

DR. WADE: Okay, Mark, welcome.

Any other Board members save for Mark on the telephone?

(no response)

DR. WADE: We do not have a quorum of the Board which is important. So we can conduct our business.

Again, as mentioned, this is a member of the work group reviewing procedures. Let's

do our normal introductions, and I'll start by asking members of the NIOSH/ORAU team to identify themselves, members of the SC&A team to identify themselves, the federal employees who are working on this call, workers, worker reps, members of Congress or their reps and anyone else who would like to be identified.

We'll start in the room and do everyone in the room so you can get a sense of who's here. And if you have difficulty hearing anyone, please shout out so we can do the appropriate adjustment of microphones.

This is Lew Wade. I work for NIOSH and serve the Advisory Board.

MS. MUNN: This is Wanda Munn. I chair this work group studying SC&A procedure reviews. I have no conflicts.

MR. GIBSON: Mike Gibson, Board member, I have no conflicts.

MR. PRESLEY: Robert Presley, Board member, I have no conflicts.

DR. MAKHIJANI: Arjun Makhijani, SC&A, I have no conflicts.

MR. FARVER: Doug Farver, SC&A.

DR. MAURO: John Mauro, SC&A, no conflicts.

MS. HOMOKI-TITUS: Liz Homoki-Titus, I work for HHS, no conflicts.

MS. HOWELL: Emily Howell, HHS, no conflicts.

DR. NETON: Jim Neton, NIOSH, no conflicts.

MR. SIEBERT: Scott Siebert, the ORAU team, no conflicts.

MR. HINNEFELD: Stu Hinnefeld from NIOSH/OCAS, with respect to procedure review there are no conflicts.

DR. ZIEMER: Paul Ziemer on the Board and member of the working group, no conflicts.

DR. WADE: And again, Dr. Lew Wade, so that's all of us in the room. Let's go out into telephone land and start with members of the NIOSH/ORAU team who are on the line.

MS. BRACKETT (by Telephone): Liz Brackett.

DR. WADE: I'm sorry, please again.

MS. BRACKETT (by Telephone): Liz Brackett with the ORAU team.

DR. WADE: Welcome, Liz.

MS. BURGOS (by Telephone): Zaida Burgos, NIOSH.

DR. WADE: Welcome, Zaida.

MS. THOMAS (by Telephone): This is Elyse

Thomas with the O-R-A-U team.

DR. WADE: Welcome.

MR. SMITH (by Telephone): Matthew Smith, ORAU team.

MR. FIX (by Telephone): Jack Fix, ORAU team.

MR. WINSLOW (by Telephone): Rob Winslow, ORAU team.

DR. WADE: Other members of the NIOSH/ORAU team?

MS. CHANG (by Telephone): Chia-Chia Chang, NIOSH Director's Office.

DR. WADE: Welcome, Chia-Chia.

Other members of the NIOSH/ORAU team?

(no response)

DR. WADE: How about SC&A?

DR. OSTROW (by Telephone): Steve Ostrow.

DR. ANIGSTEIN (by Telephone): Bob Anigstein.

MR. PETTINGILL* (by Telephone): Harry Pettingill.

MS. BEHLING (by Telephone): Kathy Behling.

DR. BEHLING (by Telephone): Hans Behling.

DR. WADE: Any other members of the SC&A team?

(no response)

DR. WADE: Other federal employees who are working on this call?

(no response)

DR. WADE: Anyone with us from the Department of Labor?

(no response)

DR. WADE: Probably traveling to our Board meeting.

Workers, worker reps, petitioners, claimants, anyone who would like to be identified within that category?

(no response)

DR. WADE: How about members of Congress or their representatives?

(no response)

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

MR. GUIDO (by Telephone): This is Joe Guido with ORAU. I just joined.

DR. WADE: Welcome.

Anyone else who wants to be identified for the record on this call?

(no response)

DR. WADE: Okay, we've completed the

introductions. Just a brief caution because we've been getting better on telephone etiquette. When you speak, speak into a handset. Always have the instrument muted when you're not speaking, and be very mindful of background noises. Elevator music can be terribly distracting if you put us on hold, and we have to listen to that. In fact, some of the older members of our group will fall asleep if that happens. So please don't let that happen.

So, Wanda, it's all yours.

INTRODUCTION BY CHAIR

MS. MUNN: I'm working on the assumption that everyone here received my e-mail of the 29th outlining what I hope that we would cover. And repeating our action item list from the last meeting that we held on August 29th. Is there anyone who does not have that information in hand?

(no response)

SUMMARY OF FIRST GROUP OF PROCEDURE REVIEWS

MS. MUNN: If not, then we'll proceed as I had indicated on the e-mail by first backing up and addressing the thing that we did not

get very far on last time which is to say the summary of the set of procedure reviews from our first group. We had only started going through those and had really not completed where we were going to go.

I've asked Kathy Behling if she would be good enough to take responsibility for leading us through where we are with that now and bring us up to date as we go through these item by item. Will anyone who has any problem with any of it or any additional information that Kathy's not providing us please stop us, and we'll go from there.

Is that amenable to everyone here and to Kathy?

MS. BEHLING (by Telephone): That's fine with me, Wanda.

DR. WADE: Just a quick introduction. Dr. Christine Branche just joined us. Dr. Branche is the Principal Associate for NIOSH and is preparing to take over responsibilities of the Board.

MS. BEHLING (by Telephone): Wanda, yesterday, I guess, and I again apologize for the delay in sending this out, I had sent

everyone in the working group or the work group a revised table. It's actually Table 2 that we revised, the document that I had sent you. And stop me if I'm repeating things, and I will repeat some of the things that we had talked about last time.

Table 1 of the document that I sent yesterday which is a summary of the first set of the procedures reviewed, just to clarify what is on Table 1 and to break it down into what's most important on this table, this table indicates on page one that there are five procedures that NIOSH has not reissued a revision to those procedures for which we still have outstanding findings.

And we had discussed this during our last meeting so I'm just recapping. And this also indicates, in fact, on page two of Table 1 that there are, and I have a little question mark there, but I think there are also five procedures that NIOSH has reissued either as a new procedure or as a revision that SC&A has not been asked to review.

And if you want me to go through that list I can provide that list once again. But

you should see, and I'm referring to, on the second page, anything that has a no under SC&A reviewed revised document. There's five no's, and those are the procedures that we have not been asked to revisit.

MS. MUNN: Hold on for just a moment and let's make sure we're all on the same page. These were the documents that you sent on the fourth, right?

MS. BEHLING (by Telephone): This document is the one that I sent actually yesterday. It's Table 1 and Table 2 that just summarizes the findings from the first set of procedures. And what I, actually, the revision that I sent you yesterday is only what was revised was Table 2 because I had not completed the very last column as to whether those issues were resolved or not.

But I'm just recapping what is on Table 1 which gives you an overview of all of the procedures that have been reviewed. Those that still have outstanding findings where we have not addressed those findings either in Supplement 1 that we'll be talking about today or in Supplement 3 which will be coming out

very shortly, in probably two weeks from SC&A.

MS. MUNN: So the heading on your document is?

MS. BEHLING (by Telephone): The heading on the document is, it's just two tables, and Table 1 is "Summary of First Set of Procedure Reviews".

MS. MUNN: All righty.

MS. BEHLING (by Telephone): Do you have that?

MR. GRIFFON (by Telephone): And Kathy, the footer says submitted October 1st, 2007, correct?

MS. BEHLING (by Telephone): That's correct.

DR. MAKHIJANI: Kathy, this is Arjun. Could you send it to me? I don't think I was copied on it.

MS. BEHLING (by Telephone): Okay, I will do that.

DR. ANIGSTEIN (by Telephone): Bob Anigstein, same here.

MS. BEHLING (by Telephone): Okay.

And then just to move on, Table 2 is actually a listing of each one of the findings in which the resolution was that we were going

to address this issue in a revision to that document or in a replacement document.

And I've identified each of the findings. I've given a description of that finding, and I discuss as to, was that finding addressed either in Supplement 1, as I've said which we'll be reviewing today or be discussing today, or in the Supplement 3 in revised documents in Supplement 3 which SC&A will be publishing probably about the 15th of this month.

And I've indicated whether that finding has been resolved in this revision or has not been resolved. If the finding has not been resolved, it will be incorporated into the matrix, the next matrix, associated with that particular document. So if you look under Table 2 here there are several findings that were not resolved under OCAS IG-001, several findings that have a no under the resolution. Those will become an item on the matrix under Supplement 3 when we start to review Supplement 3.

So I'm trying to show you here that everything has been captured from the first

set of procedures, and we did try to ensure either through the Supplement 1 that we'll review today or through Supplement 3 which will be coming out shortly that we have captured all of these findings. That summarizes everything. I didn't know, I didn't plan on going through each of the particular findings because we will be discussing them in detail when we actually start working on the matrix.

MS. MUNN: Does anyone have any question about either the items that appear on the two documents or about what Kathy was just telling us?

Yes, Paul.

DR. ZIEMER: I have a question. This is Ziemer, Kathy. On the five items that SC&A has not been tasked to review, several of those have to do with the telephone interviews. I'm trying to recall whether we decided not to have them reviewed or we simply didn't take action. Are they there by default or by intent? Maybe, Wanda, you can help me remember. The same on the other two. One is the conversion factor on TLD measurements, and

the other one is on film badge conversion factors.

MS. BEHLING (by Telephone): Actually, the three procedures associated with the interview process, on my list on Table 1 is PROC-4, PROC-5 and PROC-17. They have all been replaced with actually one procedure. I'm looking at this a little more closely now. And that is PROC-90. And we have not -- and Arjun, correct me if I'm wrong here -- but we have not been asked to review PROC-90 to the best of my knowledge.

DR. MAKHIJANI: I think there's a different -- Stu and I might put our memories together about that. I think there was a little bit of a different resolution to that. I think that Stu said that it wasn't substantially different than the three of them.

MR. HINNEFELD: Right, the combination of the three procedures into the one interview procedure, there were no changes in that combination that addressed the items that came from the findings of the review of the three procedures. I think that combination was on the way before the policy was reviewed. So

there were no revisions made in that combination to address those issues. Now there's recently been a product about a review of closed items which I guess is different. Now this is about the ^.

DR. MAKHIJANI: Right, so I remember the discussion when we went through the Task 3 matrix number one, and you had assigned us the review of Procedure 90, and Stu made this comment. At that point I believe the review of Procedure 90 was suspended because it seemed to be duplicative of what had been done. So there are some items from the earlier review of the interview procedure that are not yet resolved.

DR. ZIEMER: So maybe we need to carry that into the matrix under PROC-90 and show those items?

DR. MAKHIJANI: That would be appropriate because they're still unresolved issues, and they would also apply to PROC-90, right, Stu?

MR. HINNEFELD: My judgment was that I read PROC-90 or -92, whichever one it is, --

DR. MAKHIJANI: Ninety.

MR. HINNEFELD: -- that the changes or

whatever changes had been made were not intended to address the findings from the original review of the three procedures, and so the finding, if you were to review that procedure today, you'd get the same finding. So I felt like, yeah, based on that. So that resolution I guess still has to occur in PROC-90.

DR. MAKHIJANI: Right, I think Dr. Ziemer is on the right track.

MR. HINNEFELD: We haven't had our discussion about those findings either on the interview in the work group I don't believe.

DR. MAKHIJANI: We had some discussion and NIOSH --

MR. HINNEFELD: We had some, yes.

DR. MAKHIJANI: -- you had responded. There's actually a long history to it. There was pretty substantive discussion initially, and then it kind of fell away because we were doing other things. And so we haven't actually revisited those, I believe, since you became chair of the committee, the working group.

DR. ZIEMER: I'm just suggesting, and it may

be Kathy, maybe we need a different end column item here to make it clear that, this already says that it's been replaced by PROC-90, but the previous review still holds I think is what we're saying here rather than it's not been reviewed.

DR. MAKHIJANI: Yes. Dr. Ziemer and Ms. Munn, what I might volunteer to do with Kathy is go over that matrix and just show those items, I think, and work with Stu to show those items which are outstanding and just indicate them as PROC-90. I haven't actually read PROC-90. After Stu said it was the same I didn't go back and actually read it.

MR. HINNEFELD: Well, I don't think, well, the things that were commented on in the original procedures review were not addressed. That was my judgment when I read the PROC.

DR. ZIEMER: So the previous matrix items still hold under PROC-90?

DR. MAKHIJANI: So you need them, I think you need them transferred. If you would like, we can do that.

DR. ZIEMER: To the new matrix?

DR. MAKHIJANI: Yes.

MS. MUNN: Obviously, we need to capture them somewhere, and until we had this discussion, it certainly was not clear to me that we had outstanding items because of our lack of tracking on PROC-90. So, yes, we need to capture that in some way.

DR. ZIEMER: And what I'm saying is in this last column where it says it hasn't been reviewed, in essence, it has been reviewed.

All you've done is put the three together.

MR. HINNEFELD: Right. I mean, there were some changes made, but other changes were made, but they were not made to address the findings in ^.

MS. BEHLING (by Telephone): Let me ask a question here because I realize that we were given, I think it was PROC-92 and PROC-94 to review, and those are also interview procedures. But based on -- and again, this did become a little bit fuzzy -- I didn't recall us being assigned PROC-90 for review. That's why there is a no in the last column.

But if I'm incorrect about that, if the Board has assigned us to review PROC-90,

then that no is not appropriate. But I know we were asked to review PROC-92 and PROC-94 which are also new interview procedures. But I did not recall that PROC-90 was part of, was a procedure that we'd been assigned in the Supplement 3.

MR. PRESLEY: Kathy, this is Bob Presley. If I remember, and I've slipped a time or two, when this was part of the old working group that Wanda and I and Mark were on, at that time, if I remember correctly, we said that this was going to be rolled into a new procedures review and would not be looked at until the new one came out. And at that time I think we set this aside and nobody's done anything with it until PROC-90 if I remember correctly.

MR. HINNEFELD: Yeah, if I recall -- this is Stu Hinnefeld -- if I recall part of the resolution here when we started our discussion of these findings, part of the suggestion was perhaps a listening in on one of these interviews, you know, monitoring an interview on the part of SC&A would illustrate some of the points that we were trying to make in our

response. And that has occurred. I mean, there has been that listening in on, isn't that part of it?

DR. MAKHIJANI: No, no, I think we're mixing up different procedures here. There are three interview procedures that we have reviewed. The first one dealt with the CATI interview.

MR. HINNEFELD: Right.

DR. MAKHIJANI: That's the one we're talking about right now where the three old procedures for CATI interviews were rolled into PROC-90. That was done, that was completed. I don't believe we ever made a request, at least we did not observe any CATI interview. We talked to many of the interviewers when we visited --

MR. HINNEFELD: Okay, that's right --

DR. MAKHIJANI: -- when we visited NIOSH first, and then we visited the ORAU headquarters. And we went into the telephone interview, and we chatted with the interviewers to see how they were done. The thing that you're referring to is the close-out interview procedure which is PROC-92, and we observed that. And that is now documented in the interview review that you just got.

MS. MUNN: Correct, but which does not yet appear on any matrix.

DR. MAKHIJANI: Right.

Then the third one, which is Procedure-97, which is the documentation of site experts and union, interviews with unions which relates to the WISPR database, that has been completed internally in SC&A. Kathy DeMers and I have completed it, but it's still under internal review, and you haven't seen it.

DR. ZIEMER: Kathy, this is Ziemer again. I think you're quite correct technically that we have not asked SC&A to review PROC-90. However, in essence, it's been reviewed under the previous numbers, those three. Were they PROC-4, -5 --

MS. MUNN: And 17.

DR. ZIEMER: -- yeah, under the previous numbers in essence, and so --

MS. BEHLING (by Telephone): That's correct. However, if we don't review PROC-90, where will we capture these outstanding findings?

DR. ZIEMER: That was basically, I think, the question. Somehow we have to make sure

that we don't drop that.

DR. MAKHIJANI: What I can volunteer is maybe I'll spend half an hour opening PROC-90 and making sure that Stu and I agree on the characterization and then just send a, maybe John can send a memo out that it's the same and carry over the findings.

MS. MUNN: If you could do that then that could be one of the items that we bring to the Board during our telephone conference next month as an authority to review PROC-90 to make sure that those things are captured. That seems to be a logical way to approach it.

DR. ZIEMER: It's basically not re-reviewing it but simply making sure exactly the findings that are already there under the previous review that occurred.

MR. PRESLEY: But y'all are wanting to do that right now, aren't you?

DR. ZIEMER: We're not going to do it at the table here.

DR. MAKHIJANI: Whatever the procedure of things are you have to go through.

MS. MUNN: If we classify that as an action item to be addressed for us to discuss at the

next telephone interview, we'll have it squared away, right?

DR. MAKHIJANI: Yes, I think it should be able to be squared away in a couple of hours.

MR. HINNEFELD: I think so. And there has been some resolution ^.

DR. MAKHIJANI: Yes, there was resolution on many findings.

MR. HINNEFELD: There was why wasn't there any acknowledgment? Well, we said, well, we acknowledge the fact that we'll improve communication of some of this information. And that's been distributed but ^ has been distributed. One of our resolutions was suggesting attending a CATI, and my recollection was that in addition to doing close-out interviews, there was actually a listening in on the CATI I believe. I mean, this goes back like two years.

MR. PRESLEY: It goes back further than that I think.

DR. MAKHIJANI: Obviously some revisiting of the record is necessary because --

MR. HINNEFELD: We proposed, I don't know if it actually happened, we proposed that.

DR. WADE: The important thing is not to lose the finding. So what's going to happen is that SC&A is going to look at PROC-90. If PROC-90 is indeed PROCs four, five and 17 combined together with some editorial changes, they'll report that back to the work group. And then we'll start to carry into the matrix those findings. We can make a note that four, five and 17 are now combined in PROC-90. And then the work group will have its ability to track those items.

DR. MAKHIJANI: And whatever has been resolved we can carry that over also to keep the record of whatever has been resolved.

DR. MAURO: Mechanistically we will be getting to a summary report, the matrix that just came in for today's meeting that will work its way into this, into the next revision of this. So mechanistically we'll capture it in the matrix that we will be covering. I think that's --

DR. WADE: Don't lose the coincidence of 90, four, five and 17, otherwise we'll do this again.

DR. MAKHIJANI: I'll take care of that, Dr.

Wade.

DR. ZIEMER: A follow-up question if I could on the other two which are OTIB-008 and OTIB-010 which are the other two that Kathy mentioned. Both of those had outstanding findings in the old versions. My question is and now they've both been revised. Is it NIOSH's contention that the revisions addressed the findings? It hasn't been verified obviously but --

MR. HINNEFELD: It was our intent to address the findings.

DR. ZIEMER: Okay, so somehow as we go forward these remain unresolved until we do the actual review of those two. Is that correct?

MS. BEHLING (by Telephone): Correct.

DR. ZIEMER: In other words NIOSH now says they have tried to address these outstanding findings in the new revisions. And until we actually review those, we don't have confirmation and closure on those items.

DR. MAURO: Well, the question I have is mechanistically we have a tracking machine that we're building as we speak. That machine

has been, of course, originally the first matrix. And now we have another matrix that we're talking about with the next set of 30 which is the second set of 30. There will be a matrix that goes with the next set that's going to be coming out in a week or so which will have 40 new reviews now --

DR. ZIEMER: We almost automatically have to look at the revisions in order to close out the matrix.

DR. MAURO: Yeah, so what I'm asking the working group is should we, as we march through this process, should we only have one matrix that is, that rolls and brings from behind everything to the current so that, see, right now one of the things I'm concerned about is that we have different matrices and that not everything is being tracked on a single matrix related to Task Order 3.

And if we could have a single matrix that somehow we allow, for example, the OTIB-810, the PROC-90, and anything else that carries over into the next set of reviews somehow gets captured in the latest matrix, otherwise we're going to have too many

matrices.

MS. BEHLING (by Telephone): Excuse me, John, I would recommend that we continue doing what we're currently doing. What I've done here with the first set of procedures that we reviewed and that was identified in Table 2, I've looked at all of the findings that are still outstanding and need to be resolved in a revision.

When we look at that revision, I put a table up front that is a little bit different than our checklist. We still include the checklist, but my first table identifies here are all the findings from the previous version of this procedure. So we are capturing everything. But to put everything into one matrix, ultimately it will roll out into one matrix when we're done with it. But we have to keep separate matrices from my point of view for each published document we put out.

The first set of procedures that we did we have a matrix for that. The second set of procedures, which is Supplement 1, which we'll be discussing today, has a matrix. But that matrix is going to incorporate anything

that we have reviewed from the first set that was not resolved in a revision. So it gets carried over. Now when the Supplement 3 comes out, that will also have a separate matrix, and I think it's very important to have a matrix with each separate published SC&A document.

DR. MAURO: So mechanistically then, when we deliver our next product within a week or two from now which will have the next set of 40 or so procedures reviewed, that very same document will contain all of the history rolled up into it in some form, not necessarily into a single matrix, but there will be -- see, I'd like it in one place so that when we deliver our product that deals with Task 3, in that one volume it's all there, and we don't have to go back to previous products to sort of reconstruct what happened in the past.

MS. BEHLING (by Telephone): We won't have to do that. When we submit our Supplement 3 next week, we're also going to submit a matrix. That matrix will include, in fact, if you go to page three of the document that I

sent to you yesterday, my Table 2, the very first item on there is OCAS IG-001, External Implementation Guide.

When I reviewed that implementation guide, the revision to it, I identified all the previous findings, and if there were any, which, in fact, there are several on page four, I believe, that are indicated a no, that that was not resolved in revision two of the IG-001, that will be captured on the Supplement 3 matrix. So everything's been rolled up. And I think that's the easiest way to do this, and it captures everything. Nothing's falling through the cracks.

MS. MUNN: There's a great deal to be said for Kathy's position. There's one major concern from the Chair's point of view, and I don't know whether the other working group members have that same concern or not. One of the confusing things for me is the difference in the titles of the documents that we're working on. If we had Table 1, Summary of the First Set of Procedures; Table 1, Summary of the Second Set of Procedures; Table 1, Summary of the Third Set of Procedures; it would be

much clearer for me to be able to follow what we're doing.

It is confusing to go from Table 1, Summary of First Set, to a document entitled Summary of Task 3 Supplement One, Rev. 1, Procedure Finding Matrix. The titles themselves are less than clear. If we can't re-impose upon SC&A to bring us a suggestion with respect to the titling of these documents that will make it simpler for us to be able to follow and understand exactly what we're talking about. If we can identify Table 1, Summary of First Set; Table 1, Summary of the Second Set and the date, then we will always know which procedure we're working. Is that amenable?

DR. MAURO: Absolutely, in fact, that's what we're doing on our Task 4 work where we have the first set, the second set, the third set --

DR. ZIEMER: And then you can do roll ups also.

DR. MAURO: And no one gets confused. This one I agree. Calling it a supplement just --

MS. MUNN: Really confuses.

MS. BEHLING (by Telephone): Yeah, and I agree also. In fact, we've talked in house about that, and our technical editor has also been critical of that. I guess initially when we did our first set of procedures, we didn't realize that that was poor planning to make these Supplement 1, Supplement 2, and we'd be happy to change that. I agree. I agree.

DR. WADE: Possibly after lunch, John, if you could come back and tell us how it will be. I'd rather not wait for another meeting. This shouldn't be a hard issue for you to resolve. So maybe after lunch, you can caucus if you need to and then say this is how the nomenclature will be henceforth, and then everyone can expect that.

MR. PRESLEY: This is Bob Presley. Can I make a suggestion? If you start these things by procedure review, that way we can, we know what we're looking at. And then you can say summary of first set, summary of second set and then ever how many tables. But if you got procedures review as the first part of the title, then we can go to that and pull it up and see. That'd help me.

MS. BEHLING (by Telephone): Okay, very good.

MS. MUNN: There's one other request with respect to considering titling and how we approach these. The roll up would be very helpful if it dropped off things that had been resolved and retained only the outstanding issues that we have not yet addressed. That way we do not have page after page of items which we have, in fact, closed but are keeping on the record as an item that has been addressed.

Historically we would retain what we already have showing completed, but on the roll up that we continue to work with on a continuing basis, we would retain only outstanding items. Does that make sense?

MS. BEHLING (by Telephone): I agree. That's fine.

MS. MUNN: All right, that's good.

DR. ZIEMER: You might want to distinguish between a working roll up and an archive of everything that's been resolved. So again, that's in titling and --

DR. MAURO: Let's talk a little bit more

about that. Every procedure has a history, and at some point in that history it ends. Having the record and knowing where that record is of the history of what transpired has value.

MS. MUNN: Absolutely.

DR. MAURO: Now that would, now under your protocol the last matrix that we are working with would not have that history. In order to capture that history or to resurrect it, we would have to go back to historical documents that we are no longer working with, and that could end up being -- in other words, I could see the day coming when someone would want to hear the story of PROC-92 and how it was eventually closed out and what process went through the decision making which could have great value. But it won't be captured in the latest matrix.

MS. MUNN: But if we have two roll ups, one which shows the documents that have been reviewed and resolved, all issues resolved and the date of the resolution, then anyone who wants to research it can start from that date of resolution and work back through minutes to

identify what has transpired with respect to that particular document.

DR. MAURO: So let me see if I've got this right and see what happens. So we have two tracking systems, one is to track the active procedures that are actively undergoing closure, and one is to track those that have been closed so anyone who wants to resurrect the history can do that.

MS. MUNN: Correct, and if we put the resolution date, the final resolution date for that particular document, then anyone who wants to can follow backward.

DR. WADE: John, if you could add that to the nomenclature, after lunch. I think Dr. Ziemer's word of an archived version and then a working version so now those are the two things that we have. One an archive version where we don't lose anything. But then when the work group comes and sits it needs to know what's in front of it for that meeting without having to sift through 47 pages. So if you could think about that.

DR. ZIEMER: Also knowing which ones have been looked at so we're not repeating.

DR. WADE: If you could bring us nomenclature.

DR. BRANCHE: If I can ask, this is Christine Branche. There's the issue of nomenclature but also the template. It doesn't mean that necessarily you have to have an example of your template after lunch, but if you could forward something relatively soon because I think in the documentation I would suggest that there be difference in fonts that would distinguish those from ongoing cases, I think that would help facilitate.

MS. MUNN: An item for the Board's telephone conference. Agreed?

