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

convenes the

THIRTY-FIRST MEETING

ADVISORY BOARD ON

RADIATION AND WORKER HEALTH

DAY THREE

The verbatim transcript of the Meeting of the Advisory Board on Radiation and Worker Health held at the Chase Park Plaza Hotel, St. Louis, Missouri, on July 7, 2005.

C O N T E N T S

July 7, 2005

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MR. MARK GRIFFON, ABRWH
DR. PAUL ZIEMER, CHAIR
MS. KATHY BEHLING, SC&A
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P R O C E E D I N G S

(9:30 a.m.)

WELCOME AND OPENING COMMENTS

DR. ZIEMER: We're going to convene the full Board at this time, please. Let me begin our session this morning with the usual reminder that, if you haven't done so, please register your attendance in the registration book.

We also have later today a public comment period and those members of the public who wish to participate in the public comment period, please sign up in the book there at the registration desk.

One of the carryover items that we've not acted on from our contractor's deliverables is task three, which has to do with the review of procedures. So we are going to have the formal presentation on the task three review this morning. Hans Behling from our contractor, SC&A, will make that presentation. Hans, we'll be pleased to hear from you now if you'll take the podium.

SC&A TASK III/WORKBOOK ISSUES

DR. BEHLING: Good morning. My name is Hans Behling. I'm with SC&A and I'm here to briefly discuss task three, which is an overview of the

procedures and methods used by NIOSH to do dose reconstruction. As you can see, the people who were involved in this project were several people, and we divided our -- our task three among the different subject matters. I personally looked at the procedures that deal with external dosimetry and we had Joyce Lipsztein look at internal dosimetry. Arjun, that you've heard early this morning, and Kathy DeMers were involved in reviewing procedures that deal with the CATI interview procedures. And also there were several procedures involving quality assurance that were reviewed by Steve Ostrow, and Kathy Behling looked at documentation and records management.

And just to give you a brief overview of the genesis of this project, under the energy employee act and under 42 CFR Part 82 the Advisory Board on Radiation and Worker Health is mandated to conduct an independent review of the methods and procedures used by NIOSH for dose reconstruction. And of course as contractors to the Board, we were asked to look at these procedures.

In total NIOSH identified 33 procedures to us

for review. At least 33 procedures represent a sizeable body of written text that encompasses a wide array of complex subjects. Moreover, some of these documents are very, very detailed in defining how dose reconstructions should be done. For instance, Implementation Guides 1 and Implementation Guide 2 are very critical and provide a foundation for external and internal dose reconstruction.

Also, among the 33 procedures that were identified to us, some of them are somewhat generic in nature. In other words, they represent procedures that are to be used for all DOE sites. On the other hand, there were also several procedures, including OCAS-TIB 6 and 7 and OCAS-PER 1 and 2, that are highly site-specific. These particular four procedures are directive to the dose reconstruction involving Savannah River Site claims.

On the first slide you will see all of the procedures that represent those produced by NIOSH or OCAS, and there are a total of 13 and they cover a wide range of spectrum from, as I said, actual things that are directly involved

in dose reconstruction to things that are more peripheral in dose reconstruction. Some of them are also selective in particular areas. For instance, CATI reports or CATI procedures are driven by only a handful of procedures, and some of the issues that they contain are confined strictly to those procedures and not to any of the other procedures. As I said, the OCAS procedures are 13 in number and -- I'm sorry.

The second half of the procedures are those that were produced by ORAU, and there are a total number of 20 of these procedures. All but two of those procedures are generic. Again, generic meaning that they apply essentially to all the different sites, as well as AWEs.

Not included, and this is very important for you to understand in -- under task three for our procedural methods review are TBDs. They were re-- they are being reviewed under task one, but using different criteria. So I will remind you that our review of procedures involving dose reconstruction do not include TBDs and we'll come back to that a little

later.
Again, this is probably a busy slide, but if you have the handout in front of you, the ORAU procedure cover a wide range of issues. On top are QA procedures, there are documentation and records procedures. Again, the record procedure for internal and external dosimetry and CATI reports and others, so again, the procedures have a wide range of topics that we needed to address and therefore we had divided our task group three people into various areas for -- for review.
As contractors to the Advisory Board we were first asked to develop a method by which we would conduct this review, and so the task three was broken into two phases. Phase one was to divide (sic) a method by which we would systematically review and standardize the review process. And phase two was then actually to conduct a review. Phase A -- that is developing a protocol that would essentially define for the Board how we were planning on doing our review -- was -- that report was finished on September, 2004, almost a year ago, and was handed to the Advisory Board for review

and approval. The second phase, that is the actual review of the NIOSH and ORAU procedures, came in a report that was given to the Advisory Board in January of this past (sic) year.
In reviewing the procedures and in drafting a protocol, we realized that central to that protocol would essentially have to address technical issues. These are key, and it's almost a given that we would have to look at all of the procedures in terms of their technical accuracy. And for that, NIOSH had given us, under task three, a list of technical issues that they needed for us to evaluate, and there were a total of ten of these. And I won't go through all of them, but I'll just cite a few of them as a representative.
We needed to identify the technical basis for performing internal and external dose reconstruction. That is, critically review the Implementation Guide 1 and 2. And we needed to assess not only how to do the dose reconstruction in terms of recorded dose, but to identify how do we deal with missed doses, or the uncertainty of doses. So these were key technical issues that were part of our protocol

for -- for evaluation.
But in addition to these technical issues we were clearly also asked to look at non-technical issues. And these non-technical issues are very well specified in both the Act and the Federal regulations. And in reviewing the Federal regulations and saying what do we need to look at besides the technical issues, certain key words kept coming out of the pages. Things such as the dose reconstruction has to be fair, it has to be consistent, it has to be reasonable, it has to be claimant-favorable. And over and over again the word "timeliness" comes up.
For example, in Section 73.84 of the Act, the statement -- the following statement is presented. (Reading) One of the purposes of the compensation program is to provide for a timely compensation.
Section (e) of 42 CFR 82 in the final rule states that an additional critical fact affecting how doses are reconstructed is the amount of time available. In compensation programs a balance must be struck between efficiency and precision, and that is a very

important element.
So according to these directives then, SC&A evaluated all of these 33 procedures. And not only in looking at, for instance, things as the ICR bio-- the ICRP biokinetic models, the accuracy of those conversion factors, how were they developed, the (unintelligible) risk coefficients, computer codes and all of the science that went behind it, but in addition we also had to address perhaps something that was even more difficult and subjective in terms of striking the proper balance between efficiency and precision. And these are subjective things. I will basically give you warning here that many of our findings have a very subjective element. They express in essence our opinion as to whether or not something is ambiguous or whether it's properly stated, whether it's formatted properly. And -- and I will fully admit to you that there's not always consensus amongst even the group that's represented, the task three group, as to what was to be given as a score.
But in this slide we identified, as a result of our directives, seven basic objectives as their

fin-- objective one basically, again, dealt with the issue of timeliness. Objective two was is there -- is the procedure written in a way in which it will be used in infective (sic) manner, in an efficient manner.

Objective three, the key issue is, is the procedure, written as it stands, complete. In other words, is it sufficient to allow the dose reconstructor to do what he's expected to do without having to consult with outside documents. In other words, a procedure would be very inefficient and perhaps missing if it simply made reference to a host of other documents that you needed to get in order to fulfill the objective of that procedure.

Objective five addresses fairness and benefit of doubt to the claimant. You've heard that over and over again, whenever there is an issue here that we cannot fully understand or we do not have the necessary data, that we have to at least be fair and give the benefit of doubt to the claimant under those circumstances.

Objective number six has to deal with uncertainty. We know very well that not everything -- we don't live in a perfect world

where all dosimeters and all bioassay can be taken at their face value. But oftentimes there is a need to look at the limitation of these assays and say what is the uncertainty regarding a film or TLD dosimeter reading or a bioassay. And clearly when you deal with uncertainty, we have to understand the science behind those -- those particular measurements, whether it's a film badge or -- or a internal bioassay or in vitro or vivo bioassay, et cetera.

And lastly, the issue that I've already brought out comes into play. That is where do we strike the proper balance. And I'm sure you've heard the discussion over the last three days and -- and we realize oftentimes there are opposing forces. We need more precision in order to be sure that you're not going to shortchange anybody in terms of reconstructing dose. At the same time, time is of the essence. We cannot spend an infinite amount of time in order to get to the last decimal point of accuracy. So we need to understand the importance of striking that balance.

So for each of the seven objectives that you

see listed here, we decided to derive secondary questions in the form of a checklist, and a rating system by which we would then say is this in essence a procedure that fully fulfills the objectives that it's intended to do, or are there pers-- portions of it that we feel may be missing. And so we decided to aid the evaluation of these procedures by means of a checklist. And again this is a busy slide. I'm not sure to what extent you can see from the back, but on the very bottom you will see the rating system. So under rating, in the third column, we have a rating system of one through five. And one represents a rating that says no, it's -- it's not likely or this completely misses the point or the word never. In other words, in the first category of objective number one, determine the degree to which a procedure supports a process that is expeditious and timely for dose reconstruction. Under that heading we have five separate secondary questions. Is the procedure written in a style that is clear and unambiguous? In other words, the dose reconstructor has to be able to read this and say I know what I'm

supposed to do, and is it written clearly enough for him to follow that procedure. The second one, is the procedure written in a manner that represents -- oh, presents the data in a logical sequence? In other words, there are a sequence of steps that need to be followed. Is the procedure written where step one truly is defined as step one and not as step three where you end up, again, causing an awful lot of confusion and loss of time. And so forth and so forth. And so under category one or objective one, determine the degree to which the procedure supports a process that is expeditious and timely for dose reconstruction, we have a series of questions that have to be answered after each of the procedures was reviewed and given a rating that says no, never -- meaning that it's very bad; or it's perfect, it's a five; or in many cases we found that many of these procedures, as I already pointed out to you, are extremely selective. In other words, they're site-specific for Savannah River, or the procedure deals strictly with the CATI interview so that the other 30 procedures really do not have any

need to even address these questions. Also, for instance, under heading two or objective two, determine whether the procedure provides adequate guidance to be efficient in instance where a more detailed approach to dose reconstruction would not affect the outcome. For those of you who may not be familiar with that question, it's really directed in terms of the efficiency process. In other words, we know that claims fall into one of three general categories and we'll briefly explain those. And under category one it's basically a process by which we can easily eliminate a claim by doing a partial dose reconstruction, and so this particular section or question addresses that. If you're going to do a -- an abbreviated dose reconstruction, which we call category one claims, is the procedure sufficient to guide you in that direction and saying, for efficiency purposes, do as minimumly (sic) as you need to in order to say yes, this guy has a claim by which the probability of causation exceeds the 50 percent value and you need to go no further. It's an incomplete procedure.

And again, section 2.2, the claims with suspected cumulative low doses, does the procedure provide clear guidance in defining worse-case assumption. These are the maximized category, and we need to understand how to maximize it, and there are -- many of the procedures that I showed you, especially the ORAU procedures, that are specifically geared towards maximizing doses. Don't worry about the uncertainty because uncertainty is a very difficult element to define in some cases. And so by maximizing doses we say it couldn't possibly any bigger than this or higher than this. We eliminate the time-consuming aspect of identifying, for instance, the geometric standard deviation or the standard deviation which at times can be a very time-consuming issue. So again, review objective two addresses those particular comment -- classes of -- of claims.

Objective three at the bottom here is, again, pretty much confined to the CATI interview and -- and we'll briefly discuss some of those issues later on.

This is the second page of our review and it

addresses section -- review objective four, five, six and seven, and I'll just briefly mention it. Review objective four is the issue of consistency, are we consistent so that a claim that's being submitted from one DOE site versus another are not treated significantly different. We do recognize that there are site-specific issues which certainly has -- have to be considered, but in general when we have certain generic components of a claim, each of the site should comply with a standardized protocol so as to be fair to all of the claimants.

Five is the issue of fairness give -- benefit of doubt given to the claimant. And again, six are the issues that -- questions that focus on the concern about the uncertainty by which certain dose reconstruction have to be evaluated. And they're mostly category three. When we talk about the need to be highly definitive in our understanding of uncertainty, that also may include the Monte Carlo analysis. We're really dealing with category three claims.

And lastly, again, are the issues of -- of the

balance between technical precision and process efficiency.

For each of the ratings other than five, which is a perfect score, and the NA which means it's not applicable, you -- you see a column over here called comments. And so our report, which is a close to 300-page document, has -- for each of the 33 procedures that we were asked to review -- this particular checklist and the rating. And in all cases other than in the cate-- rating number five, which is a perfect score, or NA, we would submit comments. And here -- this is not the section for actually describing the comments. It only gives the reader an understanding where those comments will be found in the text. And so for that reason we have a fairly lengthy document and it is close to 300 pages in -- in full text. And clearly it's a text that I cannot even hope to summarize in the brief period that has been allotted this morning to me.

So what I've done in order to try to at least give you an overview is to -- I collated comments in a checklist that makes use of this one. And in a couple of minutes here I'm going

to show you what we modified.
Where you see, for instance, the rating one through five, I have expanded it in order to give you the actual numbers one through five, as well as NA, and eliminated the comments, and then collated all of the 33 procedures and said how many of the 33 procedures have comments in section 1.1 that would fall into one of those categories. And let's go take a look at this and we will simply look at the numbers.
As you can see -- and I hope, again, you can see from the back -- in review objective one there were five questions and question 1.1 says (reading) Is the procedure written in a style that's clear and unambiguous? As you can see, there were no ratings of one, but of the 33 procedures there were four that had a two rating, and a two rating is infrequently.
There were nine of the 33 procedures that had a value of three, which is sometimes; and seven that had a frequent -- had a rating of four, which is very frequently or essentially always -- near -- near perfect, and of the 33 procedures 13 had a five rating, meaning that they were excellent procedures. And of course

there were some that had the NA, didn't really apply here.

So for each of the 33 procedures we went through the checklist and what you're seeing here is a collation of numbers.

Let me go and I'll -- in addition to this I'm also going to give you examples of each of these categories because, like I said, I can't go through all of them, time wouldn't permit me. So I will first show you the summation slide, and then I will give you some discrete examples that fall into each of those categories. So let me go to the next page.

And so this continues, our checklist continues here, and it continues with question 3.2.3 and again you see the different ratings. Again, they probably don't mean anything, but one of the things you will see, that for certain review objectives you see an awful lot of NAs. In other words, it simply didn't apply to that procedure.

But what I did want to point out to you is the very bottom row, which is now the total of the -- our evaluation. What you see therefore is in total. Of the 33 procedures that we

reviewed, seven -- there were seven ratings that had the rating of one, meaning that they were lacking significantly in clarity. Thirty-seven had a rating of two; 87 of three, 55 of four and 114 of five. In other words, that was a perfect score. But the largest number of -- of ratings was the NA column of 525. So that gives you essentially an overview of how these 33 procedures were evaluated.

So let me now go back to the actual ratings and give you some examples. I mention again that under review objective one, is the procedure written in a style that's clear and unambiguous. And for an example, I will give you implementation guide one. I found implementation guide to be extremely definitive and technically reasonably sound. But I found it to be extremely fragmented.

And what do I mean by fragmented. If you look at the external dosimetry section you have a discussion that involves photons, neutrons and electrons. And for each of those three major categories that are critical for external dose reconstruction you had subsections in terms of photons that involve real recorded dosimeter

data. You have a section on missing data and uncertainty. But if I were doing a dose reconstruction and I needed to consult that particular document and I said I'm right now dealing with photon exposures as measured by film or TLD, I would have to go through a whole series of cycles.

In other words, photons are discussed in terms of the dosimeter data, and then comes in the same section neutrons, which I'm not interested in. And then comes electron. And so for me to go from the recorded photon dose to the missing photon dose, I'd have to cycle over -- on over each of these three different categories, and it's a very inefficient process.

And I was very -- almost -- you know, it was ecstatic when I realized that my finding had been corrected in ORAU Procedure PROC 6 where they did exactly what I would have said, take all of the three components of photon doses, whether it's recorded dose, missing dose, uncertainty, and put it into one package so that when a person has to consult it, he doesn't have to go through and cycle each and each over. So this is, again, a subjective

issue. I just simply categorize this as the procedure being fragmented. It may not require any resolution other than the fact that it's not written in an efficient style.

The second objective is (reading) Is the data presented in a clear and logical way? And -- and again here I ran into -- and this is consistent throughout all the procedures. I -- at times I was frustrated. I would read these very complex procedures where they give you a lot of history up front and they give you all the kinds of data from previous studies, and it almost reads like health physics 101 course, and it only in the last page do you realize that the guidance they want you to follow is sequestered to the last page, or to an attachment. And in the meantime, you know, I'm looking at some of these re-- procedures and I'm saying is this how I'm supposed to dose reconstruct if I had to do a dose reconstruction? And it turns out no, no, you're just given an awful lot of information, background information, and sometimes it's only through -- at the end of the -- the procedure in a -- in a single attachment that's two or

three pages do you actually get to understand that this is the procedure you're supposed to follow. In fact, one time I didn't even know it existed. I thought I was done because I looked at the end of the procedure and there's the references and I said I must be done. And then I just turned one more page and I said well, here's now the procedure for me to follow.

And I personally think this is a poor efficiency because I would like to see the nuts and bolts in the front saying this is what I want you to do, and this are the steps, one through ten, one through 20. And if you don't have a full, comfortable feeling about what these steps represent in terms of technical merit, please consult appendix A, B, C and D to verify, to -- to somehow or other give you that warm and fuzzy feeling that what we're telling you to do has technical merit.

As it turns out, just about every procedure suffers from that problem in terms of the reverse order. You get an awful lot of historical background data and it's only in the last page or two that you understand what

you're really supposed to do.
For technical -- for the review item 1.3, is the procedure complete in terms of required data, this was a critical issue, too. And I'll give you an example. In some instances -- and this procedure in particular suffers from multiple elements of deficiency, including the first and second one I just mentioned, and that's the occupational medical exposure. You get an awful lot of history about X-rays and how they're produced and so forth, and then you get an awful lot of information that says, you know, it's important for us to really include this in dose reconstruction. And unfortunately, some of the data is not going to be available to you in terms of dose because when people had a occupational X-ray for the chest, they would oftentimes just do it and -- and that's all you have in the record, this person was exposed to a chest X-ray in 1957. Okay. You don't have a clue what the doses were to specific organs. And so the procedure gives you a long list of how to do this. And again, I was initially puzzled when I read this and I said how am I supposed to do this, and it

tells you. You can do this from first principles if you understand -- if you know the kilovoltage potential of the tube, if you understand the milliamperage, if you understand the milliseconds of exposure, if you know the distance between the source and the body or the organ, you can reconstruct it. And I looked at this -- is this efficient?

And then of course, again, there's appendix -- of -- an appendix that has a clear-cut series of tables that says from '45 to '57 or whatever it is, use these.

My gut feeling is it should have been up front that says if you have any doubt as to how these numbers were derived, please consult the appendix and we'll explain it to you. So a lot of information that I consider useless was introduced, but only to demonstrate that we know what we're talking about.