MS. BEHLING (by Telephone): Agreed.

DR. WADE: What's an item for the Board's telephone conference that Christine just mentioned?

MS. MUNN: The template.

DR. WADE: I'd like to get the nomenclature set today.

MS. MUNN: Yes, we'll try to do that. If that means extending lunch a little bit, we can always find a way to extend lunch.

Anything else on this particular

topic?

(no response)

MS. MUNN: Kathy, thank you so much. We really appreciate it.

MS. BEHLING (by Telephone): Okay, I hope I didn't confuse things. We're trying to resolve all of this and make changes to our titles for our documents.

DR. WADE: Out of confusion comes clarity, so you helped us.

MS. MUNN: As long as I can identify, as long as any of us can identify which set of reports we're working from, then we're just fine. And I think our effort to do something with the titles and how we actually set these things apart will resolve that for us hopefully yet today. Thank you so much.

MS. BEHLING (by Telephone): You're welcome.

MR. HINNEFELD: This is Stu Hinnefeld. While we're on this I'd just offer that three of the five documents have not yet been revised are imminent. I mean they've been revised. They've been through internal review. They essentially just need signature for the revision to be done. That's three

OCAS TIBs, five, seven and eight. Are those the numbers? Yeah, five, seven and eight, OCAS TIBs five, seven and eight, the review will be signed any day now. The revision will be signed any day.

MS. MUNN: That's good. If we have any possibility at all of another face-to-face meeting of this group which is in my opinion likely prior to the January meeting, hopefully early in December I think, then we will take those particular items under review at that time.

MR. HINNEFELD: I'm sorry, six, seven and eight.

MS. BEHLING (by Telephone): This is Kathy, just one question. You said five, seven and eight.

MR. HINNEFELD: Yeah, I was wrong. I was wrong, six, seven and eight.

MS. BEHLING (by Telephone): Okay, because I was going to ask about six. Then I'm good.

MS. MUNN: All right, very good.

DR. MAURO: Before we close this, just again in terms of marching orders for SC&A, sounds like at the next Procedure working group

meeting, at this meeting we will resolve nomenclature, format, template-related issues perhaps after lunch for this archive versus active. Also, we will also move forward on proper titles for the different procedure deliverables, the Supplement 1, Supplement 2, Supplement 3 concept is going to be replaced by a better title. That means moving forward at the next working group meeting, all of our work products, whether they be matrices or reports, will reflect the changes we're talking about. So that's, I guess, the marching order for SC&A. I just want to make sure it's ^.

DR. WADE: We appreciate your tasking yourself. We've come to expect it.

For the record we have a Board call on the 6th of December, just for the record.

MS. MUNN: And sometime in or around that same time this group probably will need to meet because if we get later into December, we're going to run into holiday problems. And we want to have this particular part of our job cleaned up before the January face-to-face meeting if we can in Las Vegas.

SC&A'S REVIEW OF PROCEDURE 92

Next item of business because it touches a little bit on what we have already been discussing here relative to Procedures 90 and 92, as all of you here know, SC&A has released their review of Procedure 92, has a number of findings on it. This is a significant procedure, and the findings are themselves significant.

NIOSH clearly has not had an opportunity to react to any of those findings. And as a result, although there's been several requests and inquiries as to whether or not we are going to address that today, it's the Chair's feeling that it would be premature of us to address that given that the Agency has not had review time. That needs to occur prior to any action and any extensive discussion here.

I'd like to get a feel from NIOSH as to what their expectation is with respect to response to those particular findings. I was advised in a sidebar conversation that this procedure was at one time on our list of to be reviewed and came off of it which explains its

lack of appearance on the current matrix. But the assumption is that it will then appear on forthcoming matrices. That being the case we're back to the question of what's a reasonable time for NIOSH to have some response to those findings for us.

MR. HINNEFELD: Well, I conveyed the document over to ORAU who actually performs the close-out interviews and asked them to, because of the nature of the findings and the nature of this process which is the direct interaction with the claimants. I wanted to make sure you had a careful and thoughtful, you know, read these things with an open mind and what can we take from this that we can adopt. It's not 100 percent sure that we can adopt everything that's suggested. And a clear statement of compensability of a claim is not something we can do. That's not our decision to make. That's the Department of Labor's decision to make. So there are some, but we intend to seriously evaluate what can we take from this and provide responses. And I think by about the end of the month is when I asked ORAU to provide the reaction. You

know, what's the reaction to these findings, these issues. So with our another couple weeks after that we would probably be able to discuss in some form I would think because once we get their initial response, then we have to evaluate that as well.

MS. MUNN: So is it reasonable for us to assume that at our next face-to-face meeting which we expect to hold between now and January of 2008.

MR. HINNEFELD: Well, that was my expectation was that there would be another face-to-face meeting approximately midway between now and the next meeting. So when I said was, what I'm trying to do is get things that can be addressed at that meeting lined up so that we're prepared to talk about them. And this would be one of those items.

MS. MUNN: Fine. Is that agreeable with everyone here?

DR. WADE: Still a little bit more specificity on time. So you're saying the end of October.

MR. HINNEFELD: I'm saying the end of October for ORAU to deliver product to us.

I'm saying more like mid-November before we, OCAS, would be prepared to discuss.

DR. WADE: Okay, but what you're prepared to discuss we have to give our colleagues an opportunity to have reviewed and be prepared to react.

MR. HINNEFELD: Correct.

DR. WADE: So if you were to say mid-November NIOSH's comments appear. They go to the work group and SC&A. Then the work group and SC&A would be prepared to engage in meaningful dialogue, beginning of December?

MS. MUNN: Hopefully.

DR. MAURO: SC&A, yes.

DR. WADE: So that's a plan. So that takes us back to that early December opportunity for the next face-to-face. But then the commitment is NIOSH by mid-November. The work group and SC&A with NIOSH at a work group meeting early December.

MR. HINNEFELD: Will there be a matrix prepared for that report?

DR. MAKHIJANI: We could do so. I mean, there are not many findings, but we --

MR. HINNEFELD: I know there are a handful

of findings.

DR. MAKHIJANI: -- could put it in the form of a matrix.

DR. WADE: It's good to maintain the continuity.

DR. MAURO: Yes, the choice becomes we can make that matrix part of the overarching matrices that we're using to manage Task 3, or we can have that as a special one similar to the way we dealt specially with OTIB-052. There was construction. That one had its own special treatment because of its importance. We could treat this one as a special one with its own matrix. It'll be a relatively brief matrix. I think the number of findings are limited, but whatever the preference is of the working group, separate matrix or incorporate it into the next overarching matrix.

MS. MUNN: I'm open to suggestion.

DR. WADE: When will we see the next overarching matrix?

DR. MAURO: Well, I guess the next overarching matrix will be part and parcel of the next deliverable which will be in two weeks. We will be delivering that third set

of procedure reviews which is the name we will call it as opposed to Supplement 3, in two weeks, less than two weeks. It will include as an attachment a matrix of our findings for the ^. In fact, our plan, our mode of action in the future is going to be to include matrices in all our deliverables right up front rather than wait. And in that very same matrix I guess we can accommodate this particular OTIB-052, I'm sorry, PROC-92, or have it separate.

DR. MAKHIJANI: One little wrinkle is that the Procedure 92 review is not that big.

DR. MAURO: That's true.

DR. MAKHIJANI: ^ that you're going to get. And I think if you want it more rapidly, it's very straightforward. I didn't do it because I haven't been asked to do it. I consulted with John about that. He said don't do until the working group asks you. But I could do it on relatively short order and send it out to you.

DR. MAURO: Yeah, Arjun makes a very good point. It turns out PROC-92 --

DR. MAKHIJANI: Before the end of this

meeting. I can just sit on the side.

DR. ZIEMER: I believe there were four findings in this, right?

DR. MAKHIJANI: Yes, and one of them had some subheadings.

DR. ZIEMER: It seems to me we could have a working matrix for this and merge it into the main matrix at some point. Otherwise, why separate it out although I might tell you, and, Wanda, I got a phone call from a court reporter here, a news reporter, on this one. I think you may have also.

MS. MUNN: Yes, I did. I played telephone tag with him.

DR. ZIEMER: This one is already in the spotlight in the media -- and you got a call, too.

DR. MAURO: Yeah, I got a call, too.

DR. ZIEMER: I think it was Rocky Mountain News.

DR. MAURO: Yeah, it was this Laura Franks; she called me.

DR. ZIEMER: And called about it asking which work group was going to review it. I told Laura that it was a procedure, and

therefore, would come to this committee, but as far as I was concerned at that time unless the Board wanted to look at this separately, but I think it is a procedure, and it's appropriately being reviewed here.

But I think she's going to be tracking the outcome which tells you that this particular procedure has a level of broader interest amongst our constituents than many of the procedures do because it speaks to the interface between NIOSH and the Board and the claimants, and that's where the rubber meets the road. So I think a careful review of this is important and maybe a working matrix so we make sure we address those issues and not wait for the bigger bulk of everything else. In my opinion that's, I don't know how the others feel about it.

MS. MUNN: I think you're absolutely correct, Paul, and when I received the first telephone call from Ms. Franks about this I was newly back from vacation, had not looked at what I had on my file and had no idea what she was talking about and told her I wasn't planning on looking at anything like that.

Then I realized after I had seen my material what the issue was and had tried to relay to her that we would address it but not in depth this time simply because it had not had an opportunity to be properly vetted and would not be so for several weeks. So, yes, I do feel unless there is strong evidence to the contrary that perhaps a differentiated matrix like we did with 52 would be in order here. Especially now that we have identified our expectation of having an archive that we can incorporate these issues into once they're done.

It's always been some concern for me that when we do separate matrices for any of our documents, they may not get incorporated in any master document.

DR. WADE: So here's where we stand. For the record SC&A has completed its review of PROC-92. SC&A is going to prepare a working matrix of findings and share it with the Board and NIOSH this week. NIOSH will prepare its reaction and comments back to the SC&A review and matrix items by mid-November sharing them with the Board and SC&A, an anticipated face-

to-face working group meeting in early December.

MS. MUNN: Agree?

DR. WADE: At some appropriate clime.

MR. GRIFFON (by Telephone): Wanda, this is Mark.

MS. MUNN: Yes, Mark.

MR. GRIFFON (by Telephone): Just one comment, I agree with everything that was said. I wonder, there was the recommendation in this report for the Board to re-interview these individuals that were subjects of the SC&A review. And I know that's been a topic of Board discussion in the past, and I wonder if we might bring that discussion back to the Board meeting this time to get ahead of the game to see, you know, can we do that? I'm sure Legal has an opinion. I just wonder, you know, everything else I think I agree. We should wait until NIOSH has a chance to respond, but maybe we want to get ahead of the game on at least a discussion of can we, you know, it might be another discussion whether we choose to, but can we do that and are there legal hurdles to go through or over or to work

with NIOSH on?

MS. MUNN: Yes, Paul.

DR. ZIEMER: Mark, we have legal counsel with us today. They may not be in a position to make a determination, but at least they hear the question, and I would think perhaps at the Board meeting we can raise the issue and maybe ask Legal to look into it. But I'm not sure we need an answer today, but at least you're suggesting that they at least begin to look at this I think, right?

MR. GRIFFON (by Telephone): That's what I'm asking that we all just consider discussing it later this week, yes.

DR. ZIEMER: There's Liz.

MS. HOMOKI-TITUS: I was just going to say we've taken note of your request and we'll work with Lew Wade to get a determination, but it won't be at this meeting.

DR. WADE: Perfect. Do you understand everything you need to understand, Liz, to undertake the developing --

MS. HOMOKI-TITUS: The Board wants to consider speaking with people that have been interviewed by SC&A.

DR. ZIEMER: There's a recommendation in here that I think Mark is asking can the Board, if the Board agreed with it, could they legally do it.

DR. WADE: Let's put the recommendation on the table so that --

DR. MAKHIJANI: I just want to clarify what's in the report. There were two claimants who had given substantive information during the close-out interview. And SC&A thought that it might be useful if the Board directly or through its working group or however you decided might interview those two people. As I understand it their claims have been, part of these claims have been completed and the paperwork is done at the Department of Labor and so on.

MR. HINNEFELD: I don't know the status of --

DR. MAKHIJANI: I believe -- I did check that, and it's my understanding -- I haven't checked it recently -- but --

MS. HOWELL: Arjun, when you say substantive information do you mean new information on their claim?

DR. MAKHIJANI: During the close-out interview? Yes.

MS. HOWELL: I have read the document, but I'm just trying to make sure that I understand. I want to frame what it is you're --

DR. MAKHIJANI: Yeah, I don't know what I'm allowed to -- yes.

MS. HOWELL: We can talk about it later.

DR. MAKHIJANI: Yes, I think I'd like to give you that information offline. There was substantive information in relation to the dose reconstruction that we talked about.

DR. WADE: But the Board's or the work group's discussion with these people would not be about collecting that information and providing it to the process. It would be about the Board's review of Procedure 92.

DR. MAKHIJANI: Dr. Wade, yes, our comments were not about the dose reconstruction. It was merely because the close-out interview, part of the purpose is to make sure that if there's any new information that's provided, that that should be considered by NIOSH before the final dose reconstruction is done. And

there was some kind of gap, we felt, in between the interview, the information that was provided and that full consideration had needed to be done. That's why it sort of became an important point of the report. As the report said that we didn't feel that was fully considered.

MS. HOMOKI-TITUS: So why don't you clarify for me now that Arjun has said that, exactly what the Board would like to do? Because now I'm a little bit confused.

DR. WADE: Do you want me to do that or would you, I mean, I can attempt to do that.

MS. HOMOKI-TITUS: I don't know if the Chair would like to do that?

MS. MUNN: I believe what I heard is first of all we will not get a legal opinion on whether re-interviewing these people is possible at this meeting.

MS. HOMOKI-TITUS: No, you will not --

MS. MUNN: We will not.

Second, is my understanding that we are being asked if a re-interview, a second re-interview, now of some of these people is possible, and if so, by whom with respect to

this alleged additional information that's out there.

MS. HOWELL: I'm sorry to interrupt. Would the Board, so the Board is questioning whether the re-interview should be by SC&A or NIOSH?

MS. HOMOKI-TITUS: Or by the Board? So the Board wants to re-interview people to gather substantive information for a dose reconstruction?

DR. ZIEMER: We cannot speak for the Board here.

MS. MUNN: No, we can't.

DR. ZIEMER: Mark has raised this question and suggested that we bring it up at the Board meeting, and I was simply trying to confirm that you had heard what Mark's question was, and it had to do with the legality of the Board being involved in a re-interview process. Whether the Board wants to do that has not been determined, and I think the Board has to make that determination, not this work group. We can recommend something, but I --

MS. HOMOKI-TITUS: So are you only recommending that you actually do the interview or you listen to an interview?

DR. WADE: I think there's a nuance here that has to be made very clear. This is not about gathering information for the purpose of dose reconstruction or an appeal to dose reconstruction. It is not that. What this is is learning from people who have been through the process about the process.

MS. HOMOKI-TITUS: So you wouldn't actually be asking for the substantive information. What you would be saying is do you as a petitioner feel like your information was addressed, that kind of question.

DR. WADE: Correct, because if we ask you the first question, we know the answer's going to be no. So to explore the possibility of the Board learning about these people's experience with the process that they're reviewing, there's a possibility --

MS. HOMOKI-TITUS: No, that's very different from gathering substantive information.

DR. WADE: -- the question is tell me about your new information. I want to see if your dose reconstruction was done correctly. The answer to that I'm sure will be no. Right, Arjun?

DR. MAKHIJANI: That's correct. I think, Dr. Wade, you have the ^.

MS. HOMOKI-TITUS: And if the Board, as Dr. Ziemer said, wants to re-address that later.

DR. WADE: But this is about a review of a procedure and talking to people who've experienced the use of the procedure for the purpose of commenting upon the efficacy of the procedure.

DR. MAKHIJANI: And the whole point of the comment, and it states in the report explicitly just so there wouldn't be any confusion, that wasn't a comment on the dose reconstruction itself, whether it was right or wrong or whatever. But it was a comment on how the information provided was handled.

DR. WADE: Consistent or not consistent with the procedure.

DR. MAKHIJANI: That's right.

DR. WADE: I think you understand that was the question.

MS. HOMOKI-TITUS: I do understand that.

DR. WADE: The Board can decide whether it wants to really ask you to consider this when the Board meets, but it's very important we

distinguish between the business of dose reconstruction and the business of reviewing procedures.

MS. MUNN: I need to be very sure that the Board Chair has clearly, in his mind, what the question's going to be that's placed before the Board because I'm uncertain what the recommendation of this group needs to be with respect to the larger Board meeting on Thursday when we report.

DR. ZIEMER: Well, first of all, I think Mark as an individual Board member will probably want to raise the issue. We should recognize that this report just came out. I saw it for the first time after the reporter called me. I had been on travel also, and when she called and wondered what we were going to do with this report, I said give me the title of the report and the number. I hadn't, and I told her I had not even read the report yet.

And I don't know how many Board members will have seen it and be prepared to even make a determination at the meeting on what they think we should do. I think the

only thing we will have is the question that Mark has raised, can you be thinking about if the Board in the future accepts the recommendation, and not everyone will have even read it, and I don't think we want to dig into the report in detail, but should that occur, and you can read what the recommendations are and give us an opinion. That's what's going to happen I think.

I don't think we should discuss the report in any detail having it just come to most members within the week or so. And it's a pretty detailed report and amongst a lot of other things that we have like an extensive Hanford report very recently.

MS. MUNN: It would not be productive for us to spend Board time discussing this in my view.

DR. ZIEMER: So I think the only thing we can do is point out that we have the report, the matrix is being developed. There is a recommendation that will raise this issue and let Mark raise it.

MS. MUNN: Mark, are you --

MR. GRIFFON (by Telephone): Yeah, my only

point was, and just as Lew had put, my only point was to say it is not that we accept the recommendation from the report. We're still reviewing that. But assuming that we do, is this a viable option for the Board to pursue? Are we allowed to re-interview these people with -- and I think Lew's words are very well put, looking at the effectiveness of the procedure and the interview process not to gain more information about the particular DR in question but to look at the effectiveness of the procedure.

MS. MUNN: Mark, since you are likely going to be the person who will bring this up, would you do us the good service of during our copiously free time over lunch, would you put together the exact words that you anticipate using so that it will be crystal clear for all of us this afternoon before we go away exactly what you expect to say on Thursday when this issue is raised? Could you do that?

MR. GRIFFON (by Telephone): Sure.

MS. MUNN: It would be very helpful. Thank you so much. And I won't worry about what the real issue is. You're going to formulate it

for us specifically.

ACTION ITEMS FROM PREVIOUS MEETING

Now let's move on to our action items from our previous meeting. We can address this in one of two ways. Either we can start with the matrix and try to check off these action items as we go along, or we can ask our NIOSH folks if they want to go down the action item list and check off those as we go. Which would you prefer, gentlemen? It's up to you.

MR. HINNEFELD: Up to us?

MS. MUNN: Yeah.

MR. HINNEFELD: Well, are you talking about your action item list in your e-mail?

MS. MUNN: Yes, it's the same one that we put together --

MR. HINNEFELD: I think we can start through these.

MS. MUNN: If you would like to do that, then please do.

DR. ZIEMER: Well, we need a matrix before us that associate with this?

MS. MUNN: Perhaps it would be a good idea for you to have the matrix.

DR. ZIEMER: Which dated matrix is it?

MS. MUNN: It says Summary of Task 3, Supplement 1, Rev. 1 Procedure Findings Matrix. And at the bottom right-hand corner it says revised draft September 25, 2007, in red. Stu sent that to us last week.

MR. HINNEFELD: Well, okay, speaking from the action item list in the first action there under NIOSH's reconsider the content of OTIB-020. It says more detailed guidance in the ^ which I believe is the coworker, the general coworker approach document. Is that correct? OTIB-020?

MS. MUNN: Page five I believe.

MR. HINNEFELD: We've added some additional information to the matrix in red. It's at the top of what looks to be page --

MS. MUNN: Page six.

MR. HINNEFELD: -- six that describes some of the difficulty in developing the standard set of language in OTIB-020 to discuss acceptability of dataset. I believe the finding gets to the, how do you determine if the coworker dataset that we're using in a coworker approach is a good, quote, good set of data? I believe that's what we were asked

to address. And is there a way to include the criteria that we use when deciding the dataset is good enough for coworker; is there a way to include that time period in OTIB-020?

And so our initial take on that is because of the kinds, you know, the types of data formats you're going to see in coworker datasets, it's a little hard to determine ahead of time what might be an acceptable test to do that. That's kind of what we talked about at the last meeting.

In subsequent conversations with at least one member of the ORAU team, well, if we have kind of the same thing, we use kind of the same thing each time which is we try to match the dataset, the data in the dataset, to the data we received for that claimant in the response to see if those pieces of data ^.

In other words, if the coworker dataset has personal identifiers, which we try to get. It's based on personal identifiers. Does the data in the coworker dataset for that individual match what the Department of Energy sent to us when we asked for that person's exposure history. So that's the kind of test

that’s done.

And then there’s a sampling that’s done based on the size of the data. We don’t check every person. A sample that’s selected and the test is run to see if you get a readable match on the data DOE reports versus the coworker data.

So that is a test that’s pretty consistently used on these coworker datasets. But it may not be all, and it may not be sufficient to really describe everything in the case. So it just seems like, you know, upon thinking about this, we don’t ask, why don’t you and ORAU go think about this. What could you do? Is there some language you could put in there? That’s essentially what we were asked to do.

And so we thought about it, and I asked the people who know what they’re doing, we talked about one of them, and they came up with that potential thing. But really they said I don’t know how comprehensive that’s going to be to put something like in there. It seems like that may be something you can say there, but it doesn’t really add anything

because each of the specific coworker dataset procedures is supposed to describe what was done to decide if this was an okay dataset to use and for what years.

DR. MAURO: Let me add a little to that, and, Hans, can certainly add more. Hans was the original author. But it comes down to, the procedure itself says, well, listen, you have a worker, and you're going to make a determination based on all the information you have regarding him whether you're going to assign to him an ambient dose, in other words, this person really wasn't exposed. The only exposure he might have received could have been from an ambient environmental dose.

Or this worker may have gotten some exposure so therefore, we're going to assign to him a 50 percentile value out of the coworker model. Or here's a worker that he got exposed, but he wasn't monitored and probably should have been monitored, and we're going to assign to him the 95th percentile value in the distribution of the coworker model.

And I guess our concern in its

simplest form is that, gee, there's an awful lot of judgment that has to be made across that distribution. And it wasn't apparent that that a judgment could be made in a consistent manner based on the procedure. Now certainly, and I guess it sounds like that you do have a process. And when we read the procedure we felt that there was an awful lot of room for personal judgment that could result in inconsistent application of that decision making.

MR. HINNEFELD: Well, I think certainly from OTIB-020 it would be because the site specificity of the information that you would use to make that judgment, there is site specificity because an important part of the information is job title.

Based on a person's job title you can make some judgment about a person who got exposed. If they are a secretary to the president, for instance, that person's probably not exposed. Whereas, if they were a chemical operator, why, if you happen to find one that's not monitored, that person would be exposed. So but those job titles are not

universal. You know, each site will have its own set of job titles, and so you have to make those decisions based on that site.

So again, I may only be postponing the argument here, but it would seem like a site specific coworker TIB because, you know, this is a general one. A site specific one to the extent that specific information can be provided, that would be the place. And even then how specific can it be?

I'm not a hundred percent sure I could sit here and say, yes, by gosh, you could read this, and you'll know whether it's a guy that's a 50 percent or a 95th percenter. I'm not so sure I could promise that. But I think to the extent that any additional specific information were provided, it would have to be in the site specific one because it's just, in that instance you just can't in a general procedure say much about it because the terminology is too different from site to site.

MR. PRESLEY: This is Bob Presley. You'd have to have the location a person was working onsite, too.

MR. HINNEFELD: Sure, and in various sites you have varying degrees of quality of information of where did the person work.

MR. PRESLEY: That's right.

MR. HINNEFELD: At certain sites a particular job title could have worked all over the place. At other places you have enough information you know that he didn't. So I mean it's very specific to the information you can learn about a site or make those judgments.

DR. MAURO: I don't recall whether this also, this was universal in terms of applying to construction workers also or whether this was limited to Operations folks. Because somehow the OTIB-052 falls in here, too. So we've got this hierarchy, you know. This is like an overarching philosophy which in principle, if you have complete information, the philosophy is sound. But you don't always have complete information.

Then underneath that, subsumed within that is the site specific coworker model, and but you say, then you sort of back, in using that philosophy, you move into the site

specific and see if you could implement that philosophy in a reasonable way. And then nested underneath that is OTIB-052 which deals with construction workers.

Now that we have this hierarchy, now we're going to try to try to apply this to construction workers where you have other adjustment factors. So you have built this pyramid, and I guess the process, which is quite sophisticated, does require at each step in the process these judgments to be made. And I guess that's the essence of --

DR. NETON: This came up I think at the TIB-052 meeting we had, sort of déjà vu around here. And I thought at that time we had discussed the idea of the implementation of these things is really, the proof of the implementation is in the review of the dose reconstructions.

And at that time I thought that the Board, or working group at least, had decided that they would try to pull out specific cases where coworker models were used to see, to demonstrate, if NIOSH had or had not chosen the appropriate bracket for those workers.

Because I think our argument at that point went very much along the lines of what Stu was saying was it really is in the implementation. I mean, every site is different.

We have different site-specific TIBs, and they do provide guidance, but until you go out there and look at the dose reconstruction and see how it's being implemented, you really can't tell. So I would say to some extent it can only be determined through looking at how dose reconstructions are being carried out.

DR. BEHLING (by Telephone): Stu and Jim Neton, this is Hans Behling. And as John said I was the one who reviewed this particular procedure. And I concur with this point because I have now had a chance to not only look at this particular procedure but also view it in context with a site-specific coworker data model. And specifically, I'm referring to the Portsmouth situation.

And I concur with you because when you do not look at this in context with a site specific coworker model, all of the questions that I had raised up front are now at this point somewhat answered. And I feel confident

that in combination with a site-specific coworker model to the questions that were raised have been answered.

MR. HINNEFELD: Okay, great, thanks.

DR. NETON: How do we capture that?

DR. ZIEMER: Well, here's SC&A agreeing with the comment. SC&A agrees with the comment or NIOSH or --

MR. HINNEFELD: Our response.