Let me go to issue number two here and that is determine whether the procedure provides adequate guidance to be efficient in instance where a more detailed approach to dose reconstruction would not affect the outcome. That is, again, the efficiency process that

affects category one and two. And I'd say in most instances these were fairly readily discernible. They were very few instance where we felt that there was anything missing, and -- and as you can see in the column over here under 2.1 and 2, most of these became NAs anyway.

The only thing that I sometimes had a problem with in looking at this is the definition of worst case, and I think we have two different definitions of worst case. Some instances worst case is really a maximized approach and other times it's best estimate. Maximized meaning that we don't want to deal with uncertainty; just multiply by two and we'll cover the issue and that's fine. In other instance the worst case has also been used and very sometimes difficult to discern under conditions where we simply don't know.

For instance, under maximized, we do know but we just don't want to go through the exercise of -- of -- of finding out what the uncertainty is, so efficiency -- for efficiency purpose we will maximize and use worst case assumption.

In other instance we simply merely don't know

the answer, such as what is the solubility of the material, and you're not maximizing you're just giving the -- the benefit of doubt to the claimant. And sometimes that was not necessary always clear how to differentiate worst case for maximized dose reconstruction versus, for instance, where you really don't know and applicable to best estimate approaches.

Let me give you examples of category three. Again, these are the CATI procedures under 2.1 and 3.1 1, 2, 3. And again, you've already heard earlier this -- from -- this morning from Arjun, there were some problems here, and I won't go through all of them, but the problems center around the failure on the part of the CATI interviewer to be necessary familiar with the particular site in question. And it would certainly be helpful if the CATI interviewer had an understanding of the complexity of a given site and then asked the directive questions that would be potentially very relevant to the response that you might solicit from an interviewee.

The other issue that already was mentioned this morning by Dr. Makhijani was the issue of bias,

and we realize that, for instance, there's a distinct disadvantage when we interview a survivor who frequently, as we heard yesterday as part of the testimony on the part of one of the people here who -- who gave his -- his understanding of how the interview process went along where all the answers are I don't know, I don't know. And so the -- the -- there's a distinct bias in the way of -- of the interview process where we're not talking about the claimant himself, but a survivor who simply doesn't have the answer because in too many instances the -- the secrecy surrounding these facilities mandated that people did not talk openly, including to family members.

Let me briefly go to category 3.2. These -- this particular category we had a bunch of deficiencies, but I think they were all, by and large, centered around a -- a single procedure that is OCAS-PR-3, performing and reporting dose reconstruction. To the best of my knowledge when looking at that procedure, it's a procedure that was written early on and, quite frankly, I don't believe there's much use to this procedure. At this point I've looked

at 38 dose reconstructions and none of them have referenced this particular procedure. So the bottom line is OCAS-PR-03 may be a limit-- of limited use and -- and therefore limited concern at this point as part of our review. Let me go to review objective number four. Again, I don't want to spell -- spend too much time here, but we didn't really see too many inconsistencies among the procedures. There were a few, but sometimes one of the problems I had, when there were multiple procedures, is to determine which procedure should I be using. For instance, I think there are three different procedures one could make use of in defining the tritium exposure at Savannah River Site, and they parallel each other to some extent but they're not totally superimposable, and it was always a difficult thing for me to say which one should I really be using. And in an instance where there are multiple protocols that one can follow, especially when you talk about complex-wide issues, the question of hierarchy comes into play, which ones are really the ones that have precedent over the other procedures. So that was one of the

issues that involved category -- or -- or review object-- number four.

Review objective five is the issue of fairness and benefit of doubt. If I look at these procedures, most of these procedures were generic procedures. They are geared towards maximizing doses and admittedly the maximized doses are very, very claimant-favorable. They tend to over-estimate, as is their charter, and so we found very little to -- to be critical of.

There were a couple of instance, however, when I felt that a -- a bias was given to the unmonitored workers, which may be inevitable, but we -- I came to the conclusion that it be -- it almost behooves you to be an unmonitored worker because oftentimes he would get up -- end up with a much larger dose than any person who had truly internal exposures that were in the form of a urinalysis or in the form of a -- of a whole body count. And all of a sudden we get all these assigned doses to the worker who was not monitored. And even there there were multiple options at times that says well, for instance, if a person was monitored but there

was a period of time during which he is not monitored, you could, for instance, use an extrapolation/interpolation use and say well, what was -- how much dose did he get before this gap in information and how much did he get afterwards and side of -- kind of interpolate a little bit here and come up with what's reasonable.

You could also choose coworker data, if you wanted to, to fill in the gap. Or we could, for instance, use the maximum recorded doses for that particular facility during that time frame. Or we could even default to administrative dose limits or regulatory dose limits, as I've seen in some cases. So again, there were multiple options. Not all of them were consistent. Some were claimant favorable than others and at times it was difficult to assess basically what is it that you should really do, and there was a lot of subjective selection here available to the dose reconstructor in how he wanted to deal with this.

Let me go on to item number six, which is the issue of uncertainty. And as I've mentioned,

this is a very, very important issue, but not necessary important when we talk about category one or two -- certainly not category one, because we don't even address uncertainty under category one where we do minimized doses where we say no, you're going to get exactly what the dosimeter read, and in fact we may even shave it. We're not going to address missed dose, et cetera, et cetera. So uncertainty doesn't address the issue of the category one claim. It is marginally used in category two claims where oftentimes uncertainty is swipe-- wiped off the table by saying we'll multiply everything by two, and that's a maximized dose which then give you the 95th percentile value that exempts you from uncertainty.

But clearly for the last and third case, category three, where best estimates have to be evaluated, uncertainty becomes a critical, critical issue to be sure that we're not doing anything that is less than -- than claimant-favorable. And let me give you a couple of examples of some of the problems here.

In looking at implementation guide one, there is an uncertainty discussion that requires the

dose reconstructor, if you're doing best estimate, to establish a sigma value or standard deviation for film. And if -- I looked at that. I said my God, for people who were monitored by film in the early periods, like in the '50s, they may have been given a weekly film dosimeter that -- for which they have to establish a sigma value. And then through propagation of error for one year, do that 52 times and collate it. And the methodology that's described -- I mean I'm scratching my head and saying I'm a reasonable health physicist. I think I know what I'm doing. I've been doing this for 30-some-odd years and I have to say I wouldn't know how to do this.

They tell you, for instance, that to -- there's a formula in the -- in the implementation guide that says if you expose in roentgens you must have a sigma value that's defined as a densitometer* reading uncertainty typically of 0.015 density unit. Well, that's a typical value. Should I use it? Is there another value that should be using? Part of that equation also says that it's saturation density

of film and it's based on Dupont 502 film which was commonly used, has a saturation density of 2.8. But what if in some other instances, as we already know, other film was used? So -- and -- and to do this 52 times and then use a propagation for one year? I sort of looked at this and saying my God, this is not something that anyone can easily do in an efficient manner.

The worst is the TLD uncertainty where the -- the uncertainty is defined in terms of an air kerma dose, and I'm not sure we even have that kind of data. And there are questions here that in the equation that is to be used there is a sigma sub one, which is the standard deviation of the total air kerma. I don't know what that means and the standard deviation of the no readings, I don't have a clue what those numbers mean. Then it basically tells you that for those sigma sub-N and sigma sub-Mu, which are part of an equation, you should have that data readily available from the -- for most DOE-lab accredited programs. In other words, call up the guy who was the DOE lab accreditor (sic) and get these numbers in order for you to

do a sigma value.
I find these things very difficult and -- and questionable in terms of their usefulness in doing dose reconstruction. I think there is a better way to doing this.
So again, the uncertainty issue needs to be resolved and I think it may very well have already been resolved because ORAUT-OTIB-12 may address that issue.
Also crystal ball has been used. According to some information that we got when we went to Cincinnati about a month ago, we were shown computer codes that do this for you. So again, some of the criticism may simply fall by the wayside. This -- these documents were drafted early on and of course since that time much has been done to rectify these problems. And I will also tell you that -- I will jump ahead and Kathy will probably verify this -- at -- to date I've reviewed 38 dose reconstructions and not one instance were of dose reconstructions where recorded doses were part of the dose reconstruction with anyone ever developed a sigma value for the recorded dose. And it's clearly an understandable issue. I didn't know

how to do this. And even if you did know, you could spend weeks trying to chase down these numbers. So some deficiencies that Kathy will be talking to later on is clearly a reflection of the difficulties that I've identified in these procedures.

Let's go to lastly category seven, and that is, again, the issue of does the procedure require a level of detail that can reasonably accounted for by the dose reconstructor. And I've already mentioned to you a classic case of the occupational medical dose where they tell you up front well, you can reconstruct it if you have the KDP, the MA, the milliseconds and the distance, and of course we don't have that. If you don't have the dose, you sure as -- not going to have those values. So again, we categorized some of these procedures in that fashion saying this is -- this is a request here that cannot be achieved. So we -- we obviously took notice of that.