MS. MUNN: And this brings up --

DR. ZIEMER: And I think, Hans, you've seen that in actual cases, right?

DR. BEHLING (by Telephone): Yes, I have. And as I said I'm currently reviewing the Portsmouth site profile, and I've looked at also the site-specific coworker dose model, and I've looked at actual dose reconstruction. And in combination with those three things, the TBD, the site-specific coworker model and the dose reconstruction that made use of that, I'm very, very satisfied with the combination of information that allows for a sound dose reconstruction.

MS. MUNN: This brings up another process issue which we have not yet addressed as a

working group bothering your Chair tremendously. That's the fact that in our matrix we as yet have absolutely nothing in any of the Board recommendation columns. I don't think we even identified exactly how and when we are going to incorporate anything in that activity. It's my view that once we have reached the point where we have just achieved here on this particular issue, we need to be making some sort of notation in the Board recommendation that this is resolved. If we do not do it in this work group, I'm not sure exactly when and where that's going to occur. Has anyone else given any thought to that?

MR. HINNEFELD: Well, I mean, we used a system, I think, similar to the dose reconstruction matrices, the Board recommendation, or there may be some place in common in here. I'm not exactly sure what the title of the next column is in that matrix.

MS. MUNN: Program Actions.

MR. HINNEFELD: Well, there's a Program Actions, but there's also a Board Recommendation and Program Actions. Those are the two that are on there.

MS. MUNN: Yes.

MR. HINNEFELD: And dose reconstruction very frequently after our initial response you'll see a statement, a column there that says either NIOSH Agrees or SC&A Agrees. It says something like that.

MS. MUNN: In other matrices it does, and here it doesn't.

MR. HINNEFELD: And then the Program Action may be NIOSH agrees to revise such-and-such or we change some process in the dose reconstruction world. Or in this one it would be we agree to revise some document. Or the Program Action could be none.

MS. MUNN: Yes, Paul.

DR. ZIEMER: I might add, and I just confirmed this by checking our dose reconstruction matrices, we have another column which is the Resolution column which indicates, for example here's one, NIOSH and SC&A agree on this item or something like that. Or SC&A to do something or NIOSH is to reconsider something. But there's a Resolution column before the Board Action. And you could actually have another column

that would be labeled Working Group Recommendation or something like that even.

MS. MUNN: I'm concerned with the number of items that we have on these matrices that we don't have such a resolution column as we have in other matrices that other work groups are dealing with, and that we don't have the kind of information we were just speaking of earlier with respect to roll ups and when something comes off.

DR. MAURO: So am I correct right now I'm looking at the matrix, where OTIB-0020 exists, and it's on page five of the September 27th draft that Stu sent out. What I'm hearing is that what we could use is another column to the right that says Resolution. And right now we put in closed. So that would close it. So the next matrix for this, this would not be on it.

MS. MUNN: Correct.

DR. MAURO: But it would be on the archive.

MS. MUNN: The archive list, yes.

DR. WADE: Let's explore the right-hand regions of that matrix a little bit more. What would be the heading of the comment where

it says closed?

DR. MAURO: Resolution.

MS. MUNN: Resolution.

DR. WADE: Well, we do need to, there is the issue, we want to leave open the possibility that SC&A could say we don't agree with NIOSH, and then the Board decides that it's closed. So is this resolution column a Board column or -- so we need to just make sure that we cover all the possibilities. There will be some items that will be closed between the two parties. There'll be some items that the Board will eventually have to decide upon, and we need to leave room for that. Do you see what I mean?

MS. MUNN: But the resolution column would be, I believe, presented to the Board for final decision.

DR. WADE: But it'll come in two ways. There'll be issues where --

DR. ZIEMER: It may not be a resolution.

DR. BRANCHE: It's a recommendation, isn't it?

MS. MUNN: We have Board recommendations.

DR. ZIEMER: Well, it's not the

recommendation at that point. It's the outcome of the response and whether or not SC&A agreed to the response or didn't agree.

MS. MUNN: It's the outcome of this process right here. That's what we're looking for.

DR. ZIEMER: We called it resolution in the dose reconstruction matrices, but it wasn't always a resolution. It's sort of the outcome. I think we used that word, resolution --

DR. MAKHIJANI: I think a different title for that might be, might say NIOSH/SC&A status, and then --

DR. ZIEMER: Something like that.

DR. MAKHIJANI: -- Board Action and then Program Action so that it's clear that NIOSH agrees, SC&A agrees so that the NIOSH column in this case SC&A agrees. So then the Board can decide.

DR. ZIEMER: Or it could be NIOSH/SC&A resolution-slash-status or something like that.

DR. WADE: While you're working over lunch on this, John.

DR. MAURO: It'll be a long lunch.

MS. MUNN: That, however, there's more than one opinion apparently on what to do with that. I personally still would support the concept of using resolution for more reasons than one. It's an identifier to us that the work of this particular body is essentially done on that item. And if the resolution column says referred to the full Board, then that's an action for this group to take, but it still is a resolution.

The additional reason I would like to stick with that terminology is that's what we have used in other working groups and in other matrices. Whatever we do, it seems to me that we should develop some kind of consistency so those of us who are working with more than one set of documents and one set of information can follow through without having to put our new hat on every single time to identify what the presentation format is going to be and what that means.

DR. MAURO: It seems to me that what we're maturing to the point in this process where we're starting to understand the nuance in each step. For example, the fact that right

now what we have is agreement between NIOSH and SC&A on a particular technical issue. As far as SC&A is concerned that issue has been resolved, and we have no further comment. Of course, then we go to the next tier which says the working group because the working group heard that. And the working group could very well judge, well, there's still some aspects of it that you're uncomfortable with it.

DR. ZIEMER: Or we don't like either --

DR. MAURO: So that's your purview. It's almost like it's a tier. Then the next step is, well, it's not over yet. There's the Board. So what we will try to do during lunch is to tease out the layers of the decision-making process or whatever the right name is so that we have columns that capture it so that the last column in the end has to be the Board has closed out this item. And if you want to know how we got there, go see the archive.

DR. WADE: Right, John. See, it's important to realize that around this table what's happening is the work group is witnessing discussion between NIOSH and the Board. The

work group can engage in that, but the work group is also witnessing it. If it comes to closure, the work group has to decide whether it accepts that closure. The other important thing to include is that sometimes NIOSH and SC&A agree that intellectually we've closed on issues it will result in the re-issuance of a new procedure. We can't lose that. It has to be tracked through.

MS. MUNN: Lunch is getting longer. I can tell. I do hope that the matrix format does not become so complex that we have so many columns on it that it won't fit on a page of eight-and-a-half by 11 paper, simply because that's the only size my printer will take.

DR. MAURO: I'm going to put something on the table that I'm sure will be controversial, but, see, I think the matrix has served us well to the point but now I'm starting to think it really has to go down. In other words, we've been going this way, right? Going across. And the number of columns and today whether we realize it or not, we've added a few more columns which are important columns that are not going to fit on the page.

Maybe we could make a matrix that goes down and its structure, that is, it has a format where each of these steps in the process are itemized and someone could just go down like PROC-90 would have the same columns concept but go down the page. Could we go down the page? Because right now when NIOSH fills in a response in a little, skinny column, it goes on for three pages. I think it's time to maybe consider going the other direction.

MS. MUNN: Let's think about that after you've identified what needs to be on it. And for the moment I've been asked by more than one person for a comfort break, short, please, ten minutes. We do want to get back through some more of these things before we break for lunch. We'll be offline for ten minutes for those of you who are on.

DR. ZIEMER: What time is lunch?

MS. MUNN: I had planned lunch for 12:30. With any luck at all 12:30, but it may be a little after that.

DR. WADE: We're going to mute the phone. We'll be back with you in ten minutes.

(Whereupon, a break was taken from 11:30 a.m. until 11:40 a.m.)

DR. WADE: We're going back into session. Could I ask one person, the smartest person who's connected by phone, to identify the fact that you're hearing us?

(no response)

MS. MUNN: Boy, listen to that.

DR. WADE: Anybody on the phone. Can anybody hear me?

MS. CHANG: Yes, I can hear you.

MS. MUNN: We have, I believe, completed our discussion of the first item on the NIOSH action item list. The second item is OTIB-0028, comments two and three. I'm assuming that SC&A has received those output files from the Eckerman analysis. Are we all on the same page or am I confusing people? I'm just going down the action item list.

DR. NETON: Which one did you say, Wanda?

MS. MUNN: The second of the NIOSH action item list.

MR. HINNEFELD: Those are the files on the thorium intakes. I sent those like a couple days --

DR. MAURO: So these were Eckerman's files?

MS. MUNN: Yes.

DR. MAURO: Eckerman's files. Yes, we got it. We reviewed it, and everything's fine.

MS. MUNN: So items one and two under NIOSH are complete.

Review the title and content of OTIB-0033 dash 01 and modify as needed.

MR. HINNEFELD: Yeah, I think that may be part of our general discussion of 33 which I think may still be coming up or is that, I mean, we need to talk about we've gotten information on how it's being used and things like that.

MS. MUNN: Do you want to undertake that or is that going to be so lengthy that we need to do it after lunch?

MR. HINNEFELD: Well, I'd like to maybe get a status on the rest of these things and then we can come back to it.

MS. MUNN: All right, let's postpone it.

MR. HINNEFELD: I mean before we go to the matrix we can go back to it.

MS. MUNN: All right.

MR. HINNEFELD: OTIB-0053 I don't believe is

completed yet.

MS. MUNN: Incomplete so it needs to carry over.

MR. HINNEFELD: It's still going through review. It's not published yet, but we will when it's complete provide it to the work group and to SC&A.

MS. MUNN: Did we skip over OTIB-0004?

MR. HINNEFELD: Oh, yeah, I'm sorry, skipped OTIB-0004. We did, in fact, verify that it does describe it is used for uranium metals only, facilities only. And, in fact, there's more information about that in the matrix where we, I think we even cite where it is in the procedure. But the procedure itself does say it's limited to uranium metal facilities.

MS. MUNN: Shall we check the matrix and dispose of that item on the matrix then? What page?

MR. PRESLEY: What page is it on the matrix?

DR. ZIEMER: Page 24.

MR. HINNEFELD: OTIB-0004 starts on page 20.

MS. MUNN: Well, yes, but the only action item we had outstanding was to confirm that it deals only with uranium metal facilities and

not chemical processing.

MR. HINNEFELD: Right, and the additional information is in red. It begins, I believe, on page 21.

MS. MUNN: Do you want to take a minute and read through that?

DR. MAKHIJANI: Hans, it's on page 21.

MS. MUNN: Yes, that's correct.

DR. MAKHIJANI: Page 21 of the one that Stu sent out.

MR. HINNEFELD: Right.

MS. MUNN: The most recent one that I asked everybody to have in hand when we came to this meeting.

MR. HINNEFELD: There's a fairly extensive quote from OTIB-0004 there that essentially says it's only for metal facilities.

DR. ZIEMER: Could I, this is Ziemer. I just want to ask. I know that was a question that was asked, but how does that fit in with this particular finding about the breathing rate?

MR. HINNEFELD: I don't know that it does. I just knew that there was no real finding I don't think that fit to this issue.

MS. MUNN: I don't believe so. There was just a general question raised during the discussion at our last meeting.

DR. ZIEMER: But contextually, why did that arise on this one?

DR. MAURO: You're referring to the breathing rate question or --

MR. HINNEFELD: Why is it there in the matrix I believe is the question.

MS. MUNN: Yeah, why did it --

MR. HINNEFELD: There was no finding for OTIB-0004 related to this. It was a question that arose at the last work group meeting, and so I put the response like on the first finding.

DR. ZIEMER: Well, I guess my question is though why did it arise with respect to this? Would it have made a difference if it was chemically, if there were chemical processing? What --

MS. MUNN: Well, it may have arisen as a result of discussion of item three under OTIB-0004.

DR. ZIEMER: On the recycled uranium?

MS. MUNN: Yeah, where we were talking about

the possibility of --

MR. HINNEFELD: I believe you're right. I believe you're right.

MS. MUNN: -- and I think that's when that issue arose.

DR. ZIEMER: So maybe just move that to the box --

MS. MUNN: Yeah, if you just move it over to that three, then I think that'll do it. Does that satisfy?

DR. MAURO: In terms of the information where it is, now this question of why we asked the question for is it for process facilities or for only metal working facilities? I believe the reason that question came up at the last meeting was the justification for using 100 MAC as an upper bound value for chronic exposure to airborne uranium in OTIB-0004 was based on a review of the literature. And when you review the literature which is cited in their supporting documentation, you find that for uranium metal working facilities, 100 MAC certainly is a bounding value. However, if you include non-metal facilities such as Harshaw Chemical Company,

which is a chemical processing where they process ore with a lot of chemistry, you find that the airborne uranium dust loadings often, the breathing zone, the time-weighted average, could be well above 100 MAC. So it was important to make that distinction. The fact that OTIB-0004 is limited to metal working facilities answers our question. Yes, we concur that 100 MAC is bounding.

DR. ZIEMER: And that deals with finding seven which is the dust loading, the basis for the dust loading figure that was used. Is that right? Rather than finding four?

MR. HINNEFELD: I think finding seven is about resuspension. Actually, it was about resuspension during the residual period.

DR. ZIEMER: Oh, okay.

MR. HINNEFELD: We can move that to three.

DR. MAURO: Move on to that?

MS. MUNN: Move to three or leave it where it is?

DR. MAURO: I'm fine with the response regarding, that it's metal working facilities, bam, problem solved as far as we're concerned.

MS. MUNN: And its placement's okay?

DR. MAURO: Sorry?

MS. MUNN: Its placement on the matrix?

DR. MAURO: Okay, I see it as belonging there, yeah.

MS. MUNN: Very good. No action. Completed.

Now, Stu, we're down to report status of the ingestion global issue.

DR. NETON: That is still being worked. I think I reported last time that we had hired a contractor to help us review the ingestion model, they were assembling it and getting ready to put out a technical information bulletin on it, but it is still in progress.

MS. MUNN: So it will not be ready for this Board meeting.

DR. NETON: It became more complicated than I thought because there's a number of findings that hit on the ingestion model, and it took awhile to actually sift through all of these issues and come out with the crux of the issue. I think we've got our hands on it now.

MS. MUNN: On which of the forthcoming meetings will we probably hear about that?

DR. NETON: It's next on the list as far as

the overarching issues go to talk about on Wednesday at the Board meeting, but I would say by the time of the next Board meeting we should have.

MR. PRESLEY: January.

MS. MUNN: So we'll change it to January, right?

Next item, provide a list of completed and in process PERS. We have that. Is it the desire of this group to pursue that any further at this moment? You have the list. Stu's provided you with a list of the PERS, and we indicated earlier that we wouldn't address that in depth until the reworks are complete. Some of the reworks are still in process. What's the feeling of this body? The same as we were before? We will not do anything substantive until the reworks are done, right?

(no response)

MS. MUNN: Can we anticipate that the December meeting of this group would be an adequate time to get through those or do we need to hold that open?

Paul has a comment.

DR. ZIEMER: Well, Stu I think also gave us a list of when they would be completed, and I see some of them were slated for December 31st.

MR. HINNEFELD: Well, now wait a minute. Those are the PERS; that's not the completion of the cases. That's the completion of the determination of which cases have binned. I mean, you'll notice there are three columns on page one on the first page where it talks about PERS have been completed. And this is a little complicated by the fact that the PER process changed relatively recently.

But the current process is that what we call the PER bins the affected cases into three bins. These are the, actually, we call them potentially affected cases. And they are cases that have been, where final dose reconstruction's been completed, but the dose reconstruction technique that was used in those dose reconstructions may, in fact, be subject to whatever it is we're changing. The PER reflects some change in technique. That's why we write them.

So the potentially affected claims are claims that meet the most general criteria for

maybe being affected. It may be the site. You know, if it's a change that occurs at a site for all time it would be any case from that site. If a change occurred at a site after a particular year, there would be cases where the employment included employment after that year. So the potentially affected cases are the most broad application of who might be affected by this change.

The PER process then bins those into three categories. One is this change, just based on a computer search, there are certain criteria based on and just kind of depends on the nature of the PER and the nature of the change and the extent of the change. Through computer query you can identify certain cases where the dose is going to go up when we adopt this change on this case, and so we want that one back.

There's another, you can also on some of these bin cases into a bin where this case will not go back because there's some criteria that would prevent it, the dose from going up. It doesn't meet all the criteria. And they're in the PER search criteria, written in the

PER.

And then the third bin is, well, we can't tell whether this dose is going to go up unless we actually look at the dose reconstruction report and see precisely what was done against the changes that were done. So then that is the first step of binning.

And so when a PER is complete, all that means is the cases have been binned into those three categories. So all the cases that we've asked DOL to send back have not necessarily been reworked. And the cases that are binned into we can't tell, are not necessarily reworked and may not even be recalled. So when we say PER complete, all we're saying is that we have identified the universe of potentially affected claims by that change and have binned them accordingly. So those dates on the second page, that's not when those reworked cases are going to be done.

MS. MUNN: Before we go any further I'm sorry I didn't check to make sure everyone was on, had the PER list in front of them that Stu sent on the 27th of September. We all have

those. We're looking at them. Then back to the comment that Stu just made, is our expectation in this action item perhaps incorrect? If we're going to withhold in depth review until reworks are complete, will reworks ever be complete in the sense that they'll be done and closed out or will we not always --

MR. HINNEFELD: Well, it's my desire that we will be complete before my career ends.

MS. MUNN: But there will always be, there are likely to be more in the pipeline at any given time. Is that not true?

DR. NETON: Maybe I can shed a little light on this. I think early on the working group and the Board may have been interested in looking at PERS because NIOSH exercised some judgment to which ones were going to go over 50 percent or not. That we would not rework those cases. The way the process has evolved as Stu described it we will not, we will ask for a complete rework on every case that NIOSH would have to do some sort of manipulation of the data to come to that conclusion, a definitive conclusion. So in a sense we are

not triaging now based on some analysis that we could do to say, okay, all cases that are over 30 percent -- or under 30 percent will not go over 50 because the change cannot be greater than X. We're not doing that any more.

The category that Stu explained where we can triage these cases and say it's not affected the case is truly that there's no effect on the dose reconstruction at all. That is, either the person's dose reconstruction was reconstructed using bioassay data from some model that was changed. There's no effect on these cases at all other than a very, this is a very regimented distribution now. So if we say a case wasn't affected it means because it doesn't affect the dose reconstruction at all, not because we don't think the increase won't go over 50 percent.

So these are very finely partitioned bins, and so they're essentially, when the process is done, I think they're done in the sense that we're asking for a rework which means that we will just put them right through

the normal process, the normal dose reconstruction process. And how those get cycled back to us is, who knows? I mean that comes back through the Department of Labor, and they have to issue bulletins and such so that can take some time.

But the other two bins are pretty unique, pretty easily dispositioned. They're either, there was no material effect at all on the dose reconstruction or -- what was the third one now? It goes over 50. We have to look at it. And there's that one case where we're still looking at them to make that determination.

MS. MUNN: So are those bins effectively the three columns that we have here but the wording is not quite the same as you described it here?

DR. NETON: No, I'm not sure.

MR. HINNEFELD: Yeah, the three bins are on the table here.

MS. MUNN: Right.

MR. HINNEFELD: One is returned. Those are based on our query. We determine this one is going to go up. The dose is going to go up on

this. It's going to be affected by the change and so we ask DOL to return this case.

The don't return, is that based on the query we determine that this case is not affected by the change, and therefore, there's no need to return it. And the to be reviewed column is the one where we have to look at the dose reconstruction to determine whether it needs to be done or not.

For instance, if you look on the table, PER number 11 is a K-25 external coworker model change. We don't have a computer query that will tell us whether a coworker model was used in the dose reconstruction. So that means we have to look at each one to determine whether a coworker approach was used in dose reconstruction. So that's why we have to look at all those. So that's why that was binned that way.

MS. MUNN: What's the desire of the work group with respect to the type of tracking we want to maintain on PERs? Is this kind of report adequate for what you want to see or do you actually want to have more in depth discussion after, for example, item 11 has

been vetted further in NIOSH? Are we content with getting this kind of report and asking questions as they come up?

This satisfies the Chair's need for information with respect to where we are now that I understand what the three bins are. I didn't really understand that at the time I received the information. Is there any concern for information other than what NIOSH has given us in this respect?

DR. ZIEMER: Let me suggest something here, at least ask the question. Would it be, do we want to know the outcome of these statistically -- as I understand it now, for example, let's take the Super S thing. There's some 5,000, 4,800 cases --

MR. HINNEFELD: Right, potentially affected.

DR. ZIEMER: -- affected. Would it be of value to know the numbers of cases -- this is potentially affecting?

MR. HINNEFELD: Right, potentially affecting.

DR. ZIEMER: To know the outcome, you know, how many were actually affected? Sort of the bottom line of this?

DR. NETON: It might be more complicated than that in the sense that we no longer do individual changes piecemeal. We will apply all changes that affect that case simultaneously when it comes back for rework. So we get back to Super S, it may have six other changes that are affecting and they'll all be done at the same time.

DR. ZIEMER: So well, they're overlapping these numbers then, too, is what you're saying.

DR. NETON: That was what we agreed to at the Department of Labor. When they send the case back we just rework it from soup to nuts because there's no reason to do these individual.

MS. MUNN: The bottom line question here --

DR. ZIEMER: Well, maybe it's not the bottom line of each line then. Maybe it's overall the bottom line. But what's the final outcome going to be? All the rework, maybe this is a reporting item. I guess I'd be interested in knowing the impact of all the reworks. It's not a, it's just an interest item.

MS. MUNN: For the time being is this kind

of information adequate?

DR. ZIEMER: You're going to know that at some point I guess.

DR. NETON: I think that's --

DR. ZIEMER: If it makes extra work, if it's something you're --

DR. NETON: Now easily I would say that I think we should be able to track that. Of course, every time I say that the computer people cringe.

DR. ZIEMER: Well, I'm not interested in making extra work. If it's something that --

MR. HINNEFELD: Well, I think that the data system that we're setting up, the application we're setting up to track this, the PER process, will be able to us for all the cases that are affected by Super S, how many changed ultimately. And now it can probably also tell us how many of those cases were also affected by other PERS as well during their rework. But it wouldn't necessarily be able to feather out which one really was the key change.

DR. NETON: What I think all Dr. Ziemer's asking is an overall number.

DR. ZIEMER: It would be kind of interesting

to know that.

DR. NETON: ^ rework processing moving claims from non-compensable to compensable.

MR. PRESLEY: The overall total matrix.

DR. ZIEMER: If it's something that can be done readily, I think it would be of interest.

MR. HINNEFELD: I think we'll be able to do that if I understand the design of the PER system, application correctly. I think we'll be able to do that. But it's just, I think it rolled out this week.

DR. MAURO: Do you work within an ACCESS database?

MR. HINNEFELD: Sequal.

DR. MAURO: Same thing.

DR. NETON: It's a relational database.

MS. MUNN: Therefore, I believe I'm hearing this information is, in fact, what this group wants to see from time to time on a continuing basis if the data can be expanded as Dr. Ziemer has requested without additional effort, then that additional information would be appreciated but is not absolutely necessary. Did I state that properly?

(no response)

MS. MUNN: Hearing no --

DR. ZIEMER: I have no interest in making additional work. If it's something you're going to, information you're going to track anyway just to share it, otherwise no. I think it would be of interest to know.

DR. WADE: Just so we're grounded in the Board's charter, the Board's charter when it comes to function instructs the Board of its functions and speaks to the need of the Board to advise the Secretary of HHS on the scientific validity and quality of dose reconstruction efforts performed under this program. Now your question is in order to perform that function is this valuable information for you?

MS. MUNN: Correct.

DR. WADE: I can certainly make the argument that it is, but the Board would need to make that judgment and then ask for what it needs to perform its function.

DR. ZIEMER: Well, I guess if you took the extreme case and said all these are being reviewed and reworked and so on and it didn't change anything, then we'd have a real

question on the validity of some of the changes. I just wouldn't expect that to occur. You're going to be somewhere in between I suppose.

MR. HINNEFELD: Various ones will be varying degrees. I mean, some of these are relatively large changes. Some of them are relatively large changes but only for certain target organs. So it's just going to be a mixture. There may be some of these where the actual change in compensation is very small in the reworked cases.

DR. WADE: So onto the issue of quality and validity of dose reconstructions, the Board could look at this summary information as a barometer. Whether or not it was comfortable with that or wanted to delve further, and I think that's quite reasonable.

MS. MUNN: The reworks could be expected to be all the way across the board I think. For the time being we're happy with what we have until we can identify whether some additional breakout is easy to do without a great deal of additional work.

DR. WADE: I do think it sort of leaves the

realm of procedures and gets into the Board's overall responsibilities.

DR. MAURO: I see this as -- When you think about it, this is where the rubber meets the road: collectively review the procedures, the review of the OTIBs, the review of the site profiles and all the commentaries that propagate through eventually are going to somehow affect all of these thousands of cases one way or the other and in the end closure is, okay, how many cases did it affect and were there any reversals. Then that's where we're trying to get to to see how robust the program is. And this is going to be the ultimate matrix, how robust that is working. It's very important.

DR. ZIEMER: And I suppose you could argue that this kind of information should be in the Dose Reconstruction Subcommittee ultimately because it's changing outcomes for dose reconstructions.

DR. WADE: If it has a place other than the Board, I think that's where it would be.

MS. MUNN: On to the next item.

MR. HINNEFELD: That is complete ^ revisions

of the five documents. I know that OCAS TIB-0008 is finished and is just waiting signature. It's been reviewed and the review comments have been incorporated, and I believe awaiting signature.

TIB six and seven has been revised and is in internal review. Comments, I believe, have been generated, and the author's on vacation, but I believe those will be resolved, those would be final this week and on the way to signature.

The other two, IG-0002 I think is going to take a little more time because of the breadth of the document, the variety of topics. And then ORAU OTIB-0001 I don't have a status on but the revision is being worked on.

MS. MUNN: So at our December meeting we can anticipate having seen OTIB-0006, -0007 and -0008.

MR. HINNEFELD: Six, seven, eight will be done by then so when they're signed should we go ahead and send them to the work group and to SC&A?

MS. MUNN: It would be helpful, I think, for

all concerned if that were to transpire in that fashion. And I'm sorry. I missed your comment on IG-002.