On -- on the issue of 7.2, does the procedure avoid levels of detail that have only limited significance in final dose estimate and its POC, there were instances where I felt that we

went far beyond the call of duty and introduced levels of detail that I think are suggestive of a level of precision that really doesn't exist. Again, in the case of some of the tables that I've found in the occupational medical, we found organ doses to the -- E to the minus sixth rem. We're talking about a microrem. Is this significant or should we even have these numbers in here? I mean it's reasonable to say it's less than one millirem and be done with it. And so oftentimes some of these procedures would essentially project a level of precision that simply doesn't exist. It's a -- it's a false sense of security here in assuming that you know something that you in fact don't know. Another example is the external exposure geometry. We have in table 4.2 common exposure geometry for various jobs and facilities, and they give you uranium facility, reactor and chemical separation facilities, and they have by job category -- general labor, machinist, supervisor, fuel handlers, reactor operators -- and they will tell you that if you have a -- an exposure dose from a TLD you should consider certain geometries -- isotopic, anterior,

posterior, rotational -- and in fractions. I -- I'm reasonably certain these numbers have no real scientific basis. Or if they do, they probably don't apply to most of the individuals. And the question is, is it really necessary to get that level of detail? Not to mention that some of the dose conversion factors -- if you look at appendix B, I -- I -- I scratch my head. Appendix B offers you all the DCFs after, of course, a lengthy discussion on how they were derived. But among the four categories of DCFs are DCFs that are defined in terms of the ambient dose equivalent, and I question if I've ever heard of anyone using ambient dose equivalent for recording film or TLD -- or air kerma doses, to my -- best of my knowledge. All doses that have ever been used for -- for monitoring personnel for external exp-- (unintelligible) defined in the Roentgen or in -- in HP-10 in shallow dose, but I've never heard -- I -- I -- in fact, I had to look up the definition of ambient dose equivalent and I kept scratching my head even harder 'cause I didn't know what the definition really totally were, so there's a lot of data here

that seems superfluous, takes away from the efficiency and the clarity of a procedure.

So let me just briefly summarize. We -- we obviously had a -- a tally here in -- in one of the earlier procedures -- no. Well, I'm lost here. Where I am?

Here. These are the numbers. As I said, again, the majority of ratings were not applicable, 525. A good number were perfect scores, and there were shades of deficiencies that ranged from the -- never to -- to most of the time, and so forth.

What I did not want to discuss this morning are technical issues. I didn't know that, for instance, Mark Griffon was going to introduce a matrix, unbeknownst to me. He said he did it on the 4th of July. He didn't inform me about it. And I really clearly wanted to avoid the issue of technical issues because, out of fairness to NIOSH and ORAU, I did not want to address specific technical issues without having to go through an iterative process by which we could say well, you know, I cited you here as a deficiency. You've clarified it. I've -- see things now in a different light and

I'll walk away from it. I didn't want to be in that position. I believe that there are technical issues that need to be looked at very carefully, including DCFs. But at this point I would refrain from identifying and discussing those particular issues until SC&A has had a face-to-face communication with NIOSH people. And some of these issues may very well be resolved in their favor. We may realize we were wrong in identifying them and some will have to require resolution because we're right. But that day hasn't come yet and we'll obviously look forward to the time when we will meet with NIOSH and -- and discuss some of our technical findings.

The non-technical findings I'm not sure what to do about them. As I said, they will have probably been reviewed in -- in the past and they have -- numerous revisions have been made to take care of some of the problems that we have may -- may have identified. There are many new TIBs which we have not looked at that have come out and they keep coming out. There have been revisions to -- to those documents and including new TBDs that will be used in

category three and so forth. So I want to be sure that -- this review has not been a comprehensive and exhaustive review for those very reasons. This set of 33 documents pretty much focused on generic documents, complex-wide documents. Part of our review was not to look at TBDs, which are very, very critical and instrumental in doing the best estimates, which are likely to be something that I -- ORAU and NIOSH hasn't even really entered into yet because the low-hanging fruit have been the first in line and prioritized in terms of adjudication. So at this point in time our findings may have limited impacts from all those factors.

And -- and I just want to for -- for -- as a way of leading into -- into Kathy's presentation, as I'd already mentioned, you're all familiar with the three categories of partial -- category one we call a partial and/or minimized dose reconstruction. A category two, which is really the focus of most of these procedures, are the maximized dose reconstruction. And of course category three are the best-estimate, which will obviously be

the -- those -- claims that require an incredible amount of work. Category one, just again here, they are really used to ensure that a person's going to be compensated, where even a partial dose reconstruction, very incomplete, already puts you over the 50 percent mark and we don't need to really worry too much about uncertainty and others, so these -- these category of claims are least affected by the quality of the dose -- of dose reconstruction procedures because they almost -- in some instance don't even have to bother with it if you're, for instance, dealing with strictly an issue of external dose that puts you over the 50 percent mark.

In terms of category two, the maximized dose, again, they're somewhat insensitive to precision because we build in so much fat in overestimating doses. We give hypothetical internal, even though there's no evidence that the person was even monitored, let alone been exposed. And errors here simply don't mean anything. They're used to basically say no to a claimant. And even when you maximize doses, the POC's less than 50 percent, so the need for

precision is simply not there when we do maximized doses. The only thing we need to do is to be sure that we have not overlooked anything, that all pathways, all exposures to different radionuclides have been properly addressed, but precision is clearly not an issue here.

And lastly of course is the category three, which is the best estimate approach and we've talked, again, in terms of Mallinckrodt, these are the ones that will be very difficult because they require a thorough understanding of how to interpret the bioassay data, how to interpret the -- the external doses, the missed doses, et cetera. And there are likely to be those cases where a marginal error could easily trigger a non-compensable to a compensable claim, and this is where we need to be very sure that we understand what we're doing and how to do the dose reconstruction properly.

And as I said, I think Kathy will talk more about what kinds of claims that we have looked at in the dose reconstruction in a discussion that she'll have this morning yet. So I'll close with that statement and if there's any

questions I'll be happy to answer those.

DR. ZIEMER: Thank you, Hans. Let me open the floor for questions from the Board members on the presentation. We do need to --

MR. PRESLEY: Gen has one.

DR. ZIEMER: Oh, sorry, Gen Roessler. Sorry, I didn't see you there.

DR. ROESSLER: I just have a comment. This was a huge amount of work for your team to do, and it also impresses me that this whole set of procedures for NIOSH and ORAU was very much a learning procedure, starting from the very beginning going on through all the improvements and recognizing where things could be redone. And it kind of reminds me of supervising a master's or Ph.D. work where the student, in learning what they're doing, has to put all that information there. And then later on you realize it's not necessary and you move it to an appendix.

I guess I'm wondering, is there anything that really needs to be done with these deficiencies that you see in the procedures, or -- or is -- is this being taken care of by the later procedures that -- that sort of correct the

deficient --

DR. BEHLING: Yeah, if you look at the bottom line tally among the categories, other than five and NA, I believe they come up to 154. So in essence we had 154 comments and -- and statements regarding deficiencies. And I will tell you, many of them are subjective. Many of them are things that may not have to be corrected, it's just a -- if we talk about a poor formatting of a procedure, what do you do? Rewrite the procedure if you want to, but at this point it may be unnecessary in lieu (sic) of the fact that many of these procedures have been replaced by spreadsheets and work books. And so the question is, do we need to do that. Now I will tell you that there are some procedures that are used that are very poorly written and very ambiguous, and I think Kathy's going to get into it. And I will cite to you two procedures in particular, TIB 8 and 10. For all the 38 dose reconstruction we've done to date, I've seen just about every one of them fail to understand what the intentions were of TIB 8 and 10 and understanding how to maximize doses. And even when -- as I said, maximized

doses are not necessarily affected by precision, but there was a consistent misin-- misunderstanding on the part of the dose reconstructor in their interpretation of those procedures.

Again, you want -- you may want to just rewrite these in order to clarify these -- if these complex-wide procedures are used in the future. Just for the record, I think some of the work books may illuminate that because the option for doing a redundant approach may no long exist when a person then clicks on -- on -- on an icon or something and says this is what I want to do, so the misinterpretation has been eliminated.

There are, however, a couple of issues that I will say are very important issues that need to be looked at in terms of technical incorrectness. And I think -- we briefly mentioned, I don't want to get into it because, as I said, I wasn't even going to bring those up because we have not had a face-to-face with -- with NIOSH in discussing our concerns, some of these technical issues.

And so yeah, I think -- to answer your

question, the majority these 154 items and comments will probably not amount to a significant issue at this point, but there are some technical issues that I would hope will be resolved because they're so important, not just for the claims that have been done, but for future claims, as well. And they cross all categories.

DR. ZIEMER: Thank you. Mark has a question or comment.

MR. GRIFFON: I guess I was going to offer a response to Gen's question, as well. We don't know, you know, and that's -- I think we discussed it in the subcommittee yesterday that we're starting to set up a resolution process, and I took a first shot at -- at sort of what Hans was talking about, taking out some of the more technical issues and -- and putting them into that -- that preliminary matrix and saying these are ones that I think are more over-arching. But I think yesterday -- I -- I don't know if we -- we need to --

DR. ZIEMER: During our working session we are going to come back and take a first crack at what are next steps now, what do we do with

this report. If there are issues that need sort of a common resolution process, we need to get the ball rolling on that and we will address that during our working session later today.

MR. GRIFFON: Yeah, I guess I was going to -- I think we -- we discussed that at the subcommittee. I don't think we brought it back to the full Board yet, but we need to to bring that --

DR. ZIEMER: Right.

MR. GRIFFON: -- proposal back to the full Board, yeah.

DR. ZIEMER: And we have a -- we have a starting matrix for that purpose that we'll use in that discussion.

MR. GRIFFON: Can I ask -- can I ask one other --

DR. ZIEMER: You bet.

MR. GRIFFON: -- item of Hans? It -- it -- I -- I -- I glance at this summary sheet and it strikes me that 525 of your -- of your matrix items or whatever that high number was, are NA. And it raises the question in my mind as to whether we have the right evaluation objectives

up there. If everything's not applicable, are we measuring -- are we looking at the right metrics? Just -- just something I was thinking, Hans.

DR. BEHLING: That's due to the diversity of the procedures. For instance, when we look at a host of QA, they have nothing to do with external or internal dosimetry --

MR. GRIFFON: Right.

DR. BEHLING: -- and clearly -- or the CATI interview. You know, they -- they were select questions that were geared towards only select procedures. And we knew from the beginning that not all of these review objectives will apply. In fact, most of them would not, to a given procedure. But in order to keep things consistent, we wanted to keep a -- a -- sort of a review checklist that would be used for each and every single procedure, even if the majority of -- of our objectives were NA to that procedure.

MR. GRIFFON: Okay.

DR. BEHLING: And of course one of the -- the shortcomings was that we reviewed these procedures before we had a chance to look at

the dose reconstruction audits. And I liken that to a situation where you walk into the showroom and say gee, I'm interested in looking at a car but, you know, the -- the -- the salesman says well, here are the technical specifications. And you sort of say well, they sound great, but you know, I really want to take it out for a test drive, and he says no, not -- not now. And so right now we're -- when we reviewed these -- these procedures, we only had the tech specs to look at. We didn't have the benefit of a test drive. And the test drive comes with the review that Kathy's going to give you from the audits, which will verify some of our findings in many instance. In some instances we identified, as a result of our review of the dose reconstructions, things that we should have picked up but didn't because now we are seeing it through the eyes of the dose reconstructor. What did he do? He didn't understand the procedure. But we didn't have that benefit when we first looked at the procedures themselves, so some of the findings that I would have introduced here in our -- our procedure review came only -- that wisdom only

came with us doing the audits themselves.

DR. ZIEMER: Good. Thank you. Other questions?

Okay. Thank you, Hans. We're going to move on then to the next presentation -- this is the test drive, I guess -- report on the -- oh, wait a minute.

MR. GRIFFON: Where are we on the agenda, yeah.

DR. ZIEMER: Where are we on the agenda?

MR. GRIFFON: I think we're doing the first 20 cases.

DR. WADE: Well, we could reverse the order if you wanted to do that.

MR. GRIFFON: I -- I --

REPORT ON THE REVIEW OF THE FIRST 20 DOSE RECONSTRUCTIONS

DR. ZIEMER: Yeah, actually what -- what is next on the agenda is the first 20 cases. The second 18 comes a little later, sorry. I was -- after Hans's remarks, I was so ready to see the outcome there that I skipped ahead.

On the first 20 cases we had the report from SC&A. We went through what became known as the six-step process where there was some dialogue back and forth with NIOSH. And ultimately we

ended up with a matrix, the latest version of which -- I'm looking for a date on it. Did it have a date on it?

MR. GRIFFON: Probably not. No, there's no date.

DR. ZIEMER: Which will contain today's date, which you will write in. Anyway, you should all have it there at your place. As the matrix has developed, each of the findings of SC&A has been identified and cross-walked to the original document. There's a finding number that also includes with it the particular portion from the original report, so the finding number 1.1 also references item C.2.1, which I believe is where it rises in the original report from SC&A. There's a brief phrase or sentence which summarizes the finding, a brief summary of NIOSH's response. There's a ranking -- let's see, what is the next -- case rank. This was a high, medium, low ranking in terms of level of importance, if we want to call it that. In some cases a ranking in terms of whether this was -- I'm trying to remember now -- program-wide or simply --

MR. GRIFFON: Case-specific.
DR. ZIEMER: -- case-specific. And identification of whether it was a technical issue versus a -- what were the other ones -- procedural or quality issue. Identification of external, internal -- was there another category in there -- or a CATI issue -- internal dose, external dose, CATI. And ultimately the resolution -- the NIOSH resolution. In other words, did NIOSH accept it or agree with it or -- or is there some other resolution, and then finally a proposed Board action, and it's the proposed Board action that we have to take actual action on. Now these proposed actions are categorized as 1 to 7, and what we will need to add for your assistance here comes from an earlier document, and that is what do the numbers 1 through 7 mean.
MR. GRIFFON: Right.
DR. ZIEMER: And Mark, if you have that before you, I'll let you read that. I have it here, if you don't.
MR. GRIFFON: Yeah.
DR. ZIEMER: Go ahead.

MR. GRIFFON: And I -- I think it needs to be added as a footnote on the matrix itself --
DR. ZIEMER: And I might add that --
MR. GRIFFON: -- but I didn't get around to that.
DR. ZIEMER: -- I think initially we had 1 to 6, when this Board last met.
MR. GRIFFON: That's right.
DR. ZIEMER: But we determined in the working group at Cincinnati about a month ago, as -- I think Mark and I went over this, we realized that there was an additional category we needed to add, and that's what the 7 is, and Mark'll tell you what that is.
MR. GRIFFON: Right, number -- number 1 is NIOSH agrees and accepts the finding; 2, NIOSH disagrees but will comply --
MS. MUNN: Go slowly.
DR. ZIEMER: Go slower.
MR. GRIFFON: Three, NIOSH disagrees --
MS. MUNN: Hold on, hold on.
DR. MELIUS: Start all over again, Mark.
MR. GRIFFON: Do we want just copies of this made? Is that --
MR. PRESLEY: That's what you need to do is

make a copy.

MR. GRIFFON: That'd be a lot easier and I -- and I don't have another copy, so...

DR. ZIEMER: The first six categories actually we had agreed on earlier.

MR. GRIFFON: Right.

DR. ZIEMER: Unfortunately, they didn't get carried across onto the matrix, but why don't you go ahead and read them slowly, even -- we'll get the hard copy here, but --

MR. GRIFFON: I don't have --

DR. ZIEMER: -- number one --

MR. PRESLEY: He's got --

DR. ZIEMER: Oh, okay.

DR. WADE: As quickly as she can walk to the copy machine.

(Pause)

DR. ZIEMER: I thought I was going to pull them right -- here -- here they are. And actually, Board members, you had a hard copy of this before, but I'm not scolding you. You wouldn't necessarily have brought it.

NIOSH --

DR. MELIUS: We need a moving van every time to haul the paper.

DR. ZIEMER: That's literally true. I had some boxes this time.

NIOSH agrees and accepts the finding, that's number one.

Number two, NIOSH disagrees, but will comply.

The third one is similar but a little more reluctant on NIOSH's part, it's NIOSH disagrees and will not implement unless the Board recommends action through HHS. It requires a letter to the Secretary.

Number four, NIOSH disagrees and the Board and NIOSH reach a compromise. This would be an intermediate step if we were to agree outside of a mandated solution to some sort of compromise.

Number five, NIOSH disagrees and the Board concurs. We -- in other words, we say we agree that NIOSH -- we are basically agreeing with NIOSH on the outcome rather than the contractor.

Number -- am I going too fast?

MS. MUNN: It's fine.

DR. ZIEMER: Okay. Number six, the issue is deferred to -- to the site profile, the TBD or procedures review process. And -- and I -- in

other words, it's not resolved here. The Board in essence is saying we are deferring this because it's going to be handled in the site profile. Let me read it again.

The issue is deferred to the site profile or to a site profile, TBD or procedures review process. And there will be a number of these. You will see more specifically how that applies.

And then seven, which we hadn't allowed for, was SCA concurs with NIOSH's view. In other words, if NIOSH disagrees and SC-- and SCA says we concur.

MR. GRIFFON: Right.

DR. MELIUS: And there are no gradations in that?

DR. ZIEMER: Well, SCA reluctantly concurs.

DR. MELIUS: John Mauro agrees, but...

DR. ZIEMER: But it's going to cost you a steak dinner.

Okay, those are the seven current categories. You'll have hard copy before you here momentarily. And what -- what we actually need to do, and there's a lot of pages here, but I think once we're under way, we can speed

through this pretty rapidly. And actually if it's a category 1 or a category 2, it would be my sense of it that that closes the issue and we don't have to actually do anything -- we would accept it, but if it's a 1 or a 2, it means that NIOSH agrees with the finding and accepts it, or will comply with it.

MR. GRIFFON: As long as NIOSH agrees with my interpretation that it was a 1 or 2, yeah. Yeah.

DR. ZIEMER: Right. Now --

MR. GRIFFON: I mean I -- sometimes that was me trying to understand what was written in the NIOSH resolutions, so --

DR. ZIEMER: In some of these, yes, it's where Mark thinks that --

MR. GRIFFON: Right. Right.

DR. ZIEMER: -- NIOSH -- maybe that's another category, Mark thinks.

MR. GRIFFON: Yeah.

DR. ZIEMER: Also if -- if there are ones where we think SC&A concurs with NIOSH's response, then -- and --

MR. GRIFFON: We see Stu moved up closer to -- to take care of those 1s and 2s. Yeah.

DR. ZIEMER: Okay. Do we need to pause until we get the hard copy or...

We -- we can proceed. Okay, the first one is an example where there was a finding, NIOSH gave a response and you notice on the resolution NIOSH and SC&A agree with the way the exposure time was handled in the site profile. Basically that's a 7. SC&A is concurring then.

MR. GRIFFON: That's an easy one.

DR. ZIEMER: Okay. And if -- if NIOSH and SC&A agree with the -- with the 7, unless there's an objection, I'm going to take it that the Board concurs that this resolves that issue and the 7 would be our action -- Is that agreed? -- and we'll proceed through these in that manner.

MR. GRIFFON: If we -- I -- Paul, just for processing, I think if -- if we don't hear an objection -- you know, SC&A or NIOSH, if you have an objection, just step to the mike as we're --

DR. ZIEMER: Sure.

MR. GRIFFON: -- you know. We won't have to ask each time, maybe.

DR. ZIEMER: We'll make sure that -- right.

Stu?

MR. HINNEFELD: Why don't I just suggest that I'll speak up if I feel like we haven't been characterized --

DR. ZIEMER: Thank you.

MR. GRIFFON: That's what I was trying to say.

DR. ZIEMER: And you likewise, John, for... okay. The next item, finding 1.1(b), this is an issue that is to be addressed in the review of the Blockston (sic) Chemical site profile, so this would be a 6, and in essence the finding is not resolved here and awaits the resolution in that -- was this a Blockson -- let's see --

MS. MUNN: It doesn't look like it, the way it's stated. The summary finding looks like it's more general than that.