MR. HINNEFELD: IG-002 I don't have a date for when that will be revised. That will, because of the breadth of the document, some comments, I guess, will be kind of a rougher revision or a more difficult revision than the OCAS TIB revision, and OTIB-0001 revision is taking a fair amount of effort as well. So I don't have dates on either of those right now.

MS. MUNN: All right, we'll carry those over on our action item list so that we can keep track of them, and we'll anticipate six, seven and eight in December.

DR. WADE: Six, seven and eight.

MS. MUNN: Uh-huh, OTIBs six, seven and eight.

MR. HINNEFELD: These are actually OCAS TIBs. Normally an OTIB is ORAU TIB. These are TIBs.

DR. WADE: These are OCAS TIBs six and seven and eight. What about ORAU OTIB-0001?

DR. ZIEMER: He said that'll take some time.

MS. MUNN: He said it's going to take a long

time.

MR. HINNEFELD: It's in process. I just don't have a date.

DR. WADE: And OCAS IG-002?

MR. HINNEFELD: The same thing.

MS. MUNN: The same thing. That's the same thing. It's going to take awhile.

MS. BEHLING (by Telephone): Excuse me, Wanda, can I ask a question? When NIOSH does release OCAS TIBs six, seven and eight, am I hearing that SC&A will get that at the same time, and should we be reviewing that in our next set of procedures?

MS. MUNN: You did hear that SC&A will be doing that, will be receiving it. Is that on a list of procedures for you already?

MS. BEHLING (by Telephone): No, I don't believe it is.

MR. HINNEFELD: I don't think they're on. They've been assigned to review them again. I mean, they've reviewed them once, and we've now made a revision.

DR. NETON: It would seem to close out a revision in the matrix would suffice rather than a re-review of the entire procedure.

DR. ZIEMER: It appears that the revised documents are addressing the issues that were raised, so the close-out process has to, in a sense, require a look at what the resolution is in the whole review of that.

DR. MAURO: We have a bit of a transition question I guess that warrants some discussion. Perfect example, we have in Fiscal Year 2008 a budget for Task 3 to review procedures, PERs and ^ and OTIBs, new ones. But of course, at the same time we have this ongoing process of achieving closure some of which is protracted, some of which are not previously reviewed procedures.

I guess right now what I'm hearing is that, for example, in the case of the procedures we're talking about this is really part of the close-out process --

MS. MUNN: Yes.

DR. MAURO: -- from the historical so we need to keep that. I guess from my perspective it's very helpful for SC&A to make a clear distinction between those activities that the Board is requesting us to or the work group, that really is relegated to previous

work. You know, fiscal year 2006-7 as opposed to something that's new and is going to be part of 2008. That would be helpful, too.

DR. WADE: Just, John, as you're building some hours for the close out of site profiles I think you're hearing that it would be appropriate for you to do that for procedures as well.

DR. MAURO: Well, the facts of the matter is Task 3, which is procedure reviews, the Fiscal Year 2007 budget for that work will be consumed this month. We have taken up quite a bit of additional add-ons --

MS. MUNN: Yes.

DR. MAURO: -- because we had the budget and it was a very convenient place to add on some additional work to take care of these things. And we will deliver all our deliverables by, very soon, a matter of weeks which includes this other, the latest one which had to do with General Steel Industries, if you recall it was Appendix BB, and TBD-6000.

Now the reason I'm bringing all this up is any procedure reviews that follow on, let's say into the future, we will have no

resources left in Fiscal Year 2007. We will have to -- once we do additional procedure review activities, including the close-out process for all procedures, we will need to go into Fiscal Year 2008 resources.

Now that being said it is my understanding that we can't do that until we are given direction and authorization by the Board to move forward on those activities. In other words because previously -- and please correct me if I'm wrong -- I guess it was a contractual question.

When we, right now we have the authority to go forward and do all that needs to be done on all the procedures that we were asked to review in the past within the budget that we have allocated. We are rapidly approaching the day where all of the resources that we've allocated for Task 3 activities will have been expended.

But there are ongoing Fiscal Year 2007 procedure review close-out activities that are going to be continued well into Fiscal Year 2008, and that will require us to dip into our Fiscal Year 2008 budget. And we do have money

there, but I was not planning on using that money. I was planning on putting that in the safe for when you do give us direction to do 2008 activities. So we have a bit of a problem, and I guess we're looking for direction from the Board.

MS. MUNN: I can see the dilemma. Frankly, it never occurred to me that this would turn into a contractual problem simply because in my mind, once the Board had directed you to look at a specific procedure, if you raised questions, then activities were necessary to resolve the questions that were raised. And in my mind closure of those issues would be part and parcel of the initial direction. But I can see the concern that you have.

DR. MAURO: I might be wrong. I mean it may turn out that we have the wherewithal to just continue to work and start to use up resources that have been put in Task 3 for Fiscal Year 2008 to do Fiscal Year 2007 work.

DR. WADE: Contractually that's not a problem. What you need to do is if you start to see your free board in terms of 2008 of new reviews in jeopardy because of continuing work

for 2007, you need to notify the Contract Officer of the Board of that. And then the Board -- it's a matter of scope, not a contractual issue.

DR. MAURO: Got it.

DR. WADE: So that's fine.

MS. MUNN: You will follow through on that?

DR. MAURO: I will take care of that.

DR. WADE: If you see it becoming an issue where you need to say, you know, I was going to do 30. I can only do 20 new because of my continuing efforts. You need to let us know that as quickly as possible. But feel empowered to do the work on the close out of previous procedures using '08 money based upon this discussion.

DR. MAURO: I understand.

MS. BEHLING (by Telephone): Wanda, this is Kathy again. The reason I raised the question about, and John talked about one portion of it, typically what we've done in the past is we don't treat this just as an issues resolution process where we only look at the revised procedure for outstanding findings.

We have in the past, just like with

the Implementation Guide One and Four, we review the entire procedure looking at old findings as well as looking at how that procedure is rewritten because very often the procedure is completely rewritten. TIB-0004 is an example of that.

Now I'm not sure if NIOSH is indicating that on TIB-0006, TIB-0007 and TIB-0008 that the only changes that were incorporated into those procedures were based on our findings which maybe we can just go in and say, yes, did they satisfy those findings.

But quite often what we've seen in the past when they make a revision it doesn't only incorporate these findings. They may restructure the report or restructure the procedure or the guidance document and so on. So we make it a completely new review from our standpoint.

The other thing that's nice is if we incorporate these three procedures along with -- in fact, I don't think we finished talking about OTIB-0008 and OTIB-0010, if those get incorporated in for '08 fiscal year work, then again, we can put out one work product.

Everything gets put on one matrix, and we follow everything through very cleanly.

I'm a little concerned about just looking at TIB six, seven and eight and only these outstanding findings. I don't know how to capture all that very cleanly. What I would prefer is that the Board at some point says we will add to the procedures we've already identified for '08, we will add TIB six, seven and eight along with OTIB-0008 and OTIB-0010. I'm just suggesting that. It just makes things cleaner. I don't know if people agree or disagree.

DR. WADE: It's really a matter of degree. I mean if it turns out that the modifications are solely or largely based upon the previous critique, then I think that's one category. If those changes go well beyond those resulting from the critique, and in essence it's a new document, then you need to let the Board and the work group know that.

DR. MAURO: We have a bit of an optics problem in terms of SC&A's perspective. That is I would not as the project manager responsible for the budget and scope find

myself in the position where we end up using up 50 percent of the Fiscal Year 2008 Task 3 budget closing out all the TIBs, and then I have to bring the bad news to the working group and the Board that, listen, we don't have any more money in Task 3 to do any of the work or that we originally hoped we would be able to do for you for Fiscal Year 2008 because we used it as part of the close-out process.

And as you said, it's really a judgment call. When are we just closing out some minor issues on some previously reviewed TIB, and when are we really doing a complete review? And sometimes that's not apparent until you're into the process.

MS. MUNN: Paul.

DR. ZIEMER: My comments are along the lines of what Lew was saying. It might be helpful if NIOSH could identify on these revisions, it seems to me there's three categories.

One is the revision is solely to address concerns raised in the review process and addresses only those. Revisions that are completely independent of that, but NIOSH has

generated a revision because they have seen something themselves maybe that the old procedure was in effect and needs updating or whatever. It's a completely new one. Or something such as Kathy described where the opportunity to make other changes if they're revising it anyway occurs, and you're somewhere in the middle.

I don't know how easily we could identify those so that you would know, okay, on these it is really part of the close out, and you don't have to address anything else. These are really the only changes. I don't know how easily we could identify the nature of a revision.

DR. WADE: Well, the first part of identification would be with NIOSH. Can you say, can you answer that question on these or others? And then if you can, fine. SC&A might offer a critique.

DR. ZIEMER: Why did the revision even occur.

MR. HINNEFELD: Well, I can say for OCAS TIB-0008 that the revision occurred because of the findings from the earlier procedure

revision only addressed the findings in the procedure, and hence the grammatical corrections. I can say that about TIB-0008. I can say that because I revised it. I can't say the same thing about six and seven because I wasn't the person who revised it.

DR. ZIEMER: Well, I'm speaking generically though. I'm not saying you've got to tell us that now. Maybe as we go forward to think about when a revision is done, why is it being done. Is it in response to findings? Is it because, or both?

MR. HINNEFELD: Well, it may be both. I mean there's usually, on a revised procedure there's a record of changes page that describes the change and the origin of the change. And I'm pretty sure on TIB-0008 it says to respond to comments raised by the Advisory Board. So it may say that and to correct other things. You may get something that says that at some point. Now TIB-0008 won't say that because the changes were strictly addressed to findings from the procedures work group. So, I mean, we can tell you, but at some point there will be some

judgment call about other changes that are either important or not.

DR. WADE: And possibly a vehicle to suggest to the work group is possibly on a call between NIOSH and SC&A, you could look at these issues and decide collectively if you think it's a TIB based upon, a modification based upon the review or if it's in essence a modification based on other things and then a new TIB to be considered for review. Whatever you guys decide would guide the process.

DR. MAURO: This precedent, this is exactly what we did with regard to the Savannah River site profile review where the nature of the re-issuance was of a substantive nature, and we actually decided let's not make the review of this new version of the Savannah River a continuation of the close-out process, but let's make it an actual site profile review.

I think it will be very helpful to us if we can make, when we are given direction such as the direction we're receiving now by either the working group or the Board, some judgment be made as best we can whether we want to call this just a continuation of close

out or if this is something that really is new work for Fiscal Year 2008.

MS. MUNN: Can we task NIOSH and SC&A with getting together offline on these three OTIBs that are going to be forwarded to you when they're complete to ascertain exactly what the correct approach is?

DR. ZIEMER: One we know already.

MS. MUNN: Yeah, we know eight's --

MR. HINNEFELD: Eight was strictly to address the findings.

MS. MUNN: Simple findings.

MR. HINNEFELD: I mean, if we can do that, who should we call? Who should I call?

DR. MAURO: For Task 3?

MR. HINNEFELD: Yes.

DR. MAURO: You can call me.

At that point in the process by the way, the sort of close-out protocol, let's say there's an appreciation between NIOSH and SC&A on which old procedures have now been really closed out and which ones really represent a need for new review. At that point do I inform Lew that, yes, here's a table. We'll have them in a table that says here's the way

we see it as far as the list of procedures that really constitute a new review and more appropriately assigned to us as part of Fiscal Year 2008 which my understanding means something that we have to be authorized by the full Board.

DR. WADE: I would inform the Chair of the working group, possibly all members of the working group and me. And then, again, the work group can take that up at the next, at its next sitting as to whether or not it wants to say add that as a new one of the 30 for next year.

MS. MUNN: I would hope that that list would be the result of your previous discussion with NIOSH already so that we wouldn't be having to inquire have you both talked about this.

DR. MAURO: No, this will be an active dialogue that we will maintain.

MS. MUNN: Excellent, so that will be a slight change in our process. In the future that's the way we'll deal with these issues, okay?

Kathy, does that meet your concerns?

(no response)

MS. MUNN: Kathy, are you still there?

MS. BEHLING (by Telephone): Yes, I'm still here. I'm sorry. I couldn't find my mute button. That's fine. That is fine. Yes, it does meet my concerns. Thank you.

MS. MUNN: Very good. Thanks.

Last item on our carry-over list for NIOSH. Update Schedule 2 to indicate all completed matrix items.

MR. HINNEFELD: Schedule 2 being what exactly?

DR. ZIEMER: Was it Table 2?

MS. MUNN: Was it Table 2? Was it Schedule 2? Could it have been Table 2?

DR. WADE: ^ this nomenclature.

MS. MUNN: Yeah, this nomenclature is doing it to us again.

MR. HINNEFELD: Is that it? I couldn't understand exactly what I was doing here unless that meant to on the, put as much information as we had on the Supplement 1 matrix finding.

MS. MUNN: Didn't we have a section that was identified as Table 2?

DR. ZIEMER: We have a Table 2. I don't

know if we have a Schedule 2.

MS. BEHLING (by Telephone): This is Kathy. It almost appears to me that that's referring to Table 2 of the document that we discussed first thing this morning because that last column, the Resolved column, I had not completed all of the items in that column. Perhaps that's what we're referring to in this item.

MS. MUNN: Well, I thought that was a different action item, Kathy. I thought we had captured that in our expectations of SC&A. I thought this was an action item for NIOSH. I may have to go back during our extended lunch hour and take a look at my notes to see precisely what we were aiming for. My own notation was too cryptic. I'll check it, and we'll cover that after lunch.

DR. WADE: Excellent resolution.

MS. MUNN: It now being 12:30, let us adjourn for lunch. There is some concern about the amount of work that has to be done over this lunch period. Let's do extend the lunch hour an extra half hour so that instead of returning at 1:30, let's return at two. We

will reconvene at two o'clock --

DR. MAURO: Before we close, Kathy, are you still on the line?

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

DR. MAURO: I just wanted to ask you a question. Is it possible for SC&A with Kathy on the line to use this room to do our business during the lunch break?

DR. WADE: If you are comfortable with that, it's certainly fine with us.

DR. MAURO: I appreciate it.

Kathy, are you available to work with us through lunch?

MS. BEHLING (by Telephone): Yes, that's fine.

DR. MAURO: Thank you very much.

DR. ZIEMER: Do you have a public call-in number?

DR. MAURO: Kathy, we'll call you back separately. This way it's limited to the SC&A --

DR. WADE: But you can use this room and that machine.

MS. BEHLING (by Telephone): That's fine. John, do you have my phone number?

DR. MAURO: Yes.

DR. WADE: We're going to break the line now and re-establish contact a few minutes before 2:00 p.m. central standard time.

(Whereupon, a lunch break was taken from 12:30 p.m. until 2:00 p.m.)

MS. MUNN: Let's come back to order, please.

DR. WADE: We've also been admiring the work of whoever's typing on the other end of the phone. We hear what we think is typewriter noise. Haven't heard that for a long time.

MS. MUNN: And there are some of us who really appreciate that more than others, I think.

DR. WADE: Okay, we're back in session.

MS. MUNN: The first thing I need to do is to let all of you know that I was not successful in identifying exactly what Schedule 2 was. My personal notes which were taken at the last meeting did not get to Naperville with me. They are in some other file some other place so I can't identify precisely when and about what this particular item was. So we're going to let NIOSH off the hook and not ask them to report on something

that we can't identify what is.

RESULTS OF NOON DISCUSSIONS

And we'll move on to -- if it's all right with those involved -- the results of our discussions at noon while they're still fresh in everyone's mind. Is someone going to tell us?

DR. MAKHIJANI: Kathy, do you want to go over the titles of the things or should I --

So for the titles of the reviews we thought that we would call them Task 3, First Set of Procedure Reviews; Task 3, Second Set of Procedure Reviews along the line that we discussed. And we thought that we could break up the matrix into two portions. One would be a very summary thing that you could see the status of everything almost at a glance.

So it would be a summary matrix presented much in the manner, but there wouldn't be the discussions there. It would just be the procedure number, finding number, review objective, rating, a brief description of what the finding is, so probably one or two lines, and then whether it's active or closed. And whatever is closed it would be highlighted

so then you don't go to see the detail.

And then for each finding there would be a page that, each of those findings would have a page, and probably we could identify the page number up there or something like that. And the page header would have the procedure number, finding number, page numbers, and then it would be divided into two pieces. One is the review process and then the close-out working group process, review objective, the rating, the full statement of the finding and the full statement of the NIOSH response.

And then the second piece of that on the same page would be the close-out working group or working group process. Working group number one, meeting date, the discussion about that finding and its status, if the working group has asked anything to happen. You know, NIOSH is going to do X, Y or Z. Or SC&A is going to do X, Y or Z.

And then if an item is closed as there was agreement on something, then it would simply say SC&A and NIOSH agree. Working group closes out the item. And then we just

enter closed in the summary and highlight that as a closed item.

If it goes on, if there are action items, then we simply go to the next working group meeting and repeat this until it's closed. And that way we have more of a sense of the timing and progression of the discussion. We have a log of when the discussion happened and a little bit more substantive.

And it doesn't get carried on in long columns that are very narrow and maybe going through many pages and most of them empty. So we thought we would suggest that it could be split into two pieces this way. And there'd be one page like this for each finding.

MS. MUNN: The Chair is taken aback. My first feeling is that this looks more complicated than what we're doing now, but perhaps it's because I'm not understanding fully exactly how this is going to work. Let's see how other members of our working group react to that.

Paul.

DR. ZIEMER: As I understand it you would

have a summary matrix at the front end so you would have the overall picture.

DR. MAKHIJANI: Yes, all of what you had would be condensed into --

DR. ZIEMER: And then the details of the findings and so on which are what takes up the space on the present matrix. There would be a particular page that you would go to.

DR. MAKHIJANI: It would be a lot like the checklist in the procedure review itself. There's a checklist, and whenever there's any discussion, whenever the rating's other than five, it doesn't give the discussion right there. It says see review objective and then you just go down and you see the review objective and then the discussion there. So I think this actually follows what we do internally in the procedure.

MR. PRESLEY: Now is that going to be on the same page as what you have come up with a finding procedure and a number and a finding.

DR. MAKHIJANI: This will have a lot of different lines.

MR. PRESLEY: See, that's my problem. You're going to have to go over to another

page just to --

DR. MAKHIJANI: Yes, that is the disadvantage of this.

MS. BEHLING (by Telephone): This is Kathy, and Wanda, I fully agree. We've also come up with an alternative to the format that we currently have which was my first suggestion. The reason that we are toying with the idea of going to this one-page issue -- and, John, maybe you can explain this a little bit better than I can -- is John felt that it was important that we capture what happened in each of the various working groups with each of our findings.

I believe that John has been tasked in the past with trying to recreate what has happened at the various working group levels and determining when was that finding ultimately resolved. And so that's how this evolved. And it's very, very different than we've suggested in the past. We're just, I believe there needs to be a little bit of discussion up front as to why we thought that this might be something we'd want to entertain.

And as I said it had to do mostly with John's feeling, so much goes on at each of these working group meetings, and it maybe isn't always appropriately captured, and we can't go back and recreate what has happened each segment along the way. So that's how this evolved. And so just with that in mind you can possibly have further discussions that'll be more meaningful.

MS. MUNN: Thank you, Kathy.

Paul.

DR. ZIEMER: Could you go to the second page, please, and clarify for us on the close out part two there, so let's say that we took some action today on some item here. And next time we came back we weren't satisfied with that, whatever it was that was to be done. So what would happen here?

DR. MAKHIJANI: We would have these two repeated.

DR. ZIEMER: Would repeat, so you would have, I see, so you would have kind of a running tab of what occurred each meeting or if it was continued. That's what you're --

DR. MAKHIJANI: For example, just to take

the procedure four, five, 17 thing, we'd say working group meeting date. We'd go back to the old one and we'd say what happened. A certain review process was left open at that time. What was left open. And then in the next one, today, that these three things were, these three procedures were consolidated into Procedure-90, and then the to-do list was for SC&A to give you the list of open and closed items for that. And then we'd also, of course, go back and have all of the items in summary form here.

DR. ZIEMER: We'd have the instructions on each one as to --

DR. MAKHIJANI: You would have the instructions as well. And then when it's closed, when the working group decides that it's closed or the Board decides it's closed --

DR. ZIEMER: I do like that feature that it does sort of contain what's supposed to happen on each one.

DR. MAURO: You see, when you look at the matrix, you find out that there's a part of the process that's right now, SC&A writes a

big report. We take a matrix. We put in in summary form SC&A's findings. And then there's no involvement with the working group yet. It goes over to NIOSH. Then NIOSH responds to the findings. So that's going to happen.

DR. ZIEMER: That's set.

DR. MAURO: What happens once that's in place, that triggers the working group. Then we move into the mode of the working group and what happens in the working group. What became clear is that what happens is we go through, we have a discussion on each issue, and we try to capture the nature of the discussion we had earlier and the degree to which SC&A and NIOSH have come to resolution on this issue.

And you listen, the working group listens to that conversation and try to capture whether there's a degree of agreement or disagreement. But at some point in the process the working group weighs in and says, okay, I think this issue has been resolved and then it ends. Or I think that, well, you may give marching orders to SC&A or to NIOSH and

that's going to be stated here. And those marching orders are given here to be addressed at the next working group meeting for whatever the action is.

And then if there is the need for another working group meeting, this page will continue, and there'll be a date when the working group will meet, and we'll just do it again until we reach the point where the working group says this issue is closed. And then that brings us back to the matrix table.

The matrix table, that issue would have a one-liner and either be active or closed. And right on that one page you'll know how many issues there are, and how many of them have been closed or are active. And that would be available for every working group meeting.

DR. MAKHIJANI: I also here it might say, like today we've got a matrix in which NIOSH has responded to some item with ^ active close of NIOSH response pending so then you have to go to the pages that are active.

DR. MAURO: This came about because recently I was asked to help out in trying to help

folks get a handle on the number of matrix tables, the number of -- this had to do with the site profile work, not with this -- but on the site profiles clearly there were a series of working group meetings and then a series of matrices.

And the reality is I had a very difficult time, the only reason I was able to resurrect the working group meeting dates was that on my calendar I put in a mark on my calendar, plus on my progress reports, they go back four years, I do indicate on the progress report that, yes, last month we had a working group meeting. Otherwise, I wouldn't be able to do that. And I think it's essential that we're able to reconstruct. This is where the important, the rubber meets the road.

And I think in this form forever we will have an archive of what we have accomplished; what we've done. You're right. It may become, some of these may go on for many pages. Some issues go on for -- for example, on Rocky Flats I think we have something like ten or 12 working group meetings to cover one particular issue.

MS. MUNN: Yes.

DR. ZIEMER: But there would be -- basically, what you have is a worksheet on every issue, and you can see the progress. Right now on issues I find myself doing what you described, going back to different minutes in different documents and pieces of paper and trying to piece things together.

This seems to me if we can preserve the matrix in the overall summary, I think the worksheets would be helpful to us in any event to have a worksheet per issue and be able to say, yes, we did this. Here's the outcome. Here's the next thing we did until it comes to closure. That, it seems to me, would be helpful. I know it's, could end up to be a thick document, but in reality as I go into these and start to try to pull all these other documents out, I think I end up in the same place but less organized.

DR. MAURO: I would argue that it's going to be thinner because most of the documents we have now space. We have one column that goes on for four pages and the rest of the page is space.

DR. WADE: So, John, now in terms of the need to see active items versus archived items, this first matrix would have it all?

DR. MAURO: Well, it would, yeah.

DR. WADE: So you'll have to pick out then from five pages of matrices, you'll have to, entries, you'll have to pick out the active item.

DR. MAURO: On this one page, all of the, in other words every procedure and finding would be here, maybe two pages. But you'll know for each one of the findings whether that finding is active or closed. Now they'll all be back here, but if it's been closed, you don't have to go to that one.

In other words the only ones that, right off the bat, the first, we'll meet. We'll sit down around the table. This page will come up which we'll say, okay, here's where we are. Look down the list and say, okay, out of the 30, 40 or 50 findings that originally comprised the work of this working group, we have closed half of them, but the other half are still active.

DR. WADE: Okay, so how many pages this one

--

DR. MAURO: This would, one or two pages.

DR. MAKHIJANI: Well, it would be more because right now we've 30 procedures, you know, in the matrix.

DR. WADE: With two, three, four findings.

DR. MAURO: So yeah, maybe three, four, five, but these are going to be, in effect, I was hoping that we could make each one of these one line. But what's going to happen is we felt that we did need to put in like a one-liner of what the finding was, otherwise you wouldn't know what it was about. So at least something that says, oh, this is the high-fired plutonium issue. That's all it would say, high-fired plutonium issue, and so at least we know what that is. But we don't try to do anything on this first page to discuss it. It'll be just an identifier.

DR. WADE: So we might have eight pages. The matrix might be eight pages, but you can clearly identify opened issues from closed issues.

DR. MAURO: Yeah, let's say there are a hundred items. That'd be a hundred lines.

And a hundred lines, how many pages that would take.

MS. BEHLING (by Telephone): This is Kathy Behling. I believe one of the other things we may want to consider here is on the dose reconstruction matrices for the first three sets -- and, Dr. Ziemer, you can correct me if I'm wrong here -- but I believe that the matrix is what was sent to the Secretary of HHS. And I'm not sure for someone who hasn't been sitting through this process that those matrices are really going to really tell the full story and give him a good understanding as to what went on in this process where what we're suggesting here is if this was sent to the Secretary of HHS as a sort of final product, it may be more meaningful.

DR. MAKHIJANI: One of the things that might make it logistically easier to have a page number here, and you could probably do it in the soft copy in such a way that you could just click on it, and it would go to a page number or something like that.

MS. MUNN: Page number of what?

DR. MAKHIJANI: Page number where you would

find that, the detail of that finding.

MS. MUNN: Yes, Paul.

DR. ZIEMER: I have an additional thought here but let me insert, I don't think we would be sending this report to the Secretary. We do report to the Secretary on the dose reconstruction because of a specific charge that we have, but this is something internal to the Board.

Here's another thought though. Suppose you had two such documents. One is the closed ones. You have the matrix of all closed items with the attached. And that changes you see from meeting to meeting. As you close items it changes.

And then you have a matrix of open items with the working attachment so that you're not having to sit through these and so on. Because even if it's closed, there's a history that you might want to access readily. So there's another thought. It's a variation on this, closed items, open items.