MR. GRIFFON: Yeah, it -- the inter--

DR. ZIEMER: Mark, do you recall?

MR. GRIFFON: -- the interesting -- the interesting dilemma we face here is that we haven't tasked our contractor with doing the review of the site profile for Blockson, so -- but the NIOSH resolution that was given to -- provided to me said, you know, that this is

pending the review of the Blockson profile, so I think that -- that would necessitate us to take up that profile as -- on a review basis.

DR. ANDERSON: To see how it was addressed?

MR. GRIFFON: Right.

DR. ZIEMER: Stu?

MR. HINNEFELD: I think at the time we revisit these in -- in the Blockson profile, say revision or reconsideration of Blockson profile, whatever's determined at that time we can, you know, address with SC&A and -- and bring back to the Board.

MR. GRIFFON: Okay.

MR. HINNEFELD: You know, the language that's chosen here does sort of imply that there will be a review of the Blockson Chemical site profile, which I don't think is on the agenda at the moment -- or at the moment, and -- and it may not be what you want to do to force that to happen because of this particular response.

MR. GRIFFON: That's fine.

DR. ZIEMER: Right now this does not require an SC&A -- this says that NIOSH will address the issue in the profile, and the implication here is that the Board then would see how it's

addressed in the profile. In a sense, it delays us taking action on this till we see what NIOSH has come up with.

MR. HINNEFELD: Yeah. And I just want to make sure that -- I don't think you --

DR. ZIEMER: It doesn't necessarily task SC&A at --

MR. HINNEFELD: SC&A to do --

DR. ZIEMER: -- this point to do anything.

MR. HINNEFELD: Okay. I think it can be resolved --

MR. GRIFFON: Yeah.

MR. HINNEFELD: -- without obliga-- obligating ourselves today --

DR. ZIEMER: Yes.

MR. HINNEFELD: -- for review of the site profile. Right.

DR. WADE: Right, but -- but in essence NIOSH agrees and accepts this recommendation and intends to act upon it.

MR. HINNEFELD: Yes, it -- it's -- we need to do things in response to this --

DR. ZIEMER: Right.

DR. WADE: Right.

MR. HINNEFELD: -- this item, this

recommendation.

DR. ZIEMER: In essence, this -- if the Board accepts item 6 as our -- our action, it -- the item remains open. That's all I'm saying.

MR. GRIFFON: Yeah.

DR. ZIEMER: You understand what I -- the point here? So it doesn't close out the item. That -- our action is that this will be addressed in the site profile. The item --

MR. GRIFFON: Right, and --

DR. ZIEMER: -- therefore remains open.

MR. GRIFFON: -- it doesn't necessarily -- what I hear them saying is it doesn't necessarily commit to the Board reviewing Blockson site profile, but what -- it's just NIOSH, as they're finishing that site profile, they'll come back with these answers. Right? Yeah.

DR. ZIEMER: So I'm -- I'm just saying it remains an open item. At some later point we --

MR. GRIFFON: Yeah, deferred.

DR. ZIEMER: -- have to address it again. Wanda, do you have a question on that?

MS. MUNN: As we're going through these, I'm assuming that 7s and probably 1s will just fall

off the -- the list.

DR. ZIEMER: Right.

MS. MUNN: We will no longer carry the --

DR. ZIEMER: And now you will notice that there's a series here of -- of 6s in a row that --

MR. GRIFFON: Right, no further tracking, you mean, yeah, right, right.

DR. ZIEMER: There's seven 6s in a row here; all of these are Blockson issues.

MR. GRIFFON: Right.

DR. ZIEMER: Okay. Any -- any questions on those? Those would remain open items. Okay. Then we're ready for item -- this may be a little hard to read. This is item 2.1 and NIOSH agrees and accepts.

MR. GRIFFON: Thi-- this -- Stu, there's a couple here that don't have a NIOSH resolution listed, and I think these are ones that SC&A had in their original text but it wasn't in that Cincinnati meeting we had, so you might want to pay close attention to these ones that don't have a...

MR. HINNEFELD: Well, I think it -- it's certainly true that -- of these three that I

see, that we agreed to some reconsideration of the question.

DR. ZIEMER: Yeah, it was an eval-- agreed to evaluate something, and apparently went ahead and did that, as -- perhaps. I don't recall. Or --

MR. HINNEFELD: Well, I don't know that we've actually completed it yet.

DR. ZIEMER: Oh, okay, but --

MR. HINNEFELD: Yeah, I'd say that --

DR. ZIEMER: -- apparently agreed to do it or something.

MR. HINNEFELD: -- we -- we agree that we need to reconsider the -- the question raised here, and -- but I don't know that we have determined, you know, concurrence with the comment as made. I don't know that we particularly dispute it, either, but -- I just don't know that we've finished evaluating it yet.

For instance, one of these is a MCNP run that's discrepant. We have an MCNP run, they have an MCNP run; they don't agree. And so we're -- we have not yet been able to chase down the discrepancy. You know, that's one. That's

that five-fold birdcage, right?

DR. MELIUS: Is that for another category then?

DR. ZIEMER: I'm -- I'm wondering if this doesn't cause the item to be open then.

DR. ANDERSON: Become 6.

MR. HINNEFELD: Maybe it's a --

DR. ZIEMER: This -- this is one -- the only agreement here is that you would follow up on this.

MR. HINNEFELD: Yes.

DR. ZIEMER: And that has not yet been done --

MR. GRIFFON: (Unintelligible) 6s --

DR. ZIEMER: -- so maybe -- maybe this is a category -- this is not necessarily a 6, is it?

MR. HINNEFELD: I believe this is also dose model dose reconstruction, isn't it? Which -- which site's this from? I don't remember right now.

MS. MUNN: Seems like the same thing.

MR. HINNEFELD: Which case is -- is this Huntington?

MR. GRIFFON: Yeah.

MR. HINNEFELD: Huntington? It would be the same type of thing. We would have to re-

evaluate the information in the Huntington site profile --

MR. GRIFFON: Yeah.

MR. HINNEFELD: -- in order to -- and -- and any revision we would make in response would be in a revision of the Huntington site profile, so it'd be really analogous to the Blockson cases.

DR. ZIEMER: Okay, so this would be addressed in the Huntington site profile, so we should change this then to a 6 and put that comment on -- under resolution.

MR. GRIFFON: Yeah.

DR. ZIEMER: Is that true for all three of these --

MR. GRIFFON: Four of those maybe.

DR. ZIEMER: -- the C -- 2.1, .2 and .3?

MR. HINNEFELD: Yes.

MS. MUNN: So they're all Huntington.

DR. ZIEMER: And then the next one after that is also Huntington. It's also a 6.

MS. MUNN: Yeah.

DR. ZIEMER: Is that agreed?

MS. MUNN: Yeah.

DR. ZIEMER: Okay. On -- then we're at item

2.5, this is a re-evaluation also. What -- is this a Huntington issue?

UNIDENTIFIED: Right.

DR. ZIEMER: This then I believe becomes a 6, also.

MR. HINNEFELD: Well, no, actually we -- we agreed with 2.5 that that was an error. It was an error that was made and it substantially -- it resulted in a dose that's substantially higher than what it should have been had the IMBA run been done correctly, and so we agree that it's an error.

MS. MUNN: It was a data entry thing.

MR. HINNEFELD: But we didn't -- you know, I don't know if you have a category -- we agree it's an error, but it doesn't warrant correction because it was a significant overestimate of dose of a case that had a POC less than 50 percent.

MS. MUNN: They just put in the wrong values.

DR. ZIEMER: So it's not -- the re-evaluation -- it says NIOSH agrees to re-evaluation. That's --

MR. HINNEFELD: (Unintelligible) wrong one?

DR. ZIEMER: -- not quite correct, then.

MR. HINNEFELD: Which -- maybe I'm looking at the wrong one.

MR. GRIFFON: 2.5 (unintelligible) --

MR. HINNEFELD: 2.5-G.4.

DR. ANDERSON: It was an error, but it didn't change the...

DR. ZIEMER: So --

MR. HINNEFELD: Okay, well --

DR. ZIEMER: So the resolution is that NIOSH acknowledges the error --

MR. HINNEFELD: We acknowledge the error.

DR. ZIEMER: -- but no -- it had no effect on the outcome?

MR. HINNEFELD: Right, the error was on --

MR. GRIFFON: No correction required.

MR. HINNEFELD: -- on the high side. It was -- the error significantly overestimated what the internal dose would have been from the exposure situation, and so the case ended up, even as it was done, ended up with a probability of causation of less than 50 percent. So if we would correct this error it would just go lower -- farther below 50 percent.

DR. ZIEMER: Yes.

MR. HINNEFELD: So we don't propose to actually

do anything.

MR. GRIFFON: I -- I put in the NIOSH resolution NIOSH agrees, comma, no correction required since error resulted in overestimate.

MR. HINNEFELD: Right. Right.

DR. ZIEMER: So basically you're accepting the finding and --

MR. HINNEFELD: Yes.

DR. ZIEMER: -- thus a 1 is correct there.

MR. HINNEFELD: Yes, we agree that the finding is correct.

DR. ZIEMER: Okay, 2.6, this is a re-evaluation issue again.

MR. GRIFFON: Yeah, thi-- this was the work period question.

MR. HINNEFELD: Well, I recall the -- I can recall the issue, and I'm trying to decide how best to phrase the -- what the resolution would be. I think 1's probably the best response there, we agree and will -- will modify it to adjust. Because this was a question of what was the covered employment and therefore potential exposure period. And it had to do with sort of an idiosyncrasy that really only occurred with Huntington where there was a

verified employment period that ended before the end of the employee's total employment at that plant. Huntington Pilot Plant, one portion of the Huntington plant was shut down at a particular year and therefore the verified employment reported to us by labor terminated with the shut-down of the Huntington Pilot Plant. Okay. The Huntington Pilot Plant wasn't necessarily forbidden property after that day, and so a worker who continued to work at Huntington could have entered and then had some residual contamination exposure.

DR. ZIEMER: Well, did -- did this have to go back to Labor to get the time period changed or -- or --

MR. HINNEFELD: No.

DR. ZIEMER: -- were you authorized to change it?

MR. HINNEFELD: We're -- we are allowed to include residual contamination --

DR. ZIEMER: So --

MR. HINNEFELD: -- exposure to someone who has covered employment and then continues employment in a residual contamination period. We can do that without having to go back to

Labor --

MR. GRIFFON: So NI--

MR. HINNEFELD: -- so we agreed --

MR. GRIFFON: -- NIOSH agrees and will modify --

MR. HINNEFELD: Yes.

MR. GRIFFON: -- is that okay?

MR. HINNEFELD: Sure. Or we will at least consider the impact of the change. For instance, if -- if the change --

MR. GRIFFON: Okay.

MR. HINNEFELD: -- represents -- you know, this -- this case has a very low probability of causation, even with the IMBA error already built in.

DR. ZIEMER: Right, it may not affect the outcome, but you -- you are --

MR. HINNEFELD: I don't think it's going to affect the outcome --

DR. ZIEMER: -- going to go --

MR. HINNEFELD: -- but we will evaluate how this affects the outcome of the case.

DR. ZIEMER: Okay.

MR. HINNEFELD: I suspect it won't actually --

DR. ZIEMER: Yeah.

MR. HINNEFELD: -- affect the outcome of the case, in which case we wouldn't necessarily submit a new one back to Labor.

DR. ZIEMER: Right.

UNIDENTIFIED: Agreed.

DR. ZIEMER: This is -- the action -- the 1 is then correct.

MR. HINNEFELD: Yes.

DR. ZIEMER: Yes. The next one is 3.1, and this -- actually the next -- there's six in a row here, all of which involve the Bethlehem site profile, so those would be deferred by indicating that the issue's deferred to the site profile. Any comments from NIOSH on that? No. Board members, okay on that? Okay. Item 4 --

MR. GRIFFON: I guess I should put NA for Board action on those.

DR. ZIEMER: Clarify item -- items 4 and 5 for us, Mark, could you -- or Stu?

MR. HINNEFELD: Well, it -- they're case number 4 and case number 5, and they're both Bethlehem Steel cases and so the findings from those cases are characteristic -- like case 3 was, they flow directly from the site profile and so

--

MR. GRIFFON: Except --

MR. HINNEFELD: -- and so resolution of the site profile --

MR. GRIFFON: I guess the one distinction is I think the two -- 4 and 5 were both lung maximizing situations --

MR. HINNEFELD: Oh, okay.

MR. GRIFFON: -- so -- so the findings were more for the one that was denied rather than the two that were overestimates or --

MR. HINNEFELD: Oh, okay. Sorry.

MR. GRIFFON: -- or -- or --

MR. HINNEFELD: Sorry.

MR. GRIFFON: Right. The two were over 50 percent lungs so the result in these findings wouldn't -- wouldn't necessarily -- they weren't findings, they -- they weren't comfortable with that, but where they could have been important in -- in resolving is the case that was denied, so that why they're findings on case 3 but not 4 and 5 for Bethlehem Steel.

DR. ZIEMER: So there's no -- but should there be a response, though, explaining, or... It

actually says no findings --
MR. GRIFFON: Right --
DR. ZIEMER: -- specific to case so --
MR. GRIFFON: -- no findings, yeah.
DR. ZIEMER: -- maybe that's suitable, and no action therefore needs to be taken.
MR. GRIFFON: Right.
DR. ZIEMER: Okay, 6.1, the preliminary closure is NIOSH agrees and accepts. This says NIOSH will investigate.
MR. HINNEFELD: Well, the issue --
DR. ZIEMER: Well, yeah, okay.
MR. HINNEFELD: We will determine whether the addition of the uncertainty affects the outcome of the case. We agree that -- with the finding they made that we should consider uncertainty in this issue or evaluate whether the approach suitably addresses it.
DR. ZIEMER: Right.
MR. GRIFFON: And -- right. And you'll modify if it affects --
MR. HINNEFELD: If it affects the outcome of the case, we --
MR. GRIFFON: Outcome, right.
MR. HINNEFELD: -- will then modify.

MR. GRIFFON: But otherwise (unintelligible).
DR. ZIEMER: So that is a -- that is an agreement then.
MR. HINNEFELD: Yeah, that -- I believe it's characterized appropriately or properly.
DR. ZIEMER: Okay. Thank you.
MR. GRIFFON: We're getting there.
DR. ZIEMER: 6.2 is disagree but comply. Any comments on that one, Stu? Do you want to... All dose of record was accounted for. Some details were missing. Revised dose reconstruction --
MR. GRIFFON: Surprised myself here.
MR. HINNEFELD: Yes, this --
DR. ZIEMER: -- drafted.
MR. HINNEFELD: -- this case, 6 -- case number 6, there were a number of errors identified that we've evaluated to -- and reworked, correcting those errors. They were errors. They were, for instance, a misunderstanding of the number of zeroes that should have been included in the -- in the missed dose calculation, seems like there were a couple of others, as well. Part of it was based on the fact that there seemed to be a page -- a page

or two missing from the DOE response that --
MR. GRIFFON: Should those be --
MR. HINNEFELD: -- wasn't picked up on.
MR. GRIFFON: Should those be 1s, did I make a mistake?
DR. ZIEMER: Yeah, this says you disagree with the finding but you're --
MR. HINNEFELD: No, that --
DR. ZIEMER: -- it sounds like you probably agreed --
MR. HINNEFELD: -- probably a 1. Probably a 1.
MR. GRIFFON: So that's my mistake, I'm sorry.
DR. ZIEMER: Okay. Is that also true then with --
MS. MUNN: All the way down.
DR. ANDERSON: Yeah.
DR. ZIEMER: -- down through the rest of that page? Okay. So down through item 6.5(a) and (b) everything would be a 1 then.
MR. GRIFFON: Right, and 6.6 also?
UNIDENTIFIED: It's already a 1.
MR. GRIFFON: Oh, yeah, that's a 1 already, yeah. I'm sorry, I'm looking at --
MS. MUNN: Is that reconstruction (unintelligible) --

MR. GRIFFON: -- computer...
MS. MUNN: -- or is it still in draft form?
DR. ZIEMER: Well, hang on. Are we okay through 6.5 completing that page, (a) and (b), Stu?
MR. HINNEFELD: Yeah, we're -- we're okay making them all 1s. In response to the question about is it complete, we still need to do --
DR. ZIEMER: 6.5(c) on the next page also is a 1, improper cited reference to occupational medical exposure?
MR. GRIFFON: Did we answer Wanda's question? Wanda, didn't you have a question about a drafted, is that --
MS. MUNN: My question was whether it's still in draft -- whether the reconstruction is still in draft form or has it been completed.
MR. GRIFFON: And that's what --
MR. HINNEFELD: We still need to add the uncertainty issue from earlier on.
MR. GRIFFON: Okay.
MR. HINNEFELD: Now bear in mind that this -- this is -- these -- these errors all affect the external dose -- dose on this dose

reconstruction and this -- internal dose on this dose reconstruction was done with an intentional overestimating approach, maximizing approach, so there's -- there's very little likelihood that the outcome of the case will change once we correct all these things.

DR. ZIEMER: 6.7, the potential dose from an incident. Currently this says NIOSH disagrees?

MS. MUNN: It says no change is needed.

DR. ZIEMER: It also says SC&A's February report agrees with the conclusion regarding the incident.

MS. MUNN: So it is a 4.

DR. ZIEMER: So that sounds like SCA is accepting NIOSH response. Is that correct?

UNIDENTIFIED: Or is it a -- have we reached a compromise?

MR. HINNEFELD: I think that -- I'd like to offer an explanation on how that sentence ended up in our response is that we started -- the matrix originally was prepared with the original version of the procedure or the first 20 reviewed. And subsequent to some conversations, you know, in our conversion process, another matrix was prepared from the

first version -- the listing, the findings. And so we tried to deduce from the second one whether an issue had gone away. We may have made a mistake and we certainly didn't mean to speak for SC&A and characterize their response. It may be fair -- to be fair to them, we may want to allow them the opportunity to see if they -- if we did in fact accurately characterize their response.

DR. ZIEMER: Okay. NIOSH -- this is the NIOSH response. It says that SCA's February report agrees with the conclusion, so Stu is asking if he has correctly characterized your conclusion. Kathy, can you answer?

MS. BEHLING: Yeah. Yes, in that -- in this particular case we did feel that NIOSH could have looked a little bit harder at the radiological incident that was identified in the CATI. However, we do agree with the fact that NIOSH used the hypothetical internal dose in calculating the internal dose portion, that that should take care of, you know, any radiological incident that may have happened. So I guess we are saying that we do agree, although --

MR. GRIFFON: I think I can -- I mean maybe my -- I -- I wrote the number 4, so I'll try to explain it. I think what I'm getting at here was the -- the last sentence in the NIOSH response -- NIOSH also agreed that this is -- this needed to be explained in the DR report. We had a lengthy discussion at the workbook -- the workgroup level that -- that basically if -- if incidents were brought up in the CATI reports it was important to convey in the DR report that the dose reconstructors considered that information, even if it -- even if it was by saying we've looked into what you've described in your incident scenario. We don't have data for that particular incident, however we've used over-arching -- overcompensating mechanisms or assumptions to apply an internal dose and therefore we still think we've -- we've given you a claimant-favorable assessment. You know, that wasn't done in the DR report, so I think the compromise was that they -- they agreed to modify language in the DR report. So it -- it was -- I guess it was kind of a split finding almost there. You know, they -- they -- I think we are all in

agreement that that incident likely wouldn't have affected the outcome of the -- of the -- the case, but the second part was the -- where I -- I guess -- that's why I put a 4 there. I'm not sure if that number's the right action.