DR. WADE: Or all items opened items. I mean you could have a matrix of everything, and then extract from that open items. And

then the working group would say this is what we have to work with.

DR. MAKHIJANI: There are a few ways that that could be handled. I think we could consolidate all the open items at the top of the matrix, this summary matrix. So then you only in the beginning are looking at the open items. And then you could take the detail on the closed items and put them at the bottom at the end of the document. So everything that's open that's in the front of the document. Everything that's closed --

DR. WADE: That splits up findings in a particular procedure. I just think maybe a set up so you extract the open items and make a sub-matrix.

DR. MAURO: It becomes a working document for the purpose of this meeting so that here is what our work is for today.

DR. ZIEMER: I hate to monopolize this, but things are popping in my mind. I'm wondering if it would be worth doing this on a sort of a trial or pilot plan basis for the next work group meeting to have the contractor bring us the material in that form and try it out. We

may find that it's cumbersome. We might find out it's more efficient. I don't know.

I'm just wondering if it's worth giving it a trial to see how it works. Because I think we still want to preserve the matrix idea and the idea of being able to see everything sort of the overview which is, I think, what the Chair would certainly want us to be able to do.

MS. MUNN: That's very true.

DR. ZIEMER: But I like the idea of the worksheets has a certain attraction for me at least.

MS. MUNN: Being each of us creatures of our past history and our own personal experience, I cannot help but wince at the clerical effort that I foresee as being inherent in this kind of undertaking. It really is even with all of the material digitalized and an ability to move it around, this is not a trivial issue to break this information up in this way.

DR. MAURO: I find this is going to make life so much easier for everyone concerned because it's going to be just adding on the next working group meeting, the next working

group meeting. It's just going to add on on any given issue. It's going to just keep rolling.

And at any time you want, if you want to go back to a particular issue whether it's the oronasal breathing issue, if we track this way of high-fired. That's an issue. It has a page, and we can find out how it was resolved. And you could just see. The whole story would be right there in front of you rather than at the end of the process.

For example, right now let's say we all wanted to get together and say, geez, how did we resolve the high-fired plutonium issue. How did it begin and what was done by NIOSH, the working group, the Board and SC&A to reach closure, which we have reached. I would say we'd be hard pressed right now to try to -- without going back to reading all the minutes, all the transcripts that Ray put together -- so we would be able to rebuild that. With this thing I would say five minutes you would see the whole story right in front of you.

MS. MUNN: Oh, once it's set up and operating very possibly.

DR. MAURO: We're doing it anyway. You realize we're doing it anyway. As a result of each meeting together working with the chairperson and NIOSH and SC&A, we do try to build a matrix.

MS. MUNN: Yes.

DR. MAURO: And the information is being assembled and put into some form. So we have to do it anyway, and in my mind let's do it in a systematic way that's in one place that's there forever. So the work is going to be done anyway.

MS. MUNN: Did I not hear somewhere in the discussion that the resolution issue, whether it occurs in this body or in one of the other work groups is proposed to be incorporated in some way?

DR. MAKHIJANI: Yeah, it will be in the summary and also in the detailed worksheet.

DR. MAURO: In that discussion section, you know, in other words on each sheet there's a discussion and the outcome might be issue closed because it's being dealt with ^. On the last stop if you end that issue because it has moved to a generic issue, for example,

let's say oronasal breathing, it moves to that. Well, that would be, that's how that issue would have been resolved and for that reason. And that would be the bridge to some other activity, some other working group.

MS. MUNN: Certainly the idea of having a single matrix that shows what's open and what's closed is more than attractive.

DR. MAURO: The point you just bring up though to tell you the truth is that it may not be as simple as active or closed for the reason you just said. Something might be closed under Task 3 because we moved that out of Task 3 and put it into some other task because it's part of the site profile issue or a generic issue. So we may actually have to have three labeled, in other words, active within Task 3, closed or it's been moved out.

MS. MUNN: Transferred.

DR. MAURO: Yeah, it's been transferred.

MS. MUNN: Yeah, transferred.

DR. WADE: And to deal with the whole universe now while it's on our mind to me the only eventual solution to this is a relational database that would have everything in it.

DR. MAURO: We were talking about an ACCESS or a Sequal database that in theory could actually link into the minutes of the meeting. I mean if you really want to get off the charts on it, but we can do that. That's very aggressive.

DR. WADE: Yeah, and I wouldn't do it. I wouldn't dismiss it. You see, what Wanda and I have always wanted, and we've talked about this to each other and not to each other about this, if you close something here, and it goes to the science issue column, there needs to be a guarantee that it's gone there and is there as opposed to what happens now. And if it goes to the site profile, a particular site profile, it needs to go with certainty. And the only way to make that happen is to have it within an overall data system.

DR. MAURO: We really haven't created those cross-links between tasks.

DR. MAKHIJANI: That's true. So when we say closed, it's just closed for here. NIOSH is revising the site profile then it comes back.

DR. MAURO: Let's say we're transferring --

MS. MUNN: Transferred to where.

DR. MAURO: -- but we're saying it's got to hook, that's got to activate some other part of the system.

MS. MUNN: Yes, uh-huh.

DR. WADE: So that's something we need to think about. And it comes to all of us. I know Larry and I have talked about it as well. How do we get that done? For the Board really to be certain that it hasn't dropped anything between the floorboards that sort of linked data system is necessary. For another day.

MS. MUNN: Let's suggest that the contractor put together the suggested summary matrix for what timeframe?

DR. MAURO: I could say we can do this very quickly. Whenever you want. All the information is here.

DR. MAKHIJANI: Which one? The one that we're working with now?

MS. MUNN: We're talking about the summary matrix of what we have on matrices currently. The procedures.

DR. MAURO: We'll work with the one we're working with right now. We'll try that.

DR. ZIEMER: Put it in this form?

DR. MAURO: This form.

MS. MUNN: Try putting in that form and see how it looks, and we'll spend a significant amount of time at our December meeting discussing whether or not this does, in fact, meet our criteria, whether it will be simpler, whether the time element is reasonable, and whether this fulfills the archival concerns that all of us have with respect to what we've done. Is that agreeable with everyone?

MR. PRESLEY: Question. Where do we get money for this? Have we got money to do this extra work?

DR. WADE: I believe we do. I mean, I don't know how big --

DR. ZIEMER: I wouldn't regard it as extra work. I think they're doing the work now. It's a way of sorting it in a more consistent manner. And you may spend a little time initially setting up, but it's like you pretty much have it defined now, and you type it in.

DR. MAURO: And this is the right time to begin it because we're, really, even though we did have one previous meeting regarding this matrix, we're on top of this so it's the right

time to try this out. This is the right set of cases, this Supplement -- I don't know the supplement number. I don't recall -- Supplement 1 which is the one with 30 cases. This is the right time to try this out. To convert from this matrix to that is very easy to do. It's just going to look different, but it's going, it basically contained it in a way that I think will serve us all better.

DR. WADE: And then as a special request I would make of you, when you do this, and then when you present it, I would like to be able to ask you your thoughts about expanding this beyond to the linkage of work products. I don't want you to do anything about it, but just as your people do this, I'd like you to think about that.

MS. BEHLING (by Telephone): Wanda, this is Kathy Behling. Also one of the other things that I might just suggest is, because this will not take me much time at all, but to take the current matrix that we're working from and modify this to some extent as you had initially tasked us to do. We talked about maybe adding a column and changing some names

of some columns to make them more meaningful. And also present that as an alternative in case we decide that it is too cumbersome to do this approach we're suggesting today.

MS. MUNN: That would be helpful if it won't be too time consuming for you, Kathy.

MS. BEHLING (by Telephone): No, not at all.

MS. MUNN: That's good if you would.

MS. BEHLING (by Telephone): Okay.

MR. PRESLEY: Now the next thing. Do we need -- I realize that we are going to task the contractor to do this, but do we need anybody from NIOSH to look at this to see if they can live with the format and stuff like this? Because they're going to have to work with it along with us.

MR. HINNEFELD: Well, I've got no issue with this. It seems like it probably adds readability in the historical base. The one question that comes to my mind as I'm sitting here is for lack of a better term, version control. For instance, we'll have, now I think it'll be one document with this table on the front and supporting sheets behind in one document. So there will be times when NIOSH

will add information to some of those supporting sheets, but not all. And I don't suppose we would ever change this table. This table would only be changed by the work group to active, closed or transfer. That would be a work group action. We'll be adding to the document in that we add to the supporting. So presumably then the date, you know, we might have a current date so everybody knows they're current. So the document then would be re-dated or a new revised date each time anybody writes to it. The additional issue is that we will write to it. SC&A will write to it, and the Board essentially will write to it. So that we will have three different entities generating a next version of the document, maybe simultaneously. SC&A may be working, we may provide some, as we are wont to do, we will provide initial responses on some findings but not all. And SC&A may be analyzing and reaching conclusions on those initial responses while we continue to work on other initial responses. So I think there may be a way to do this with naming conventions or something like that so that the origin of the

document, not just the date of the document, but the organization that prepared this version of the document occurs in the name, the file name in some fashion. And I don't know if you want to think about that or not, but it occurs to me that it's going to be very, very difficult. It already is. The reason I bring this up it's already sometimes difficult for me to keep track of what is the most recent version.

MS. MUNN: It is very difficult.

MR. PRESLEY: And how we get on there --

MR. HINNEFELD: But I think if we just think about it as we design it and include some things like that, and whether it's in a file name or whether it's in a header of some sort, however it works easiest to build it. And I'm not a Word person so I'm not very good at offering advice at what would be best. But something like that to keep track of when I pick up one of these things, what exactly am I looking at. Am I looking at our product or am I looking at SC&A's most recent contribution or the Board's most recent determination or something like that?

MS. MUNN: What would appear to be the simplest method of doing that would be to simply identify as we currently are in the bottom right-hand corner of each page the date and who is issuing it. If we do that then it will be very clear that any change --

DR. NETON: I might suggest that --

MS. MUNN: Yes, Jim.

DR. NETON: -- I'm not a computer person, but putting this on a central drive like the O drive I think would take care of a lot of these issues where it exists in a central location where only one person can open it at a time. It's always there and always resident. And I think that would help.

MR. PRESLEY: We'd have to do that. If not, if you're not then we're going to be sitting there looking at that thing every day trying to figure out who added what to this.

DR. NETON: Every time you open it, you know you're opening the most recent version and only one person can add, writes at a time to that document.

MR. PRESLEY: If SC&A adds something today, and NIOSH adds something today, and we don't

know to go back in there and look at that, something's got to trigger for us to go back in there because I assure you I don't want to have to sit and look at this matrix every day just to see if there's something extra came up on it.

MS. MUNN: John.

DR. MAURO: I'm looking at it a little different. This thing is revised after every working group meeting. It's revised in a collaborative way between SC&A, NIOSH and the chairman of the working group. And it's put out by the chairman of the working group. Okay, here is the next revision that reflects the last meeting we just had. Now once that's done it's done, and it's not revised again, not touched again, until the next working group meeting was completed. So therefore, there's nothing going on. Now, it may turn out between the two working groups, there might be other white papers going back and forth. There might be all sorts of stuff going back and forth on the O drive. Nothing to do with this form. That's work that's going on perhaps to resolve an issue, but it

doesn’t emerge and that activity doesn’t show up until the next working group meeting where we have a chance to talk about this work. So in effect, there’s going to be an issue of this revision of one of these after, within a matter of days.

MS. MUNN: Following each work group.

DR. MAURO: Each working group and that’s it. After it’s issued it’s done, untouched until the next working group.

DR. MAKHIJANI: That’s not quite right, John. NIOSH is, after this working group meeting, NIOSH is going to fill in a lot of those blanks in this where they haven’t had a response yet.

MR. HINNEFELD: We can do it in some other format. For instance, we don’t have to write it directly on the document.

DR. MAKHIJANI: That’s true.

MR. HINNEFELD: We could, you know, we can restate, it’s easy to cut and paste the finding and put it on a piece of paper, a new sheet, and write the response there.

DR. MAKHIJANI: Yeah, a multiplicity of documents in that case.

MR. HINNEFELD: That means there's a lot more stuff flying around.

DR. MAKHIJANI: That I think will create a kind of problem of its own because then you've got huge numbers of documents because there are so many issues.

MR. PRESLEY: I like Jim's idea about doing this.

MR. HINNEFELD: ^ O drive.

MS. MUNN: Paul, you were trying to say something.

DR. NETON: We all have the same O drive. They get transferred.

DR. ZIEMER: Well, I'm a little concerned about having anyone go in and make changes.

MS. MUNN: I am, too.

DR. ZIEMER: Because in principle while we trust each other, but who knows what could, sometimes my computer seems to change things and I don't even know why. I'm typing and I find that something else has, I've changed something. I'm a little concerned about anyone going into the O drive and fiddling with the document. So I kind of like the idea, and maybe we can do it through the chair

of the work group. If the ball is in NIOSH's court, let's say. Let's say they got the SC&A response version and we're waiting for the NIOSH responses for the next meeting. We would want to have that in advance, and it seems to me that whoever's going to be responsible for entering it, whether it's the contractor or the chair or NIOSH, we have them enter the new stuff and assign the new number or whatever the new identity is, and that gets distributed. And that's it until the next meeting. Something like that. I just don't like the idea that anybody can go in and change something.

DR. MAURO: What's split up, and I agree with this is that, okay, at the end of this meeting we put a product out. That's pretty straightforward. And that will be under your direction, and you put out a new version of the matrix. There's a new matrix.

Now, but then as a result of the direction provided by the working group, you've given NIOSH and SC&A, let's say, some marching orders. And we start to work, and we do some work, right? And the question becomes

-- and let's say SC&A puts out a white paper, and you folks put out a white paper. It goes up on the O drive or whatever we do.

The question is when does that information, the outcome of that exchange find its way into the matrix? Do you try to do that before the next working group meeting? I mean, I guess that's a good question. In other words whether we, and if we do it, how is that mechanistically done?

DR. WADE: So I think the way to do it if I could offer an opinion, I mean, I think you freeze the matrix at certain points in time, but people can post comments to it that can exist, they don't change the matrix.

So let's say after a work group meeting, it's put out. This is the situation. NIOSH has certain tasks. SC&A has certain tasks. You post those at the appropriate place in the matrix, but you don't change the matrix. Then they're there for people to look at as you will leading up to another Board meeting when then again, the chair can decide what changes will actually be made to the matrix.

And you could have a document that's frozen in time with a layer on top of that of transient information that's captured there but not added until the gatekeeper makes that decision.

DR. ZIEMER: Can I ask is that then posted in a different color or a different font or something so we can identify it?

DR. WADE: Sure.

DR. ZIEMER: And then once it's approved it's changed or --

DR. WADE: The system I've worked with is color. You choose the color red, and that's there, transient, but it's not entered into the frozen version of the document.

MS. MUNN: We seem to be falling into the problem of spending 85 percent of our time talking about 15 percent of our problem. We really don't want to do that for much longer. May I suggest that it might be a good idea for us to set up a telephone conference between whoever wants to be the decision or needs to be the decision maker in NIOSH, whoever needs to be the decision maker about this at SC&A, perhaps Bob, perhaps me get together on a

telephone conference and talk about this after SC&A has had an opportunity to put together the first page of a draft format, and we'll address this specific issue of who makes changes when and how does that mechanistically occur. Does that make sense to everybody? Can we do that?

(no response)

MS. MUNN: At the end of this meeting we'll set up a time for a telephone group meeting, and we'll identify who's going to be on the call. Then we will bring that as a part of the straw man first trial to the Board either at the, I mean to the working group either at the working group's meeting, telephone meeting which we may be able to do or not or at our face-to-face meeting in December, one of the two.

MAJOR PROCEDURES LIST

All right, we have our major procedures list, Summary of Task 3, Supplement 1, Rev. 1, Revised Draft, September 25, 2007, that I asked you to have in hand that we have not yet addressed as an item-by-item issue for what has been provided by NIOSH following our

last meeting. We need to go through that, and we need to make sure in the process of doing that that we're going to catch, was it 19 that we said we were going back and pick up?

MR. HINNEFELD: It's 33, I think.

MS. MUNN: Thirty-three probably. So who's going to take the lead on these new items, and where do you want to begin? I see the first one is OTIB-0023 on page eight. Am I mistaken?

MR. HINNEFELD: Correct.

DR. MAURO: Okay, we're talking about, are we on OTIB-0023, assignment of missed neutron doses based on dosimeter records? Is that where we are?

MS. MUNN: Yes, OTIB-0023, we have items one, two, three, four, five, six, seven, eight. All have responses to them now, and what we're expecting is a word from SC&A as to whether the NIOSH response is agreeable or for some reason leaves you with a continuing, outstanding issue.

DR. BEHLING (by Telephone): I guess I will take that issue on. This is Hans Behling. My comments, I guess, reflect a number of things

that involve the differences between OTIB-0023 and the Implementation Guide-001.

And I think it's kind of difficult to gather from the summarized comments on the matrix what the issues are because we'd almost have to go back to the report itself, and I used some quotes directly. And I guess central to the issue is one in which we define reliable dosimeters for neutron monitoring and unreliable.

And I think therein lies the problem because the OTIB-0023 really is limited to instances where we are dealing with what are called reliable neutron dosimeters which on my estimation reflect perhaps the albedo badge that was introduced in the early '70s in most of the DOE locations although that's not necessarily the case in certain locations where NTA film was, in fact, viewed as a reliable neutron dosimeter.

And most of the issues center around, I guess, the alternative approaches in which case the OTIB-0023 really is confined to those instances where we are dealing with a viable dosimeter, and the issue is one of assigning

either N times L over D over two as opposed to some other alternative method in the event that that particular ^ ends up with a dose that is greater than 75 percent of the external whole body from penetrating gamma radiation.

And I think we have a significant conflict between TIB-0023 and Implementation Guide-02 because they have very different opinions in terms of what is to be used under those conditions. I think Implementation Guide-002 is not confined to necessarily best estimates or not confined to instances where you're dealing with a credible neutron dosimeter of record. And I think most of these issues center around that difference between the two documents. And the OTIB-0023 does, in fact, reference the Implementation Guide-002 as its basic document.

And just one of the comments that I do want to make, you said, for instance, when the neutron dose defined by N times L over D over two exceeds the 0.75 or 75 percent of the gamma dose, there is a recommendation to make use of neutron survey data in state times and

other things which I have come to the conclusion is not likely to be available for most instances when you're dealing with a person who may have been exposed to neutrons but obviously in his personal dosimetry package, there won't be any reference to that kind of the data.

MR. HINNEFELD: Well, I guess from our standpoint it's true that it's not, you know, the information in IG-001 is not exactly the same as the information in OTIB-0023. OTIB-0023 was prepared later and probably after there was a little more practical experience with trying to do dose reconstructions and what kind of information are we going to have because IG-001 was prepared very early on. So it's true that they don't say exactly the same things, but these are two of the documents and there are many others that are available during dose reconstruction.

Part of our response in this is that there's an entirety of data that's used on each particular site, and IG-001 has general directions, general guidance. OTIB-0023 is supposed to provide some more specificity to

that, and then there is site specific information in the site profile that can be used in order to, you know, there should be a judgment statement in there about what years the dosimetry, the neutron dosimetry data should be bound, based upon the method they were using.

So in terms of reading this OTIB on its own and saying that this OTIB in conjunction with IG-001, you know, I can see why some of these comments arise, but OTIB-0023 is not used by itself or only with IG-001 but it’s used in combination with other information available about this specific site.

So it’s a little hard to really sort out what would we write different in OTIB-0023 that would provide the kind of instruction we want without, you know, here rather than writing that instruction in the site profile. You’re looking at that kind of situation. Either have something like this that provides us with this information or you include this same kind of instruction in every site profile’s neutron dosimetry section to sort of

enhance what IG-001 gives in association with those site profile documents.

So I guess I don't, I'm having a hard time figuring out what amendments or what revisions we make here to OTIB-0023 or to documents in general to kind of address this what may be a consistency issue but what we feel like is sort of layers of specificity in each document having its own, serving its own purpose in the dose reconstruction process. So that's kind of what I'm struggling with here because I'm not exactly sure what revisions to make here.

DR. BEHLING (by Telephone): Well, let me add a couple things. First of all, Kathy just reminded me that I kept on referring to Implementation Guide-002. It's Implementation Guide-001-2.

But let me go quickly over what OTIB-0023 really asks you to do. First of all in Section 3 and again in Section 6 it basically defines the use for this particular TIB in instances where the dosimeter is the dosimeter of record, meaning that we have faith in the neutron dosimeter and it's a credible

dosimeter for use in neutron monitoring.

And under condition one you are to use in cases where the dose ends up as being recorded as zero to simply apply the N times L over D divided by two. But if such a number in the end exceeds 75 percent of the external gamma dose, then you are to default to a situation where you deal with survey data and time and duration of exposure as a surrogate.

Now I have to say, for instance, dealing with, and I can give you an example, a situation in ^ Hanford ^ a rubber glove line. And I looked at some of the data, and of course, post-1972 when the Hanford multi-purpose dosimeter was introduced, we have, expect to assume is now a credible dosimeter.

And I realize the neutron/photon ratio is under question, but at the same time there were data that I looked at where the neutron/photon ratio was probably in some instances close to a factor of four. In other words, you could have a neutron dose that was four times higher than your registered gamma dose.

And the issue of saying, well, it’s

greater than 0.75, we'll default to some alternative method, would certainly not apply there. And so there are some instances, and I'm only giving examples where I would find that these methods, the two alternative methods here, are perhaps too restrictive.

MR. SMITH (by Telephone): This is Matt Smith of the ORAU team. Can I interject some information?

MS. MUNN: Please do.

MR. SMITH (by Telephone): Just historically this TIB was developed as Stu stated to kind of clarify and add onto what's in IG-001. One example would be the Savannah River site where OCAS has developed a TIB which is TIB-0007 which further expands on neutron dosimetry practiced at Savannah River site.

It's that kind of additional technical information that you're either going to find in additional TIBs like that for a site or in the site profile itself that allows the DR to use item number two which is under Section 6.0, the guidance section of this TIB, to make their determinations. If you really use a document as Stu stated that was put into the

system it kind of revises and extends what is stated in IG-001.

MS. MUNN: Thank you.

DR. BEHLING (by Telephone): I would like to make a final statement here because the OTIB-0023 really is based on having a credible neutron dosimeter. In other words, we trust what the neutron dosimeter says or records as a dose of record. And we're not going to contest that.

In other words if there is a zero recording that means we're below LOD. And there's no reason not to necessarily apply N times LOD over two for those reasons where we have a zero as a dose of record for that neutron monitoring period. And it would be no different from any others. And I agree that on average that N times L over D over two is probably somewhat claimant favorable, but so be it, and we do it for photon exposure.

On the other hand if the dose of record based on the belief that this dosimeter registers a fair and accurate neutron exposure exceeds 75 percent of the gamma dose, so let it be. I mean, after all, that was saying we

don’t trust the neutron dosimeter if it goes above 75 percent or the 0.75 fraction.

To me the qualifying statement in TIB-0023 is that it’s based on a credible neutron dosimeter. So for any time that is registered below LOD or zero recorded dose, you give the LOD over two. And for those instances where it’s a true dose, you accept that as, on face value. If it’s greater than 75 percent external gamma dose, well, let it be. That might just be the true radiation field in question.

MR. HINNEFELD: I guess the provision was entered or was put in here because to avoid a situation where when we’re talking about missed doses, we’re talking about the dosimeter didn’t measure anything. So reliable dosimeter or not, it didn’t measure anything.

So if it’s limited detection, if the neutron dosimeter badge is limited detection is quite high relative to the photon limited detection which is quite often, quite easily could be the case, then for many cycles of missed dose, you know, a lot of missed dose,

you can have a photon limited detection quite a lot smaller.

You could have a work environment that is reasonably well characterized in some fashion. You know, it may not be a survey instrument or ^ survey data, but it may be reasonably characterizable because of source term information or because reliable dosimetry measurements of some sort. You could put yourself in the situation where just using LOD over two for both the neutron and the photon badge would end up with the assignment of a neutron missed dose that just doesn't match the reality of the missed photon dose.

In other words, if the neutron missed dose is going to be that high, you would have had to have had a measurable photon dose, because its limit ^. And so rather than just say automatically we will always assign LOD over two, which is our wont. You know, certainly on a photon badge, you'd ^ the photon badges were pretty good for most of the period, and we generally will assign LOD over two if they wore a badge that read zero, you know, it would be LOD over two.

But rather than just follow that on a neutron badge, there are situations where you could have evidence that indicates that's just not credible. And so because of that situation, that's why this kind of provision was put in there. And now the actual implementation of it should be site specific and location specific and how much do we really know, and how much can we really say about the radiation field that they, that these people might have encountered in their work. So that's why this was in there was to allow for that eventuality.

DR. BEHLING (by Telephone): And I agree, Stu, that on average in most locations, the neutron dose will be less than the photon penetrating dose, and 0.75 is not an unreasonable ratio to draw as a crossover line where you say, well, this doesn't seem reasonable.

But two things, one, the idea of using instrumentation and time and motion studies is an unrealistic alternative, I would say as a minimum than to default to a 0.75 value and let it go with that value than default to a

time and motion study based on neutron measurements that may or may not really have any real significant value for a given individual.

DR. NETON: Hans, this is, Jim. That kind of runs counter to what you just said though that you've seen ratios that could be as high as four. All this really does is recommend you do a field investigation of some kind.

DR. BEHLING (by Telephone): And I agree.

DR. NETON: It doesn't buy you anything other than do a sanity check is what it's really trying to say here.

DR. BEHLING (by Telephone): Well, as I said, if you look at the rubber glove line at Hanford, you ^ that ^ a period of time, especially from the '60s on, there were probably neutron/photon ratios that were based on instrumentation measurements, approach a value of four. And clearly to deny a person that option of saying, well, you have the neutron/photon ratio that exceeds 75 percent of your photon dose, is perhaps not fair.

DR. NETON: Well, that's not what it says here though. It says that two conditions need

to be met, and if the second condition in this procedure is that if it could be established that the dose was basically zero. If it's not, then clearly it says you can, I think you can do what you feel with the dosimetry data. Just trying to do a, you know, a sanity check on the dosimetry data itself. Like Stu said, a missed neutron dose can be much, much higher than a photon dose. And so I don't think our part's to go back and say, does this make sense in light of what we know about the particular conditions of the site. I just don't see that being a bad thing to do.

DR. BEHLING (by Telephone): Well, I think you almost have to go back to look at the TIB-0023 and look at the actual instructions --

DR. NETON: I'm reading it right here while we're talking.

DR. BEHLING (by Telephone): Well, I am, too, and I'm somewhat in disagreement because --

MR. SMITH (by Telephone): Well, the other thing I would interject and maybe Scott could add to it there in the room is that any time a dose reconstructor does go down the road of

using as guidance, the final paragraph there in Section 6 applies which is that whatever assumptions were made are discussed in the DR report which is not a random thing that's just done in an automated sense with no thought to it.

And Scott, you've got a lot of folks that do Hanford claims so maybe you can add to that discussion.

MR. SIEBERT: You're right onboard, and if someone does, they have to defend it in the DR report. The peer reviewers are looking for that, and I know the OCAS reviewers are looking for that as well.

MS. MUNN: Does this satisfy some of your concerns, Hans?

DR. BEHLING (by Telephone): Well, not fully, but perhaps it's something that needs to be more carefully discussed between SC&A and NIOSH and not necessarily take the time away today.

DR. MAURO: What I'm watching is it's interesting that when we review the procedure what I'm really hearing is that there is a vast amount of information available to the

dose reconstructors that is continually expanding. And in theory all of them are kept abreast of this continually enriching dataset of information and guidance.

So in effect, it's really up to the dose reconstructor who has this OTIB in front of him which is just really one piece of guidance along with everything else. And in the end he uses this collective wisdom that's before him to make a determination what dose he's going to assign to a given worker for neutrons for a given year. And that's what he puts into his IREP code.

Now what I'm hearing though is that, so as a result there's a, he draws upon all of this knowledge base. One of our concerns I believe is that this knowledge base is vast, and it may turn out that different dose reconstructors may interpret and draw upon this array of information differently and come out with an inconsistent result. Now would you explain -- it makes perfect sense to me.

What you're saying to me is that, as Jim explained, now listen, you look at all of this, he doesn't look at this OTIB in a

vacuum. And I guess on the other side of the question is, well, where is the assurance that all of the 300 dose reconstructors, whatever, are, in fact, drawing upon this vast amount of information in a consistent way. And I guess by looking at the OTIB itself. It doesn't give you the pathways. Maybe this is a --

MR. ELLIOTT: Well, let me try to speak to that, John. First of all there's not 300 that are doing that. There's different groups that are assigned certain, specific types of dose reconstructions to do. There's, of course, internal dosimetrists, as you know, and external dosimetrists. And when a new tool comes online like this, it's my understanding, my belief, that ORAU has a training session.

Scott?

Run them through a training session. The peer reviewers are also included in that so they understand what the new guidance is and what they are to look for in reviewing the work of the dose reconstructors. And that also gets translated over into the OCAS peer review that we do.

And so I think, yes, we're all

concerned about consistency, too. We want to make sure that in this vast breadth of knowledge as it increases in its expanse we understand how people are taught to use it, and how we're charged with reviewing that work product when it comes out.

Am I --

MR. SIEBERT: Yes, you're exactly correct. It's each site has different small core groups that are really working the dose reconstructions, and Hanford is a perfect example. I won't take somebody who's working other sites and throw them into Hanford because there's just so much to learn. So each core group is working together, and they get to know the specific information that's needed for that site. And each site has a site expert.

Oftentimes when it gets confusing, an internal and external expert that really people can answer questions as the dose reconstructors have their questions. The peer reviewers or the senior dose reconstructors who are also part of the same group who know what's going on with all the portions. And

then the PID and the PED, the internal and external principals, also are available for any questions and answers. And that's only on our side, but then it goes up to NIOSH and the same information is done there.

MR. ELLIOTT: So you have that layer, but let's talk in another layer, another context layer. And that is how many dose reconstructions does this particular issue bear upon? It's really a best estimate, right? In where you've got to look at neutrons really hard to make sure you're getting the right --

MR. SIEBERT: Right, if it can be an overestimate, you can throw in the LOD over two, and it doesn't make any difference, that's what will be done. But it has to be at the sharp end of the marshmallow exactly. It's a smaller subset of claimants.

MR. ELLIOTT: And then that takes us back to the previous layer and context. As Scott was saying, you're not going to give one of those types of very hard cases or best estimate cases that's got to have a lot of attention to detail to a really new dosimetrist. You're

going to make sure they give it to somebody that's worked through one of these before.

DR. MAURO: I hear what you're saying, and I appreciate it.

But when I read -- I mostly look at AWE sites so I won't speak to Hanford. But I guess my question would be to perhaps Hans and Kathy is that when you review a Hanford where this issue may very well come up where a neutron exposure is concerned, the DR report itself. And of course, behind the DR report is all of the spreadsheets, an array of information.

I know that when you look at the DR report itself, it does not communicate the richness of thought that goes into the selection of a particular strategy for doing that dose reconstruction. It's imbedded perhaps in an amazing amount of material that stands behind that ten-page DR report.

I guess this is more of a question to, that I could put on the table is that how transparent, is it important that this thought process and the way in which each dose reconstruction draws upon this and then, of

course, how it's checked, how transparent is that to, for example, to us as auditors? I know what when Hans and Kathy and myself and others review, we work our way through a lot of material. And sometimes we're able to match your numbers and understand how you got to where you got and the judgments that were made, and sometimes we don't.

And, Hans, when you review Hanford dose reconstructions, and you just heard an example of how this would be applied, do you run into situations where you find it difficult to understand the rationale or the decisions that were made ultimately in inserting a given number in the IREP input sheet?

DR. BEHLING (by Telephone): Actually, no, because at this point I do know the Hanford TBD for external dosimetry that addresses the issue of neutron exposures and assigns neutron/photon ratios. However, I will also add that we are not in agreement with those numbers, and 0023 does specifically state that in instances where you use or have a prescribed neutron/photon ratio this TIB does

not apply.

So in essence the time period prior to 1972 when the albedo badge was introduced, the Hanford protocol would suggest a neutron/photon ratio of 0.71 which is under the 0.75 as the cutoff line prescribed in OTIB-0023 here. But there's still the issue that I have to question. That is, if you do exceed 0.75 based on the N times LOD over two, and you now face the challenge of reconstructing neutron dose based on neutron survey data and time motion studies, where do you go to get this information? How does the dose reconstructor address this as an option for assigning missed neutron dose?

MR. HINNEFELD: Well, I don't think an individual dose reconstructor would be expected to do that research. It would have to be a compendium that was collected probably in a site profile or something of that sort.

DR. BEHLING (by Telephone): I mean, you would have to have RWP data. You would have to have incredible detailed information available to you and to me when I say that this is information that is unlikely to be

available to virtually anybody.

DR. NETON: But, Hans, I think you're missing the nature of these numbers one and two in the Guides because it clearly says that both conditions have to be met. One is they have to exceed 75 percent. And the second condition says that based on his work location and information in the TBD or other places, the dose reconstructor determines the neutron dose was zero. So if he can't come up with that information, then clearly the two conditions haven't been met.

DR. BEHLING (by Telephone): Well, that is the third option which is totally unfair because if, in fact, now the number of zeros for neutrons exceeds the 75 percent of the external deep dose, then the guy ends up getting into the third category that says we don't have any data. He exceeds 75 percent of the deep dose; and therefore, we're going to assume he didn't get any neutron exposure. That to me is totally unrealistic.

DR. NETON: What?

MR. HINNEFELD: That's not the thought process though.

DR. NETON: That's not what it says though.

MR. HINNEFELD: The thought process is there are some people, I just gave you an example this morning like the secretary to the president of the company who you would not expect to, for instance, be monitored. I used it as being monitored, but there are certain jobs you would not expect neutron dose.

But there were sites that hung a combination dosimeter that included a neutron component whenever they badged somebody. So even though they think those people didn't particularly need to be monitored for neutrons, their combination badge had a neutron so the record will probably show zero for the cycle.

And so under those circumstances where you can determine that a person really wasn't neutron exposed -- and you've got to have a reasonable amount of evidence -- then you can conclude, well, okay, any neutron exposure would have been incidental or essentially zero, and so we're not going to include it at all. That would be the only time that you would do that, not just because there's a lack

of data but because when there's sufficient data to say this person wasn't neutron exposed.

But other than that there has to be some adjustment, some accounting for unmeasured neutron dose. Neutron doses below the detection level of the badge. If a person was exposed to neutrons, and his neutron readings are zero, you have to account for that in some way. That missed dose has to be accounted for in some fashion.

DR. BEHLING (by Telephone): I understand, Stu. There are really three categories. You could have a situation where your LOD over two and times N gives you less then 75 percent of your deep dose in which case you're fine. You assign that dose.

On the other hand when it does exceed 75 percent, you have a choice to make. You can, based on job description as you mentioned a secretary, and say, well, they were handed a multi-purpose dosimeter, but there was very little or no reason to assume that that individual was exposed to neutrons; and therefore, come to the conclusion that there's

no need to assign any.

But there's still yet the alternative that yet the job description would suggest that the person was exposed to neutrons, but his calculated dose based on N times L over D over two is greater than 75, and you're still faced with the issue of trying to figure out what to do about that person.

MR. HINNEFELD: Well, I think there would be, there are ways to do that. I don't know that they're spelled out in TIB-0023, but presumably there's site profile information or some document like that that would provide an alternative. And the question here is not, we're trying, the point here is if LOD over two is not realistic because of a known characterization of the work place, if the neutron LOD over two just isn't feasible, isn't credible, because of his photon dosimetry record, and some knowledge of the radiation characteristics of where he worked, then you don't just blindly assign LOD over two. If that doesn't, I mean, now, if you don't just blindly assign LOD over two, that doesn't mean that you blindly assign zero.

What it means is there must be some way to account for that. It could be that TIB-0023 by itself doesn't explain that very well.

DR. BEHLING (by Telephone): But it defaults to Implementation Guide-001 which says you use a time motion study and survey data which to me is also a highly unreasonable approach to filling in that void.

MR. HINNEFELD: Well, I think it's unreasonable to expect the dose reconstructor to do that. I'll agree with you. To ask an individual dose reconstructor to search down those records and make that determination. That's unreasonable. But that or other ways of doing a work place radiation characterization are supposed to be available in some other vehicle to the dose reconstructor whether, and I'm thinking site profile. There may be other vehicles as well, other technical documents as well, that would provide that. But the question here is not, it's strictly a matter of let's assign a dose that's credible here, not one that's incredible just by following this procedure, just applying it. That's the whole point of

this.

DR. BEHLING (by Telephone): I believe ^ would be to say, okay, if you think 75, we'll stop at 75, and that will be a bounding value even under best estimates.

MR. HINNEFELD: Well, I think that might the case in some sites. I'm just not completely familiar with all the techniques, but I think it sounds as if maybe some better explanation of the intent here, whether we put it in the TIB or not may help us out. And so, I mean, I can take that back and say, look, if I were going to read this thing, and I was going to read this, how would it be clear to me what exactly are we trying to attain?

I mean, we can go and take that as an action and try to come up with some clarity to the usage here because it appears that it's not. It appears that it's not very clear, and so I guess --

MR. SMITH (by Telephone): Well, I would just interject again on item number two under Section 6 where it says other documentation, again, if it was Savannah River site, I'm going to go get OCAS TIB number 0007 which

goes into further depth and detail about neutron exposures at Savannah River site. And that's what's going to get used, as Dr. Neton stated, to qualify the situation under item number two.

The document was made general in nature and all with the future in mind knowing that there would be a wide variety of site profiles, and in addition, add additional TIBs that might be added in the future to clarify what's in the sight profile or to expand on what's in the site profile.

DR. BEHLING (by Telephone): I still personally think that you can simplify things because under the current ^ guidance, if a guy ends up with a calculated neutron dose that ends up coming just under the wire, let's say 74 percent of his deep dose, you would give to him. If he ends up with 76 percent, or 0.76, you would end up defaulting to some very incredibly difficult option for assigning the dose. Why not just simply assign a cutoff date and say thou shalt never exceed 75 percent of your deep dose and let it go?

DR. NETON: Hans, you can give him 76

percent if the documentation is not supporting the fact that he was not neutron exposed.

DR. BEHLING (by Telephone): Of course, we've been through that. If the person was a secretary, and you come to the conclusion that there should be no neutron exposure, I agree. But what if you come to the realization that there was a potential for neutron exposure, and you don't have the data?

DR. NETON: Hans, this is no different than what we do for every single thing we use coworker data. It's ambient; it's 50 percent; it's 95th percentile. There are value judgments made on these cases. I don't know why this is that different to you.

I mean, you have to make a value judgment at some point. Was this person potentially exposed, yes or no? And if they were exposed, were they heavily exposed or average-type exposed. That's the exactly what this is doing. It's no different.

MS. MUNN: We're getting really down into the weeds here with respect to the issues on OTIB-0023. Let's establish that the further technical discussion on this particular item

covering all eight of the outstanding issues under OTIB-0023 will be discussed by the technical experts at NIOSH, ORAU and SC&A. And we will revisit this at our next face-to-face meeting to see whether any resolution has occurred so that our SC&A experts are comfortable with, more comfortable with the responses that have been given by NIOSH. Is that acceptable?

DR. BEHLING (by Telephone): Yeah, and I would, add to that, Wanda, just perhaps a simple statement that under Section 6 of the TIB, under Guidance, there should be a little more definitive explanation given in terms of what are the options here. One and two basically says if you need both one and two, you don't get anything. That to me is an incomplete guidance for dealing with this particular OTIB.

MS. MUNN: I'll leave that to the discussion group to resolve.

And it's time for us to take a 15-minute break now. When we come back for your information the first item that we want to cover is the one that I indicated we would

cover no matter what, OTIB-0019, which interestingly enough is on page 19. Let's put that one in its appropriate slot immediately following a 15-minute break. We'll go offline for that period and be back here in 15.

DR. WADE: We'll mute the phone and back in 15.

(Whereupon, a break was taken from 3:25 p.m. until 3:42 p.m.)

MS. MUNN: Thank you, we are back on track here.

Dr. Ziemer, did you have a question?

DR. ZIEMER: I have question following up on the previous discussion. Will the next version of our document have some kind of a summary of Hans' comments which really, I feel like we're not close to resolution on those items. And it's almost like, okay, here are SC&A's responses to NIOSH. I mean it seems, or something like that here. In this new version will there be a synopsis? Because Hans raised a lot of issues, some of which I think had to do with interpretation of what the document actually says versus the technical because I want to --

MS. MUNN: But, Paul, it was the intent when the groups were asked to meet offline and discuss this to try to distill the issues to the bottom line as it were, and for this group to discuss that on our forthcoming phone call before any entry would be made on our --

DR. ZIEMER: Oh, okay. I felt like we needed to capture, I mean, that's, I don't know if those are the official responses or what this, but I mean, that's the sort of thing that's hard to --

DR. MAURO: This is the perfect test case. In other words in effect on this issue where we are in the process is this working group meeting on this date. There's this issue, right? And right here --

DR. ZIEMER: Right, and I feel like we're pretty far apart right now.

DR. MAURO: Right. And right now we'll try to keep it brief that there is an issue here that we're --

DR. ZIEMER: SC&A's concerns remain --

DR. MAURO: Right, well, we'll briefly summarize it. That's why we wanted to bring this form. We will discuss it amongst the

three, I guess whoever needs to discuss what the work should be here. And then there certainly will be Board words here regarding what your direction is to what needs to be done to take action.

DR. WADE: If you have this call where the technical people discuss it, the results of that call will then be captured.

DR. MAURO: Yeah, if we could do that quickly. You see, in my mind we'd like to capture that. Now the only question becomes how deep do we go into it. In my mind our intent was to revise this quickly after the working group meeting so that we could re-issue this. So if we can get the right language in quickly after this meeting for this spot right here on this issue, that would be the intent. And not make this so drawn out.

I mean, for every one of the issues where we have to put something in every one of these issues we discussed today, the intent would be to somehow capture the discussion that was held and put it right in here soon after this meeting, let's say within a week

from today after we get back. And that would be what I had in my mind for this form.

MS. MUNN: It would be hoped that not much would go on there until that telephone call between the technical parties that was requested to try to really distill that to its essence.

DR. MAURO: I guess that's the question before the working group.

DR. ZIEMER: Well, let me speak to that in a somewhat generic way. One of the things that we've sort of allowed the contractor and NIOSH to do separate from the Board is address issues of factual, do you have the right information, but not resolution of issues if you understand what I'm saying.

So that if they're saying to Hans, actually, you don't have the right information. Maybe we didn't say this right in our procedure so we'll revise the procedure. So we say what we intend, what we're trying to explain here. And Hans says, oh, that's what you mean, okay, then I don't have any problem with. That I think you can, no, you can do that offline.

DR. MAURO: What goes here is --

DR. ZIEMER: If there's a resolution that you need to come to, that's where we have the work group. I'm not clear which is which because it seems like some of what I heard was Stu saying or Jim saying to Hans, well, you're not understanding that correctly, or we don't read it in the same way so have we not said it right or what. And that's sort of fact finding and I think that can be done offline.

MS. MUNN: That was the request to be done offline and then discussed with us on our working group call.

DR. ZIEMER: And then if there's still issues, then we have to resolve them.

MS. MUNN: Right.

DR. MAURO: So it goes in that spot as you just said. That is, if there's any disagreement regarding interpretation of language or clarity of the information provided in 23, and that is to be further evaluated by the working group.

DR. ZIEMER: Or you have gotten together and agreed on certain things that maybe some of these will fall away then.

DR. MAURO: Well, that's the question I'm posing to the working group. To what degree do we actually start to resolve it during this call? See, to me my intent was simply to capture what was discussed at this meeting clearly and not in that step which would be, let's say, the exchange of the meeting, the conference calls, the exchange of white papers. See, in my mind that is separate from this form. This form is filled out and just captures what transpired and the direction given by the working group to NIOSH and SC&A at this meeting and not say anything more than that unless you see it differently.

DR. WADE: If at the next meeting the result of that little clarification session is reported out, then it can be captured.

DR. MAURO: Then it will be captured then.

MS. MUNN: Yes, yes, no problem with any of that I believe. And we have one other outlier here before we take up what I said we were going to take up immediately.

John, would you like to tell us what the issue is here?

DR. MAURO: There is going to be a meeting

with General Steel Industries on October 9th, a site visit. NIOSH will be going there. One of the things I asked Wanda and Lew was whether it would be appropriate for --

DR. ANIGSTEIN (by Telephone): John, let me interject. The site visit is not, it's still pending, and it probably has not been approved and may not be approved by the current site operator.

DR. MAURO: This October 9th meeting, how should I refer to it?

DR. ANIGSTEIN (by Telephone): Well, it is a worker outreach meeting.

DR. MAURO: A worker outreach meeting.

MR. ELLIOTT: Let me clear about this. There are two meetings, I believe. There's one meeting, one meeting for GSI, and it's not a worker outreach meeting. It is a town hall meeting where we are proposing to explain to a claimant-based audience how we are doing their dose reconstructions using TBD-6000 and Appendices BB. So it's not a worker outreach meeting.

A worker outreach meeting, for everybody's understanding, is a narrow focus

group-type setting where we pull six-to-eight workers together who have knowledge about the operations and the process. And we pose questions to them and we try to get a better, clearer understanding of how they interacted with the work they had to do. So this is not a worker outreach meeting.

MS. MUNN: And we muddied the meeting for you a little bit the last time.

MR. ELLIOTT: We're all on a learning curve here.

DR. MAURO: That's the reason I posed the question whether or not it would be worthwhile for Bob Anigstein representing S&A to participate in that simply because he has a number of questions related to the modeling he's doing for General Steel Industries and the Betatron. But it sounds like the questions he has won't be answered at this meeting. What he had in mind was the ability to perhaps actually go to the site and ask certain questions.

DR. ANIGSTEIN (by Telephone): John, I keep saying that's not up to NIOSH. That's up to the site operators. So far they have not

given their consent.

DR. MAURO: Okay, there's information we'd like to get our hands on if we can. I guess I was under the impression that perhaps Bob joining in this meeting that information could be acquired. But if that's not the case, it may not be worthwhile for Bob to make that trip.

MR. ELLIOTT: Well, let me pose this as an opportunity for Bob to pull people aside from that meeting. I mean he can identify people that may want to talk to him one-on-one. And he could ask his questions and maybe get some clear responses.

DR. ANIGSTEIN (by Telephone): That I can also, you know, we have a contact liaison with the workers, [name redacted], that's been talking with us. And I believe he could arrange some telephone interviews. I mean a face-to-face is even better, but --

MR. ELLIOTT: But I have no problem with Bob going there and pulling people aside from the meeting if that's what he wants to do. I think we ought to talk a little bit about this site visit though. And just to be on the

record here and conducting site visits with entities who perhaps don't, who own the site now, own the facility, or if it's the same entity, let's say it was GSI still that owned this site, NIOSH has no access, no entré authority. We can't go in under any regulatory authority. We can't get your contractor access to the site. So we're on the good graces of the owners of that site to let you in. And I know that [name redacted] really thinks it's important and would like to have everybody walk through that facility. But it's not something that we can make happen unless the owners will allow it to happen.

DR. ANIGSTEIN (by Telephone): I understand that.

MS. MUNN: The question that John posed is whether or not it was reasonable for the SC&A representative to be going to that particular meeting given their contractual obligations. I responded to him that I certainly was not comfortable making any thumbs up or thumbs down decision about that kind of undertaking because I felt it was outside the authority of this particular group. But since there seems

to be a time issue, a time versus cost issue here, I asked him to bring it to this group so that we would at least be aware of it.

I'm open to any suggestion from anyone else with respect to whether this is something that you're comfortable even saying personally that you have feelings on one way or the other or whether it needs to go to the Board. Or whether it's something, a decision that John can make himself.

DR. ZIEMER: I don't think it's this work group's prerogative so that it's really the contractor's call at this point as to how you gather information.

DR. MAURO: Yes, thank you, and it is important, the point that you've made is that if we are in a position where we can pose certain questions and talk to people like that, then the trip will be well worth it.

MR. ELLIOTT: There's certainly going to be people in the room.

DR. MAURO: That'll be able to answer the questions.

MR. HINNEFELD: If it matters, at our last worker outreach or kind of town hall-type

meetings out there in the past and some of the people at that meeting had direct knowledge of the use of the Betatron and were the operators, you know, the radiographers that operated it, and could speak very clearly about what they did. So if the same people show up or some of the same people show up, it may be you can gain some valuable information.

DR. MAURO: Then on that basis I'd very much like to see Bob go.

DR. NETON: Let's be clear. I mean, this would take place on the side in addition to the town hall formatted meeting.

DR. ZIEMER: As part of the meeting.

DR. NETON: As, Wanda, we learned at Blockson Chemical, you just cannot mix the two.

MS. MUNN: You don't do that.

DR. NETON: You have emotions running very high with people who want to voice their opinions, and you just can't --

DR. ANIGSTEIN (by Telephone): This would be, this would take place before the meeting. In other words this would be in the afternoon before the meeting; some individual, small

group meetings would be arranged. That's my understanding in talking to the workers' representatives.

MS. MUNN: Sounds like the agreement here is it's your call, John.

DR. MAURO: Okay, good. I'd very much like Bob to do that.

MR. ELLIOTT: Is it your preference, John, that Bob do this without any NIOSH involvement?

DR. MAURO: No, my preference would be that NIOSH participate so that everyone has the same information.

MR. HINNEFELD: We'll be there then.

MR. ELLIOTT: So if that's okay with you, John, we would like to sit in and hear what's being said.

DR. ANIGSTEIN (by Telephone): Can I ask who would be sitting in?

MR. HINNEFELD: It will be probably Dave Allen, will be Dave Allen and probably myself, Stu Hinnefeld.

DR. ANIGSTEIN (by Telephone): Who's speaking?

MR. HINNEFELD: This is Stu Hinnefeld.

DR. ANIGSTEIN (by Telephone): Oh, hi, Stu. I just wasn't sure who it was. I see so there would be, and I would be there. Okay, understood.

DR. MAURO: Thank you.

MS. MUNN: And one other item of business before we get back to OTIB-0019. We had asked Mark Griffon to put together specific words for us that he was going to be using tomorrow, and -- rather Thursday. What day is today? This is Tuesday. It'll be Thursday. I'm told that Mark is probably not on the line.

DR. WADE: Mark, are you on the line?

(no response)

DR. WADE: He sent the words to me.

MS. MUNN: Very good.

DR. WADE: Now this is, Mark was generating words that would form a question to be asked of the Legal team if you recall about the re-interviewing. Quote, one of the recommendations of SC&A's review of PROC-92 was that the Board interview those claimants who were the subject of the SC&A review to gain a better understanding of the claimant's opinion of the effectiveness of the close-out

interview process. If the work group-slash-Board accepts SC&A's recommendation, can the Board conduct such interviews with the narrow purpose of gaining insight from the claimant's standpoint on the effectiveness of the close-out interview process? Closed quote.

MS. MUNN: Sounds reasonable to me. Any disagreement?

MS. HOMOKI-TITUS: Lew, if the Board accepts that, can you just forward that language to us so we can respond to this and ^ that question?

DR. WADE: Certainly.

OTIB-0019

MS. MUNN: Thank you. Now to the item that would be taken up immediately following our break, page 19, OTIB-0019, with respect to regression analysis. We have a response from NIOSH to the item. There's only one item. Take just another moment to re-read it. I'm sure you've all read it before.

SC&A?

DR. MAURO: I'm going to turn this over to Bob Anigstein who has been working on this issue.

Bob, can you address OTIB-0019?

DR. ANIGSTEIN (by Telephone): Sure. I pretty much have the same thing to say that I said at the telephone conference, the one that we had earlier in the summer about, with this working group.

I read over the NIOSH response and we don't agree with it. The reason being that our point, ours because I've looked at this and so has our statistician, Dr. Harry Chlmynski, that R squared is a valid measure of correlation when you are examining the data where there has been no correlation imposed on it.

So let's say if there was, to make up an example, a known uranium intake and then corresponding urine analyses of the same individuals, it would be reasonable to take these pairs of data and do a correlation between them. And if you had an R squared of ^.9, we'd say yes, that indicates that the urine analysis is a good indicator of intake. And maybe 0.7 may be sort of passable.

But here you don't have independent, you don't have two independent variables that you're comparing. You're comparing the Z

score and the rank. These are already correlated by nature of the process. You sort them out; you sort out the data. You assign the Z score, and then you assign a rank to it, and the two are automatically correlated. So to say whether the R squared is a measure of whether or not these are lognormal is not valid.

And there is a paper that's cited in our response which shows that artificially making up data points, you always get an R squared of around 0.9 sometimes even 0.99, but this does not indicate that it's lognormal. And there are other tests that are valid. There are valid tests for lognormality, a number of them which would be more appropriate to apply.

And the reason the question of lognormal is important is if, say, one were to pick the 95th percentile and assign that as a worker dose or for a bioassay result for an unmonitored worker, it becomes very important because, one, if a 95th percentile can be calculated by -- I'm not sure I'm correct ^ -- 1.6 or five times the standard deviation --

I'm just going off the top of my head.

Or the other way would be to actually take if off the distribution. And there is a nonparametric method by determining the 95th percentile of ranked data that makes no assumptions as to whether it's lognormal or not. And that would seem to me to be a more valid, and in some cases, more claimant favorable approach. That's basically the response I would have had to that.

DR. NETON: This is Jim Neton, Bob, I think I don't disagree with some of the things you just presented here. I think we need to go back and reword this a little better. I do disagree that in the sense that I think a straight line fit is a reasonable thing to look at when you're fitting cumulative probability data because for the exact reason you just stated, if you can demonstrate that that cumulative probability fit is a straight line, then you can make some reasonable assumptions or extrapolations about what the 95th percentile is.

DR. ANIGSTEIN (by Telephone): I agree.

DR. NETON: That's what you're exactly

trying to do.

DR. ANIGSTEIN (by Telephone): I agree with that.

DR. NETON: So I think maybe we're doing the right thing. We're saying it may be slightly statistically improperly here, and we'll reword this to I think better reflect what we're really using that for.

DR. ANIGSTEIN (by Telephone): Okay. Also, as long as we're on this, at this point in the procedure if that's acceptable to the Chairman, I'd also like to mention OTIB-0012. That's not on the agenda for the reason that it was given a five.

Now what happened internally at SC&A is these were, both 12 and 19, were statistical issues, but they were assigned to our statistician, Dr. Chlmynski, who reviewed 12 and found, he did his own Monte Carlo analysis, and found that the mathematics are correct. That the statistics procedure was correctly implemented.

However, what was not considered at the time of that review were the actual Health-Physics and dose reconstruction

implications of that procedure. And having looked at that it appears that because the, as one example, the OCAS, the Appendix B to OCAS 1G, or to Procedure 1G, does indicate these are photon dose conversion factors based on zero to 30 keV, 30 to 250 keV over 250 keV.

And these were taken from the appropriate tables in ICRP Publication 74 which gives a great deal of detail. They give it broken in much smaller steps, maybe ten or maybe 12 or 20 increments in energy. And these were sort of condensed into what is representative a triangular distribution. And typically, the number in both ^ is much higher than the mid-range.

And my understanding is that that is the number that is usually used. If the dose reconstructor looks for a single value, he would use that number. Now, when you do the procedure in OTIB-0012, which is folding that triangular distribution into a normal distribution that is assigned that accounts for the uncertainty in the measurement, you end up actually with a lower value that is less claimant favorable as the mid-point. And

so that's the objection that SC&A ^ John Mauro has ^.

DR. MAKHIJANI: It's not in the matrix because -- I'm just looking at our document -- OTIB-0012 I think had all scores of five --

DR. ANIGSTEIN (by Telephone): I know that, but based purely on a statistical evaluation --

DR. MAKHIJANI: No, no, I'm just informing people as to where to find what you're talking about, Bob.

It's in the full report on page 115 where the checklist is, but it doesn't show up in the matrix because everything's a five. And I think what Bob is saying is that everything shouldn't have been a five, and there should have been an elaboration made.

DR. MAURO: Yeah, that's a good question. In the process for preparing for this meeting, reviewing the original document that was about a year ago, we revisited some of these issues. And Bob Anigstein had looked at this other OTIB procedures, 19 and 12. And we're in a situation now where, I guess the bottom line is we do have some concerns with 12 that we're

expressing now, OTIB-0012, that we did not have before. And you heard what the concern was. How best to proceed?

MR. SMITH (by Telephone): I could address some of them right now. This is Matthew Smith, but I'll leave that to OCAS as to whether or not they want me to speak on an issue we haven't had time to consider yet.

DR. NETON: Why don't we see what the Board is going to do with it, or working group.

MS. MUNN: This is an interesting issue, and one that probably will come up over and over again when we encounter these, oh, by the way, back when sorts of issues. Clearly, it falls under the purview of Task 3 and what we have done. It would appear that we need to formulate in our own minds a standard procedure for dealing with this.

I can see no reason why that procedure shouldn't simply be a one-page statement, a one-page white paper from SC&A identifying chapter and verse and the reasons why you feel that it now should be undertaken as a part of our responsibility. When you do that, then we will incorporate it in our agenda at the next

working group meeting, and we'll undoubtedly anticipate seeing it on the matrix as well, and that way we can track it. But as long as we have, it's my feeling in any case. Please other Board members tell me if you feel otherwise. We need to have at least a simple document of some sort to refer to as the trigger for this action to occur. Any objection to that?

DR. ZIEMER: I concur with that. I think we certainly don't want to have a rule that you can't bring up anything for the time that's passed. But we do need to have it documented and then there'll be a reason for it to show up in the matrix next time.

DR. MAKHIJANI: Then also you might incorporate that page in a page change.

DR. MAURO: I was thinking the best way perhaps would be just to submit to everyone, a page change and just insert this page here and replace that page.

DR. MAKHIJANI: Then you have a loose page, one-page document kind of ^.

DR. ZIEMER: Well, it may change your summary, your front summary, too.

DR. MAURO: It would just replace the --

DR. ZIEMER: The finding, you'll have a finding. So you'll have a couple of pages probably to --

DR. WADE: But you'll bring it to the work group, and then they'll decide whether it can be entered in the matrix.

DR. MAURO: Yeah, and the next action to be taken. I guess that's the question. Certainly we could take that particular review for OTIB-0012, revise it, have it sitting at SC&A. The question is, okay, what do we do at that point in time.

DR. WADE: Wanda asked that you prepare a one-page document raising the issue to the work group for consideration at the next meeting. If they agree, then they'll say go and add it.

That's what you said?

MS. MUNN: Yes, yes, essentially.

OTIB-0017

Are we ready for the next item on our list? We skipped over OTIB-0017. We were going along in an orderly manner, but I insisted that we go to 19 because I wanted to

get that off of our yet-to-be-done list, but we still have something to be done. The NIOSH action, they're going to reword their response to express that differently.

OTIB-0017 starts on page 11 and has 15 action items, 15 findings. Take just a moment to read through them.

These are fairly wide-ranging issues with a significant variant of depth to the response and the concern. I don't know of any way to address this other than starting through it one finding at a time. Does anyone have any problem with that? I can't see how else to do it.

(no response)

MS. MUNN: One finding at a time then.

John?

DR. MAURO: I'll be the point man on this. I guess the first item has to do with the guidance given to the dose reconstruction. This all has to do by the way with shallow dose to beta or photon radiation. And the first concern expressed here has to do with clarity regarding, first of all being able to make a distinction between whether the shallow

dose was due to electrons or was due to photons, and that distinction is important.

And apparently the procedure is not, somewhat ambiguous on how to interpret the reading that you get back from the dosimeter, and how that dosimeter was calibrated, whether or not it was calibrated for low energy photon exposure versus electron exposure. And in the procedure the concern was that it's unclear on how to make that distinction and that distinction was important to be made when you're determining what the shallow dose is. I don't know if I --

MR. HINNEFELD: Yeah, I think we understand the issue. Again, this OTIB is used in conjunction with other technical documents, in this case most directly the site profile. So information that's a site specific question about how is the shallow dose, what does it mean when they report a shallow dose, how did they arrive at that. It's a site specific question.

So this information is utilized in combination with the site profile information to make that judgment. And it's site

specific, and it doesn't lend, that kind of the information doesn't lend itself to an OTIB that's used for all the sites.

MS. MUNN: Does that clarify?

DR. MAURO: Yep. I mean, as long as that, in other words the main concern is that there is a vehicle by which someone could make that distinction, and you're saying it's contained in the site profile. And the dose reconstructor will go there and be able to --

MR. HINNEFELD: The dose reconstructors are a team of people who work on that site.

DR. MAURO: We're probably going to run into this --

MR. HINNEFELD: Sure, sure, I think we will a lot because, again, when you review these by themselves, I think it's perfectly understandable for these things to appear, but they do, these documents are used in this context with other technical documents as well.

MS. MUNN: The response to 01 is acceptable. Zero two.

DR. MAURO: Well, this has to do with protective clothing. Let me just take a quick

look.

MS. MUNN: Clothing specific transmission factors.

DR. MAURO: Okay, yeah, this is pretty straightforward. There's a default protection factor that's based on certain information around the shielding effect of standard clothing. The comment that's made here is that, I guess we'll see it again, that it could be very variable what that protection factor is and whether or not the particular one that was selected as a default value is the most appropriate value to be used. Apparently, that the author of this, John Hunt, found that there are perhaps better values to be used as your default value for protection factors or shielding effectiveness.

MR. HINNEFELD: And I think part of this has to do with why bother to have an overestimating rather than underestimating shielding value when you've got more specific ones in there. There's a certain psychological aspect to doing this that if I underestimate this dose, this guy's dose intentionally, and it's still compensable, I

felt good that this is a compensable case, and it's going to be compensable. And so there's a kind of a reassurance to a dose reconstructor to be able to do that.

Or conversely, there's a kind of reassurance to a dose reconstructor to intentionally overestimate the dose and arrive at a non-compensable value. So that's done sometimes, and maybe it's done needlessly, and maybe a best estimate would be, you know, you can pick out what is the true value. What's the true, you know, shielding factor we should use.

But we have not really interfered with that process of an underestimating or overestimating approach when they choose that. It's one of those things that's done commonly, and were done commonly from the start.

DR. MAURO: So in other words what you're saying here is that the dose reconstructor really has the, if he's doing the minimizing versus maximizing, he has the flexibility to choose what he feels is most appropriate in the case. Now, I guess I'd have to go back and read the procedure again, but it --

MR. HINNEFELD: That's essentially the intent of the response is that there are variations in what clothing, what protection clothing would provide to a beta dose. And there are some ranges given or there are some specific values given even for a specific thing. I think a common coverall is so much and some things like that. And if the dose reconstructor can choose a larger shielding factor and still arrive at a compensable decision for the case, it provides him a little psychological reassurance. I got this one right. I underestimated, and it's still compensable so I can worry less about this one.

DR. MAURO: I fully agree and understand what you're saying. I presume the language is in there.

MR. HINNEFELD: I believe that's in there. I'm not 100 percent sure, but it's presumed. I mean the dose reconstructor. The dose reconstructor's ^ all think that way. Yeah, there is language in here that says an acceptable claimant favorable approach is to assume 100 percent transmission. In other

words in that case you're ignoring it.

DR. MAURO: No shield.

MR. HINNEFELD: And for compensable cases an acceptable minimizing approach is a transmission 0.6. So that does come out of the ^. Yeah, that does come ^.

DR. MAURO: A perfectly acceptable answer.

MS. MUNN: Acceptable. Dash 03.

MR. HINNEFELD: Well, this is about whether you can measure beta doses.

MS. MUNN: Beta doses.

DR. MAURO: And this is going to be recurring with a lot of these is when all is said and done, the most important comment that was made here is most of the time when we're talking about doing beta dosimetry, you're talking a beta exposure at some distance where a certain part of the body might be exposed to both photon and beta from some source.

However, very often the exposure is because a particle has landed on a person's skin or on his clothing and some more highly energetic beta emitters landing even on the clothing will deliver relatively high, localized dose. The film badge is not going

to pick up. And I guess when I read through the commentaries it appeared that the procedure in terms of how do you deal with that, skin contamination by beta emitters for a person that's a claimant for a skin cancer or other shallow organ cancer; however, ultimately how is that dealt with.

So that goes toward this question here about, yes or no, was the person, was he exposed to that or not. And I guess we'd like to hear a little bit about that and see what the answer is to it.

MR. HINNEFELD: Well, I guess on the, certainly, the dose reconstructor has the option, you know, if there's evidence of a contamination event that's expected that will be addressed in the dose reconstruction. If there were some experience with hot particle that was never, you know, no detection of hot particles, I don't know that we don't have an approach that says add so much dose for undetected hot particle exposure. So we don't have an approach like that.

DR. MAURO: So I mean in theory what I'm hearing is that, okay, you have a worker.

He’s leaving his work area. He’s frisked. Nothing is picked up; therefore, no issue, no problem. However, ten years later he comes down with a skin cancer, and the question becomes is it possible that that skin cancer was due to some localized deposition. And the answer is, well, if there’s no record that we ever saw any skin contamination as part of his frisking, then we will not assume that that occurred.

MR. HINNEFELD: I think that that is probably accurate. I don’t know that we assume that a, we don’t look at a, we don’t treat every skin cancer case and say, okay, how much of a hot particle experience would there have had to have been for this to be compensable. So we’re kind of in a situation now where if there’s evidence, including interview information, you know, I was ^ up several times, you know, found on the way home. Generally, a dose reconstruction will address that, or at least will take steps to make sure that the skin dose would account for those times ^. But if there’s no evidence, for instance, it’s a person who went to work

in an area with potential hot particles, and there's no evidence that they were ever exposed or contaminated in some fashion, it's not normally our practice to say, okay, then for this skin cancer case, and I guess, for the skin cancer case what would kind of a hot particle experience would he have had to have been in. Is that credible? And how to pursue that.

DR. MAURO: I understand what you're saying, and I wouldn't disagree. But if I recall, and it's been awhile since I read that procedure, the procedure itself. And I don't recall there being any guidance along those lines. That is what you're effectively saying is, listen, if this guy's job and job location and the history of that particular site, this type of thing just didn't happen very often or happen at all. I can understand that argument. But I don't believe that's contained in the text.

MR. HINNEFELD: No, I don't believe there's any. You're right.

DR. MAURO: It might be worthwhile putting some text to point the dose reconstructor in

that direction. Because just to simply say that, well, the scanner, the frisker didn't see it, by definition it's not a problem. I like the idea -- I'm just speaking now as one of the reviewers, I like the idea that, well, let's go one step further.

Beside the frisking, let's take a look at the records of the workers that work in that area, the potential for airborne particulates causing localized skin contamination, and put that to bed also. That would be, I would see that as a claimant favorable strategy for dealing with this.

MR. HINNEFELD: I guess I can kind of see the point. I think there would be certain cases where there's no evidence of skin contamination. The person worked in an area where it was feasible, and there's no evidence of a skin contamination. A person gets skin cancer. Is that sufficient evidence to say that, well, there's a causal relationship here?

MR. ELLIOTT: It goes to professional judgment, I think. The dose reconstructor's working through the claim, and it's a skin

cancer claim. And it comes down to, well, I can reconstruct the dose and will produce a POC of 48 percent, but I can't get it over. Maybe I need to look at this harder and is there hot particles involved. Is the process, does it have hot particles related to it? I just assume they would pick that up and follow that thread.

MR. HINNEFELD: I think there's some discussion for us to pursue with the ORAU dose reconstructors who are perhaps more expert on this if you do it a lot. So, I mean, we can pursue that some more and look at the suggestions in the report and see what in there might lend itself. I mean, we may be getting into a situation where we can't reconstruct the skin dose.

DR. NETON: How do you prove a negative? It's the same old issue.

DR. MAURO: This is really a question that --

DR. ZIEMER: I'd like to ask, I don't understand the SC&A finding, that it's a yes/no basis. What does that mean? Because if someone is working with a beta emitter,

let's say it's P-32, you're going to monitor him with a film badge, and you're going to get, you can get the skin dose values, and usually you're doing extremity measurements on many beta emitters anyway, so you have an extra sort of check on that.

If they're getting hot particles, if you can't pick it up with a scan, I mean, hot particles are exactly what they're talking about. They are not uniform contamination. Usually a tiny particle, and it's very hot, and it's very easy to detect normally and set off a monitor. So then the problem on hot particles has been for those who have found them on their skin they worked with them on there all day.

How do you figure out dose for that? What is that? A concept of dose average is stuff over sort of big areas, and the arguments on hot particles has been how do you figure out the dose? Usually you know there's been hot particles.

I mean, there are very few cases where people haven't known, they just don't know how to go about calculating the dose from that in

a way that's meaningful. If you got skin cancer from the hot particle, and the particle is here, you better not get skin cancer somewhere else and attribute it to that particle. But anyway, that's beside the point, but what does it mean about the yes/no business?

DR. MAURO: The yes/no means if you get a positive reading on your film badge or beta emitters, well, that's a yes, and it's unambiguous, and the answer yes. This person was exposed to a beta exposure. But when you get less than a detectable level on your film badge, that doesn't mean that there may have been parts of your body, either localized or --

DR. ZIEMER: Oh, I see what you're saying. And that per se doesn't rule out hot particles.

DR. MAURO: Right, so in other words when you --

DR. ZIEMER: So the hot particle issue usually is being detected in other ways.

DR. MAURO: It's more than, in other words basically, it's possible to get a localized

exposure to a portion of the body from a beta emitter whether it's from a hot particle or just a source that might be close to a part of your body and still get a negative reading on their film badge. And so when you get a no, when you get no, zero, for a beta exposure, it doesn't, there's not very convincing that means you didn't get any beta exposure. I guess that was the point I'm really making.

DR. ZIEMER: But for it to be significant, you've got to be able to get by scanners.

DR. MAURO: Well, we ran --

DR. ZIEMER: Not everybody scans.

DR. MAURO: Once you, for example, when you postulate a certain particle size specific activity of a beta emitter. We ran a VARSKIN. We could run MCNP. You could predict what the localized dose is, the tissue beneath the particle. So I mean, this could be done.

Our concern with this procedure, I guess, goes to how do you deal with the fact that some people may have gotten some hot particles that were not detected, and later on they come down with a skin cancer. And quite frankly, I mean, whether or not it's adequate

to argue, well, we never saw it on the frisker so therefore, it's not an issue.

If that's satisfactory to the working group, that's fine. But to me I would say it really goes to the question of is it commonplace for a person to miss something on the scanning process? Is it possible? Is that a plausible scenario?

DR. ZIEMER: I think it is for an individual, but places that have had hot particles it's usually showing up in the system. It's showing up in the laundry system. It's showing up amongst their coworkers. So I think you would have to look at the total system on that.

DR. MAURO: I think that may be all we're, maybe that's what needs to be said in the procedure. That is that there's a --

DR. ZIEMER: So if someone gets skin cancer, you sort of ask the question are they working an area where that could have been a consideration. I see what you're saying.

MR. SMITH (by Telephone): Well, but that's why the OTIB has a section on non-uniform exposure of the skin.

DR. NETON: Isn't that really more --

MR. SMITH (by Telephone): And it summarizes much of what Dr. Ziemer just said.

DR. NETON: In terms of how you calculate the dose though, right?

MR. SMITH (by Telephone): Correct. And in addition, the gentleman was speaking to the professional judgment. That's what occurs as the DRs go through it, and Scott can attest to that.

MS. MUNN: So is there an action here?

MR. ELLIOTT: I think we ought to look at our language in the guidance that we give, maybe be a little more clearer or a little bit more proscriptive in what happens if the claimant, the energy employee, was in a process or an operation, perhaps had a hot particle circumstance.

MS. MUNN: Look at it and report back to us.

DR. WADE: This 17 three?

MS. MUNN: Seventeen three, correct.

DR. MAURO: Plus four and five I believe, too.

MS. MUNN: Does NIOSH agree to that? Four and five?

MR. HINNEFELD: They're all the same.

DR. ZIEMER: Yeah, they're all related.

MS. MUNN: All right. Six, we get to dosimetry recorded LODs.

MR. HINNEFELD: This speaks about adjustment of limited detection based on the type of radiation this badge was exposed to and its reaction to that, and how was it calibrated versus what it was exposed to. Is that where we're going here? I'm having trouble from the page, from page 77 of the report as to where exactly where this finding appears on here.

DR. MAURO: I am at a bit of a loss to help out here. I see that you have responded, an adjustment to the LOD is needed, but technically, it isn't stated in this section. So apparently --

MR. ELLIOTT: So we've accepted your comment?

DR. NETON: No, I think we did an adjustment.

MR. ELLIOTT: Oh, we've already done an adjustment.

DR. MAURO: So you're saying it has been done?

DR. NETON: Well, that's the way I read this is apparently they're saying that the LOD should be used, and it reads to me that some adjustment has been made to compensate for the over response of the dosimeter's beta particles. I can't be sure of that, but that's --

MR. HINNEFELD: I think it's the old ^ approach.

MS. MUNN: Are we still talking about beta particles here?

MR. HINNEFELD: Well, we're talking about shallow dose measuring which may be beta particles or may be low energy photons. And so the question relates in the TIB there is a discussion about how much, if you're under 30 keV photon dose, and you're using film calibrated with, say, a higher energy photon, the low energy photon, the fact the film would over-respond a lot to the low energy photon.

And so I think what the TIB contains is a sort of a reminder to that effect is that when you're using, it may not be acceptable to use an LOD at face value depending upon how it was calibrated, and what it was exposed to.

And there may be some need to adjust an LOD when you're assigning missed dose LOD over two missed dose. So I think that's the statement that this is addressing. And I'm not exactly sure though what, well, yeah, I guess the finding is that says use the LOD.

And I think our response is it's important before you just use the LOD, you know, how was that LOD arrived at based on the calibration badge, and too, what was the ^ of the badge exposed in the field. So it doesn't necessarily automatically translate the published LOD would be the correct one to use. So that's what our response is.

DR. ZIEMER: Which way do you correct it?

MR. HINNEFELD: Well, if the LOD for the badge were --

DR. ZIEMER: Let's say it's a certain amount of blackening, and if that's done by betas, that certain amount of blackening actually represents a lower dose than had it been gammas.

DR. NETON: Because this is for a low energy photon.

DR. ZIEMER: Yeah.

MR. HINNEFELD: Yeah, the same way.

DR. ZIEMER: Or a lower energy photon.

MR. HINNEFELD: If you have a badge --

DR. ZIEMER: Your LOD is really a certain amount of darkening.

MR. HINNEFELD: Yes, and if it was calibrated, and the LOD was determined based on an exposure to, say, a cesium source, then that amount of darkening, if you were exposed to a low energy photon, you would have a much smaller dose so it would be an adjustment downward, yes.

DR. ZIEMER: Yeah, that's what I'm saying. And they seem to be saying use the actual LOD because it's more claimant favorable.

MR. HINNEFELD: Yeah, it would be.

DR. ZIEMER: It looks to me like if you assigned the higher dose --

DR. NETON: The badge would over-respond at low energies, right?

MR. HINNEFELD: Yeah.

DR. NETON: So the dose would be --

DR. ZIEMER: No, it's the other way. If it over-responds, it takes less dose to give you that response.

DR. NETON: Right, so the measured dose would be higher.

DR. ZIEMER: No, they're assigning an LOD.

MR. HINNEFELD: What they're saying, what apparently is being done here is a recommendation to adjust the LOD downward because it was calibrated to a high energy photon, but it was exposed to a low energy photon. So the LOD should be adjusted downward from the one that was calculated to the high energy photon. That appears to be what is being said.

^: That is correct.

DR. ZIEMER: You're assigning less dose, so they seem to be saying assign the LOD because you will be assigning a higher dose. I guess that's what they're saying. And you're saying, well, they're assigning the correct amount.

MR. HINNEFELD: Our view is that we're trying to assign the correct missed dose.

DR. MAURO: It sounds like I can't answer this, whether or not, it sounds like there is a reasonable answer, response to the concern here. The ball's in our park to make sure

that this answer is satisfactory. I can't speak to it off the top of my head.

DR. ZIEMER: I'm trying to understand whether your recommendation is just in order to be more claimant favorable as opposed to a technical reason.

DR. MAURO: Yeah, I have to say this is a bit of a brain teaser because of the low limits of detection, calibrated with a higher energy photon. And the question is, and right now you have an adjustment factor to increase --

DR. NETON: No, you reduce the LOD. The efficiency of the measurement is much greater for lower energy photons.

DR. ZIEMER: It doesn't take as much dose to get that minimum detection.

DR. NETON: ^ that predominates is just a huge absorption.

MS. MUNN: So you'll have the action to come back to us on 06, 06.

DR. MAURO: We have the action.

MS. MUNN: Finding seven.

MR. HINNEFELD: Finding seven has to do with what thickness of clothing is likely to cover

a particular target. Shallow dose and why use four millimeters. The author measured his clothing using a micrometer and arrived at four millimeters. So it's an actual measurement of the clothing being worn. He made sure he did this at home, not in the workplace. So it's an actual measurement of the clothing.

MS. MUNN: Is that acceptable, SC&A?

DR. ZIEMER: Do we need to specify whether it was Jockeys or Hanes?

MS. MUNN: And was the t-shirt tucked in or out?

MR. SMITH (by Telephone): It was Hanes and Levis.

DR. ZIEMER: Levis are too thick.

MS. MUNN: Well, no, it sounds likely from most sites that I'm familiar with.

Is that acceptable, John?

DR. MAURO: Yes.

MS. MUNN: Finding number eight.

DR. MAURO: Oh, this goes again to the fact that in the case of ^, well, I guess it goes to this business of where the organ of concern is relative to where the film badge is, and

whether it's beta or photon there is this issue. And this has come up before.

MR. HINNEFELD: I think that that has to be, I mean, that's something that can't be ignored, you know, depending on where is the cancer, and where was the badge particularly in a beta dose environment. And there have been some doses, sort of a badge geometry thing. We've made some site specific adjustments in some cases or case specific adjustments in some cases. So it's in there. This OTIB may not address it in detail, or it may in fact. I'm not even sure. It's certainly something that's considered in dose reconstruction.

MR. PRESLEY: I thought you all were going to come up with a, some type of an overall statement.

MR. HINNEFELD: Well, that was about hot particles.

MR. PRESLEY: Oh, was that just for hot particles?

DR. NETON: No, it was also for photon exposures, remember?

MR. HINNEFELD: Yeah, right.

DR. NETON: We were going to take the Mallinckrodt experience and make a generic. That was not intended to address, at least in my mind, non-uniform beta exposures. A classic example was a picture of a guy at Fernald sleeping on the ^. I'm not saying it shouldn't be done, but it wasn't going to be ^.

DR. MAURO: I know that non-uniform exposure is addressed in other OTIBs. I've seen that. Now you say does this particular guideline cross-reference it or is it silent on this issue?

DR. NETON: It's silent.

DR. MAURO: It's silent. Okay, I guess that's the issue.

MR. HINNEFELD: Well, it's got a section that says non-uniform exposure to skin.

DR. NETON: What I was speaking of it's not cross-referenced to the non-uniform documents that we have, and possibly it should.

DR. MAURO: We run into this often except for, you know, we're reviewing the particular document, and if we see it's silent on an issue, the question becomes should it cross-

reference other places where that issue is more thoroughly addressed.

Or should we assume that, especially if we're aware that the issue is addressed some place else, even though it's silent in the particular procedure, but we know because we've been looking at all this stuff that we know is addressed somewhere else, is it reasonable to assume that the dose reconstructor is aware of that and will use it accordingly? Or should the policy be no, there should be some explicit statement in here in the section on non-uniform exposure to refer the dose reconstructor to this other guidance that would help him deal with that issue? That's really the question that --

MR. HINNEFELD: Well, it's a reasonable question, I guess. We consult with dose reconstructors and see whether or not that kind of a statement in here would be helpful in that application. To me, I mean, basically it seems like it would be helpful in actuality if the dose reconstructor is using mainly tools for dose reconstruction and can choose various options and tools, then the words in

this OTIB would be even less important.

MR. ELLIOTT: It could be restraining, too.

DR. MAURO: This is a difficult question because your OTIBs, your procedures, your site, I mean, is a living process where you're adding, you're refining and building this collection of guidelines. Is it incumbent to make sure that all guidelines are appropriately cross-referenced to all other guidelines as appropriate a burden that would be quite burdensome to be able to do that?

Or is it reasonable to say, listen, we realize that every, you know, there is a need to, the dose reconstructor has to be cognizant of the full sweep of guidance available to him and the very fact that this particular guidance, OTIB-0017, doesn't cross-reference anything to other documents that might be useful, that's not a deficiency. And I think that's an important question I believe for the working group or the Board to judge.

I mean, all we're doing is pointing out that in this particular case, dealing with non-uniform exposures and how to best deal with that is not described at a level of

detail that stands alone. And the question becomes is it really a policy question.

MS. MUNN: It is a policy question.

DR. MAURO: It is, yes.

MS. MUNN: To the best of my knowledge, we haven't addressed it very fully. It's always an issue of efficiency as well as a question of completeness to be able to identify that whoever is doing the work is fully aware of all of the items that need to be referenced, whether they are specifically referenced or not. So it's, has NIOSH discussed this internally with regard to how best to address the cross-referencing issue?

DR. NETON: I don't think we have. I mean, clearly we're comfortable with the way it's organized now which is sort of a tier-down approach. I would suggest that again, this is an issue where the proof is in the dose reconstructions. Now, are there instances where we have site-specific TIBs that were ignored because the generic guidance was applied and ignore a more specific approach that was outlined for geometry or a site? So I think, I agree with John. It would be

cumbersome and burdensome to have to go back and continue to cross-reference all of the procedures against each other.

MR. HINNEFELD: I'd say in practice we rely on the training of the dose reconstructors when the documents are generated, and there's a training determination that is training needed in the case of the document revision came out.

And so the training of the dose reconstructors as well as their peer reviewers and the leadership of the dose reconstruction team leaders, you know, we kind of rely on that system as opposed to this interlocking referencing system, you know, referring back and forth to various technical documents. It's a relatively dynamic and popping up all the time.

So that's what we're doing now, and if it's, and I think like Jim said, if it shows on dose reconstructions that people are missing instructions, well then maybe what we're doing isn't good enough. But in a procedure review it's hard to determine exactly which is better.

MR. ELLIOTT: I think the proof of that pudding is we haven't seen it come out in our technical peer reviews.

MR. HINNEFELD: Well, we would not know what was found in ORAU's technical peer review.

DR. NETON: You mean NIOSH.

MR. ELLIOTT: You mean in our --

MR. HINNEFELD: In our reviews. I don't know that we have. I hesitate to sit here and say that I know for sure what the suite of our comments have been on dose reconstruction reviews. What the ^.

MS. MUNN: The real question then becomes what can we do to reassure this group right here that the training is adequate enough that we don't have to worry about the individual dose reconstructor being fully aware of all of the material that's necessary and available to them to make these --

MR. ELLIOTT: Again, it goes back to what Jim said. It's in the evaluation completed dose reconstructions.

DR. NETON: It's certainly a big part of it in my mind.

MR. ELLIOTT: I mean we could go back and

talk to our ORAU dose reconstructors and get a sense from them as to how they feel toward this. I mean, are they comfortable with the status quo or do they see that this might be a benefit given the increasing suite of tools that are being used. I don't know. That's one thing we could do, I guess.

DR. NETON: I think one thing we haven't talked about is the workbooks which tend to automate a fair amount of these approaches when you're doing certain, when new things come online, they are incorporated into workbooks to a very large extent which takes some of the burden --

MR. ELLIOTT: Scott or Matt, do you have a gut sense of what the reaction would be from the dose reconstruction teams?

MR. SIEBERT: Personally, I haven't heard it being an issue that people are saying I can't keep up with everything going on. I mean, there's always a lot going on, but I haven't heard general tendencies from the group saying, and we haven't, as far as I know and like Stu said, you can't run the breadth of the comments, but I don't, I haven't noticed a

trend of those types of comments coming back.

MR. FARVER: Is there a training requirement for an OTIB?

MR. SIEBERT: Yeah, there's training required.

MR. FARVER: Then I assume there's a training record that shows that the dosimetrist was trained.

MR. SIEBERT: Yeah, you can always go back and look at the training record.

MR. FARVER: I'd say as long as they'd been trained for the OTIBs that apply to their site, that would be a verification.

MR. PRESLEY: Also, each one of your, each procedure you do, you don't have a checklist that you check off when you're through that says I did this. I did this. I did this. I did this.

MR. SIEBERT: There's a peer review checklist to make sure everything was covered.

MR. PRESLEY: Yes.

MS. MUNN: Yeah, and it's worked very well and had a high level of performance and accuracy. I guess some of us have undoubtedly relied on the knowledge that the workbooks

that have been produced would incorporate all of the information that any dose reconstructor would need. I can't get clear in my mind what we would need to do or what we could do that would answer the direct question as to whether we need to pursue the possibility of a cross-referencing policy. It seems to be working all right.

MR. PRESLEY: Yeah, I think you've got a process. It seems to be working. I think we have something we don't need to fix if we don't have a problem.

DR. MAURO: It seems that beta exposure, skin cancer, is extremely prevalent, and a very difficult thing to reconstruct. That's the sense I get from reading the procedures, my own knowledge of the subject. And in order to make sure that a person that is a claimant with a skin cancer, especially since skin cancer isn't covered by, for example, SECs, this is in my mind a particularly important assurance that if there are holes in the process whereby you could miss some doses to the skin from either calibration of the dosimeters from hot particles, localized

irradiation of the skin, that needs to be rock solid because it's one of the tougher ones.

It's like neutron dosimetry. It's as difficult as that, making sure that you haven't missed important doses. I guess that's, and all you're really looking at now in one after the other after the other is Dr. Hunt's experience in struggling with doing dosimetry for ^. That his life's experience has been dealing with that issue. So what you're looking at is that life's experience.

MS. MUNN: But, John, we're back here to the geometry issue on this particular one --

DR. ZIEMER: Are we still on eight?

MS. MUNN: We're still on eight, and we're still talking about geometry.

DR. ZIEMER: Eight doesn't seem to be talking about skin cancer, does it?

MS. MUNN: No, it's geometry.

DR. ZIEMER: It's talking about breast cancer and testicular and geometry correction factors, and --

MR. SMITH (by Telephone): I can interject a little bit on this if you like.

MR. HINNEFELD: Go ahead, Matt.

MR. SMITH (by Telephone): In this section there was prepared correction factors to deal with different beta energies and exposure to breast, penis and testicles. So what would happen here is actually some modeling. So that's why we state regarding the geometry issue isn't really relevant here because this is a table that was put together based on some modeling -- I believe these are VARSKIN 3 -- just to come up with some correction factors. So it was an empirical calculation that was going on.

DR. ZIEMER: Well, that's what I was wondering is that --

DR. NETON: Well, that's missing the point of the comment though. I think the comment is related to the geometry issue I believe which is film badge which is located near the breast would actually record the dose more accurately than if the testes were exposed, notwithstanding the fact that there are different depths of energy which one needs to calculate that which is the modeling that Matt referred to. But I think my take on his comment was that it's a geometry comment, not

an energy ^.

DR. ZIEMER: But that's always the case --

MR. SMITH (by Telephone): Could be and, you know, again, the reference is given to check on page seven where geometry is discussed in the OTIB.

DR. ZIEMER: Yeah, that's what we were trying to find here, whether that had to do with the --

MR. SMITH (by Telephone): In the OTIB itself there is a section on exposure geometry. In the way this book's put together there are not numbers in front of each subsection. You'll find it on page seven.

MS. MUNN: But somehow we've gotten away from the issue of this particular finding and have gotten into the policy realm with whether or not we should be cross-referencing items. Let's --

DR. ZIEMER: We still need to know whether does the OTIB speak to the geometry between the badge and the organ of interest? I mean you always have that issue for everything. Is that what the comment is? It's --

DR. MAURO: Yes, the comment goes toward

that. The question is is there adequate guidance in this particular OTIB --

DR. ZIEMER: There is an exposure geometry statement in this.

MR. HINNEFELD: There's a paragraph that just says you have to worry about this.

DR. MAURO: And I know there are other documents, and it gets back to there are other documents, which for example, I know there's one that has two between if you're working at the glove box, between the ^ and let's say the waste. So there's some specific guidance there.

Now in this case the question becomes the fact that this problem exists, and you alert the dose reconstructor to the fact that this problem exists, is that sufficient. Okay, he's aware of it, do you give him any further guidance or do you leave it up to his own skills in order to make the appropriate corrections and deal with this problem?

MS. MUNN: And what we were saying earlier I believe is that to this point training and workbook accessibility has taken care of that issue.

MR. HINNEFELD: And I believe, again, dose reconstructors don't work by themselves. You know, they have a team leader. They work on a team that's familiar with the site. They discuss what are the things we run into, and what are the approaches to solve those. So those things are, I believe, are addressed so it's addressed in the system.

DR. ZIEMER: I'm looking at this thing now, and there is some guidance in here as to when no correction should be made, and when correction should be made. So I, it appears to me that there is a sort of generic guidance already there. Obviously, it has to look at the particular --

MR. HINNEFELD: It's essentially a warning to figure it out. Now remember every, a dose reconstructor can always put a case on a technical hold and say there is some research that needs to be done. Actually, the reconstructor would probably be able to do it himself, but with the team leader, that's probably what happens. Say look, there's some research here that we need to get in order to do this case.

And they'll put it on a technical hold until that research and approach is completed. So a dose reconstructor doesn't have to charge off and invent something on his own and wouldn't. He would consult with the, if he doesn't know the approach. If he doesn't know what we're doing in this case, he would consult with his team leader or the peer reviewers and the principal external dosimetrist to say, okay, what are my options here because the badge reading's not good enough.

So there are ways to do that, but I don't know that we can specify them here because they're so case specific and the aspects of the site enter into it as well. But this is essentially an admonition. The fact that, yes, there is not specific guidance here, but it's an admonition that prevents a dose reconstructor from just saying the badge said this so that's what I'm using.

So it's sort of a, to me it's a help to say, okay, don't do it wrong. So it may not say, essentially it doesn't say, but essentially it says you may have to get help

to do it right, but don't do it wrong.

DR. MAURO: When these circumstances arise as you just described, and then let's say we can go back to a case, a real case, and go into his record and the rationale for the assumptions made, I know when I look into some of these dose reconstructions -- and you have a lot more than I have -- sometimes it's not apparent of the rationale behind what was done. And it is a bit of a struggle I know on our end to, and there may be good reason.

As a person that's done a lot of the, that's ^ some skin dose reconstructions, is it in your experience -- or, Hans, on line -- that when you go back and look into the records that the rationale behind the assumptions made for dealing with questions like this, are they transparent to that? Is it self evident? Oh, yeah, they did take this into consideration, and this is what they did to factor in that particular issue. You're saying in the end the dose reconstruction's done correctly.

MR. HINNEFELD: Well, yeah, I believe probably they are.

MR. FARVER: Well, when they do the skin doses that I remember looking at you have your OTIB which then refers you where you go to the more or less a technical basis document, and that will provide you with more specific information. Like you said our hardest part is just going backwards and trying to figure out where they got it. It's not that they got it wrong. It's where did they get it. But, yes, a lot of times it does come from multiple places.

MR. HINNEFELD: I think we've struggled with this from the start is how fully can we explain the dose reconstruction. And we've not given up on the idea that a different dose reconstruction format, you know, with a section for the claimant, that the claimant had a hope of reading, and a section for a technical reviewer. We've not given up on that. It's been held in abeyance for money reasons, but it's costly.

It's a costly thing to do. But it's kind of part of that is that how much do you explain in the dose reconstruction report without just completely intimidating the

claimant into saying, well, they're just trying to, you know, they're just messing with me.

DR. MAURO: Oh, I'm not saying it should be in the dose reconstruction report.

MR. HINNEFELD: So you think supporting?

DR. MAURO: Yeah, I'm saying that --

MR. HINNEFELD: Supporting information.

DR. MAURO: Yeah, when either SC&A in doing its audits or even your own technical people doing their independent reviews, there should be a story told where the rationale for the judgments that are made in accordance with your procedure.

DR. NETON: That kind of defeats the whole purpose of having procedures though. If you're doing it per procedures that are out there for the world to see and only technical people can probably understand them, then once you start explaining what the procedures mean --

DR. MAURO: No, no, I'm saying that I agree with you. I'm saying though that, okay, in this particular, for example, in a dose reconstruction for a person with a skin cancer

whereby you're following OTIB-0017, you get to the point where you have to take and say, yes, there could be a concern regarding localized exposure. There's in my mind in the dose reconstruction record describing the assumptions that were made to deal with that issue, there should be something in there that says this is how I dealt with this issue, or I used this procedure.

DR. NETON: More often than not what's going to happen as Stu explained, there's going to be a technical hold. There'll be a panel convened to do a technical approach to a TIB issue. I just made a list here. We've done this, every time there's a unique exposure geometry, the glove box TIB that was issued, overhead piping, contaminated plane geometries.

These are things that come up that are solved technically by our staff, and then for the world to see we say, okay, well, this is how we handled it, and then the dose reconstruction would reference TIB whatever.

MR. FARVER: And most of the time they do. Sometimes they don't. Sometimes they do it

correctly and just forget to reference the TIB.

DR. NETON: And that happens, but that's a valid comment then if it's not --

MS. MUNN: So finding 08 which is specifically about geometry, how do you find?

DR. ZIEMER: Well, I just want to say that I think the NIOSH response is appropriate.

MS. MUNN: I do, too.

DR. ZIEMER: It references on page seven certain things that they are to do. It is somewhat generic, but it does address the geometry issue and I think for the nature of this OTIB it's appropriate. That's my opinion.

MS. MUNN: I do as well.

DR. MAURO: Well, I'm not --

MS. MUNN: Can SC&A accept that?

DR. MAURO: This is a judgment call and what you're saying is we have a pointer in there that just alerts, and what I'm hearing is that there's a process in place that that pointer is sufficient to make sure that the dose reconstructor is alerted to this issue, and he knows what to do from there on because of his

training.

MR. HINNEFELD: And he can find out what to do. He has colleagues. He has supervisors.

DR. MAURO: And that's the answer.

MS. MUNN: Now ladies and gentlemen, friends and colleagues, it has become what I anticipated the witching hour would be, and we are nowhere near where I had hoped we might be. We're in the midst of one OTIB that I hoped we would complete, but we still have, we're only halfway through it. What is your pleasure? Do you want to take a 15-minute break or do you want to stop where we are now?

We have some housekeeping issues that we have to take care of before we walk out the door. My preference would be to stop what we're doing at this juncture, make note of where we are, anticipate picking this up in December at our face-to-face meeting together with the additional items that we have. At this time review our action items, get out our calendars and make some date commitments for each other and call it a day.

DR. WADE: Who could argue with the wisdom of the Chair?

MS. MUNN: Do I hear any disagreement?

(no response)

RECAP OF ACTION ITEMS

MS. MUNN: That being the case I have listed about 11 action items I think that Dr. Wade has been good enough to record them for me.

DR. WADE: Do you want me to read them?

MS. MUNN: Yes, please do, briefly.

DR. WADE: Remember back to the morning. NIOSH will report summary PER data to the Board during regularly scheduled program updates.

Next item, NIOSH will send revisions of OCAS OTIBs six, seven and eight to SC&A and the work group.

NIOSH and SC&A will discuss OCAS OTIB-0006 and -0007 to determine if they need to be reviewed as quote documents modified as a result of this review or as new documents.

SC&A will review the modified OCAS OTIB-0008 and either six or seven if those documents are determined to be documents reviewed as the result of this review or await work group instruction if either six or seven are to be considered new documents.

The science issue on ingestion will be presented to the Board during the January meeting.

SC&A will prepare a working matrix of their review of PROC-92 during this week. NIOSH will prepare a response to SC&A's review of PROC-02 by mid-November, and the work group will discuss that situation at the December work group meeting.

SC&A has recommended consistent terminology for matrix titles. That was on the board. SC&A will modify all previous products consistent with this new terminology.

SC&A will report a trial matrix worksheet package including the definition of templates to be reviewed by the working group at the December meeting.

A small group consisting of NIOSH, SC&A and work group members will meet to explore the issues of updating and implementing the matrix worksheet approach.

SC&A, particularly Arjun, will review the materials to determine if PROC-90 captures, is based upon OTIBs four, five and 17 or if it contains new procedures and should

be reviewed as a new document or whether the heading, PROC-90, can be used in the matrix to capture the findings of four, five and 17.

Further technical clarification discussions will take place between NIOSH and SC&A on OTIB-0023, particularly this relates to Findings 23-1 through eight, and NIOSH and SC&A will report on those technical clarification discussions to the work group in December.

MS. MUNN: I have November call.

DR. WADE: November call?

MS. MUNN: That’s what I had originally.

DR. WADE: I don’t have a November call.

MS. MUNN: We haven’t scheduled it yet.

DR. WADE: Okay, I will change that to November.

NIOSH will reword its response to OTIB-0019, Finding OTIB-0019-1 to better reflect the actual procedure.

SC&A will prepare a one-page workup on the OTIB-0012 findings to be presented to the work group for consideration. The work group will decide if the findings in OTIB-0012 should be added to the matrix.

NIOSH will review the language relative to Findings 17, three, four and five and report to the work group.

SC&A will review NIOSH's response to Finding 17-06 and report to the work group.

That's all that I have.

MS. MUNN: You have broken down into little pieces some of the larger ones that I had and with only one or two minor wording changes --

DR. WADE: You, my lady, are a lumper. I am a splitter.

MS. MUNN: Yes, there's no question about that. If you would be good enough to get me a copy of that electronically, or I will take that one if you want me to. We'll get that put together and out to everyone within the next few days.

FUTURE DATES AND MEETINGS

DR. WADE: Now we have the issue of dates and meetings.

MS. MUNN: Yes, we do. The first date that I believe needs to be set -- let me get my calendar out -- is the one for the small group that's going to talk about how to track which revision of the matrix that's in hand at any

given time. We were going to have, that will be a conference call, I guess, for members of this group that want to listen in, but I'd hope it would be a conference call of people like you and me and --

MR. PRESLEY: Conference call or face-to-face?

MS. MUNN: Conference call.

MR. PRESLEY: That's good.

DR. MAKHIJANI: What date was being proposed?

MS. MUNN: Well, we don't have a date yet. We're looking at, unfortunately, I can't do that until toward the end of October. I'd like for that to take place much sooner than that but I can't be a part of that discussion. If it's not necessary for me to be on it then you folks could do that earlier. Otherwise, I would suggest November 1st? This is the small group call, and who all is going to be on that? John? Who from NIOSH?

MR. HINNEFELD: I should be there.

MS. MUNN: John, Stu, Bob, Wanda.

Lew, do you need to be on that?

DR. WADE: No, because I don't think it's

going to be a formal work group meeting.

MS. MUNN: No, it isn't. It's just a how are we going to do this.

DR. WADE: I'd say it would be better if I wasn't on it.

MR. PRESLEY: We'll talk about just the way that the form's set up?

MS. MUNN: Yeah, just the way the form's set up. Maybe by that time we'll already have a straw man to look at, think about.

MR. PRESLEY: Make darn sure whenever we set this, we've got something to look at at least three or four days prior to the phone call.

DR. WADE: So a call, no transcript of the call.

MS. MUNN: No transcript, just working out how we're going to track these new matrices that we're --

DR. WADE: Minutes kept of the call, brief findings of the call?

John, can you organize the call?

MS. MUNN: Brief meetings and organize the call, John.

DR. MAURO: Okay, I'll organize it, and if I could just get a list of the names at some

point whenever.

MS. MUNN: Yes, well, it's you, Stu, Presley, Munn.

DR. WADE: That was easy.

MS. MUNN: Yes, it was so far. How about 2:00 p.m. eastern time? Okay?

(no response)

MS. MUNN: Now the next date that we need to set is the full work group's working call. Either the following week or the week of the 11th, 12th in November. What is the availability of the people sitting around this table right now? Because they're the key people.

MR. PRESLEY: Which one did you say? The week of the 11th?

MS. MUNN: Either the week of the 4th or the week of the 11th.

DR. NETON: I'm out most of the week of the 11th, but that shouldn't be the deciding factor.

MS. MUNN: Okay, there's no reason why we shouldn't. I'm looking at Thursday, the 8th. Is that a reasonable date?

MR. PRESLEY: I can be there up until three

o'clock that day. After that I have a planning commission meeting.

MS. MUNN: What if we backed off to Wednesday, the 7th?

MR. PRESLEY: Okay.

MS. MUNN: Wednesday, the 7th?

MR. PRESLEY: Is this going to be an all day conference call?

MS. MUNN: It will probably be at least four or five hours.

DR. MAURO: This is a conference call and not face-to-face?

MS. MUNN: Conference call, not face-to-face.

DR. MAKHIJANI: What's the agenda of that call would be? I wonder would I need to be on it. I don't think I'm available on the 7th.

MS. MUNN: I'll have to go back through the action items to identify what we said we would definitely cover on the 7th.

DR. MAURO: I assume it's a continuation of --

MS. MUNN: It's a continuation of that.

DR. MAKHIJANI: I don't think I need to be on this.

MR. PRESLEY: We'll start at nine, right?

MS. MUNN: Yep, we'll start at nine, and we'll have several items from our action list generated today.

MR. PRESLEY: We'll start on OTIB-0009. Is that correct?

MS. MUNN: We will start on action item, Finding number nine, OTIB-0017.

DR. WADE: So 9:00 a.m. to mercifully four?

MS. MUNN: Mercifully.

DR. WADE: But this will be a formal meeting of the work group, so we'll set it up and Ray will be with us telephonically, November 7th, 9:00 a.m. to 4:00 p.m. eastern whatever.

MS. MUNN: No, not 9:00 a.m. I'm sorry.

MR. PRESLEY: You're not going to get up at six o'clock and start this thing?

MS. MUNN: No.

DR. WADE: Eleven.

MS. MUNN: Eleven's all right with me.

DR. WADE: Eleven to five eastern time.

MS. MUNN: And then we come to December and our next face-to-face which I propose to be Tuesday, the 11th.

MR. PRESLEY: This is going to be a face-to-

face in Cincinnati?

MS. MUNN: Yes.

DR. WADE: That doesn't work for me I hate to say; the 12th does.

MS. MUNN: The 12th, okay.

DR. ZIEMER: I'm out the 12th through the 14th.

MS. MUNN: Okay, that doesn't work. And if we do the 10th, the only person really, if we start late enough.

MR. PRESLEY: I can get to this one.

DR. WADE: No, that's good. Either I'll make arrangements or Christine will be here.

DR. BRANCHE: Both of us have a conference on the 11th, but we can make arrangements.

DR. WADE: One of us will have to be one place or the other.

MR. PRESLEY: The 10th all right?

MS. MUNN: The 10th is okay with me.

MR. PRESLEY: The 10th's fine with me.

MS. MUNN: I can fly, it won't be the first time I've flown on Sunday.

DR. WADE: Well, not on Sunday. Don't worry about me. My conflict is the 10th and 11th, so let's do the 11th.

DR. MAURO: Have we got a start time?

DR. WADE: And the city.

MS. MUNN: Since we're, well, let's do it in Cincinnati. It's always easier for everybody else to get there, and it's okay with me to get there. Start time 9:30.

DR. MAKHIJANI: You said the 11th?

DR. WADE: December 11th.

MS. MUNN: December 11th.

DR. WADE: Nine-thirty a.m., Cincinnati, hotel to be named.

MS. MUNN: Hopefully, the Marriott.

MR. PRESLEY: Yeah, hopefully the Marriott. It works like a million dollars. They come right over at the airport and pick us up.

MS. MUNN: All right, is there anything crucial left on our plate that we can't postpone until the phone call or our meeting?

(no response)

MS. MUNN: If not, this meeting is adjourned.

DR. WADE: Thank you, Madam Chairman, wonderfully done.

(Whereupon, the working group meeting was adjourned at 5:20 p.m.)

CERTIFICATE OF COURT REPORTER

STATE OF GEORGIA

COUNTY OF FULTON

I, Steven Ray Green, Certified Merit Court Reporter, do hereby certify that I reported the above and foregoing on the day of Oct. 2, 2007; and it is a true and accurate transcript of the testimony captioned herein.

I further certify that I am neither kin nor counsel to any of the parties herein, nor have any interest in the cause named herein.

WITNESS my hand and official seal this the 14th day of March, 2008.

_____

STEVEN RAY GREEN, CCR, CVR-CM

CERTIFIED MERIT COURT REPORTER

CERTIFICATE NUMBER: A-2102