MS. MUNN: But now that the -- now that another draft is out, now that a second DR is out, doesn't that become a 7 then?

MR. GRIFFON: Well, there's no -- there's no second DR out, I don't think, on this. They -- they've agreed to modify for future DR reports...

MR. HINNEFELD: Right, I mean the only way we would -- if we were to modify this dose reconstruction for wording, we would be sending a new dose reconstruction report to a claimant who has received a decision that does nothing different than change the wording. So we would not expect to send a new dose reconstruction on this -- for this case, but to pursue the idea in future ones that have similar issues.

MS. MUNN: Okay.

MR. HINNEFELD: That's -- that's what we agreed to.

MR. GRIFFON: Right.

DR. ZIEMER: Right. It sounds to me that this is not a -- a 4 where NIOSH is disagreeing and we're trying to reach a compromise. It sounds like SC&A's accepted NIOSH's -- is that right?
MR. GRIFFON: I don't know.
DR. ZIEMER: No?
MR. GRIFFON: I -- I -- I don't think NIOSH disagrees. I think you're right. I...
DR. ZIEMER: NIOSH has made a response. It sounds like SC&A --
MR. GRIFFON: SC&A accepts and NIOSH accepts, number 8 -- I mean it's -- that's --
UNIDENTIFIED: A 1-7.
MR. GRIFFON: Yeah. I think the complicating part is it was kind of a split issue --
DR. ZIEMER: Oh, I see.
MR. GRIFFON: -- you know.
MS. MUNN: A 4.
MR. GRIFFON: Halfway, I know.
DR. ZIEMER: That's why -- yeah, but --
But -- but the 4 has an implication that NIOSH still doesn't agree with this, but we're finally going to close it out anyway. I would -- I think -- this is not overly critical, but I would suggest we just go with a 7 here and it

would say that there's closure on it and agreement.

Henry?

DR. ANDERSON: Well, I mean it isn't --

MR. GRIFFON: Yeah.

DR. ANDERSON: -- that SCA concurs with NIOSH. In other words, SCA's comment was wrong and -- and now they agree that -- so I don't think it's a 7. If anything it would be a -- a 1.

MR. GRIFFON: See, I -- I -- I --

DR. ANDERSON: I mean that's what's a compro--

MR. GRIFFON: -- I think this is -- this is a problem.

DR. ANDERSON: -- a compromise (unintelligible) address.

MR. GRIFFON: I'm trying to find a way of doing this without creating a new finding.

DR. ANDERSON: Yeah.

MR. GRIFFON: But I think it's a 1 and a 7. I mean --

DR. ANDERSON: Yeah.

MR. GRIFFON: -- the one part -- SC&A agrees that the incident wouldn't have affected the outcome. The second part, NIOSH accepts that they need to modify their DR reports, you know.

DR. ZIEMER: Okay, 1 and 7, that's (unintelligible).

(Simultaneous comments)

MR. GRIFFON: 1 comma 7. That's going to look interesting.

DR. ZIEMER: Okay, item 7.1 --

MR. GRIFFON: Yeah.

DR. ZIEMER: -- read it here, suggested category is NIOSH does not accept. This is a missed dose issue.

MR. HINNEFELD: Well, if you'd like to know the -- the specifics of the issue are that this -- for this employee -- there were a number of sites that badged people with a combination badge that would measure photons and neutrons both. And so they would generally process those badges, and this is usually a TLD, a combination TLD badge. So there would be zero neutron reading in this person's record, regardless of what their exposure potential was. You know, whether they had a potential to be exposed to neutrons or not didn't matter, there would be a zero dose in their dose record. So in this case the dose reconstructor evaluated this person's exposure history, which

was relatively well-known where they worked and determined these -- these areas there is no appreciable neutron dose potential and therefore we won't apply the neutron dose methodology to these zeroes because there was no neutron exposure potential in these jobs. And that was the -- that was the decision of the dose reconstructor. It seems to be -- you know, in our view it's fairly well supported by the quality information we had about where he worked and the information we had about the buildings and, you know, about the radiological fields in those buildings.

Now this occurs relatively -- I mean not often, but it's not uncommon to have sites that hang one of these combination badges on people because that's their dosimeter. They don't make a judgment when they hang that dosimeter on people that there's a likelihood for neutron exposure. And so that's how we treat those kinds of situations, and we do -- that's our general practice and what we think is appropriate in those cases.

The missed dose calculation is appropriate when there's a potential for exposure to that kind

of radiation. But without that potential for exposure to the radiation, you wouldn't -- we don't think it's appropriate to be adding in the missed dose numbers. So that's the specifics of the -- the finding.

DR. ZIEMER: Okay.

MR. GRIFFON: And I -- I guess this was a -- and -- and I think 3 -- you know, it might look different or bad, but it's -- I would agree that no Board action's required, so I think, you know -- I guess the point here, if -- if -- and SC&A may help me out, but the point here was that -- a procedural question, and -- and if they were strictly doing a maxim-- following their maximizing procedures, I think we -- SC&A found that they -- they didn't strictly follow them, and that might have -- go ahead.

MS. BEHLING: Excuse me. I think in this particular case it's a combination of the procedural -- maximizing the dose, and also just a judgment, a difference in judgment. When we looked at the records and we looked at the potential locations that the worker --

MR. GRIFFON: Right.

MS. BEHLING: -- may have worked, we felt there was a potential for neutron dose. So it's just a difference of opinion.

MR. GRIFFON: I think there -- I think there was general agreement that even if that had built -- been built in it wouldn't have affected the outcome on -- I don't know about that, though. This is a -- this may be the...

MS. BEHLING: Again, in this particular case, this is a maximizing dose and so even if it was a significant amount of neutron dose, on this particular case I know they assigned a hypothetical internal dose which was -- excee---- is a very high dose, and even if we incorporated the neutron dose and it went over the 50 percent, they would go back and refine this. So it has no impact on changing the compensability of the case.

DR. ZIEMER: If we agree with the 3, it does close the issue. It simply says the two have disagreed and we're not asking that anything be done.

MR. GRIFFON: Right.

DR. ZIEMER: The issue is closed. Is -- so that's --

MR. GRIFFON: Yeah.
DR. ZIEMER: Anyone objecting to a 3?
MS. MUNN: No (unintelligible) --
DR. ZIEMER: No --
MS. MUNN: -- (unintelligible) scientifics.
DR. ZIEMER: No objection. Is this the same -- let's see --
MS. MUNN: Same case.
DR. ZIEMER: -- 7.2, the same case, on on the X-ray dose.
MR. GRIFFON: I think these are -- are similar answers. Right, Kathy, on these next three? Similar reasons for -- for...
DR. ZIEMER: Is 7.2, 7.3 and 7.4 all the same issue, in essence?
MR. HINNEFELD: I think -- I think my recollection is 2 and 3 are similar issue. I mean there was a medical dose chosen that is -- was higher than what these references cited by SC&A would prescribe. I believe that was -- I believe that was the issue. Okay.
And then the 7 -- 7.4 has to do with the -- what's the appropriate target organ for a lymphoma. And SC&A did not have available to them at the time they reviewed the dose

reconstruction the medical opinion that had been rendered by ORAU's medical expert on what target organ to use for this case. So that's -- that's the origin, I believe, of 7.4.

DR. ZIEMER: Okay. Again, this one would identify that the disagreement remains, but that no action is being taken.

MR. GRIFFON: Is that true? Okay.

DR. ZIEMER: Is that agreeable?

MR. GRIFFON: The only thing I would say possibly for 7.2 -- you know, in looking at that, I don't know if -- if PROC-6 is one of the procedures under our procedures review, but we might consider taking that up under -- deferring that under number 6 -- assigning a 6 to the Board action to say deferred to the procedures review 'cause it is -- PROC-6 is the question. But I don't know if that was under a list of procedures that we reviewed -- it was.

MS. BEHLING: Yes.

MR. GRIFFON: That might be a way to make sure we don't lose track of that one. I would argue to change that to a 6.

DR. ZIEMER: The 7.2?

MR. GRIFFON: Yeah.

MS. MUNN: 'Cause that is a procedure issue.
MR. GRIFFON: It's -- it's still def-- you know, it's...
MS. MUNN: Something needs to be done with the procedure. It's the procedure, not the DR, that's at issue.
MR. GRIFFON: Right.
DR. ZIEMER: You're suggesting that 7.2 be categorized as a 6. A 6 currently talks about site profiles, not --
MR. GRIFFON: No, it --
DR. WADE: Or procedures --
DR. ZIEMER: -- or procedures, okay. Yes. Is that general agreement we'll go to a 6 then? Okay.
Then down to 8.1, this, Stu, says that NIOSH agrees with the finding and accepts. Apparently didn't change the outcome, but -- okay on that? Okay.
8.2, this is a disagreement category. Well, last column suggests there is agreement, but the categorization says that there's a disagreement.
MR. GRIFFON: 8.2?
MR. HINNEFELD: I think for consistency this

might be better called a 1. I mean we agree that -- we agree that the dose was higher than the reference cited, but since it was higher on a less-than-50- percent case --

MR. GRIFFON: I think so, yeah.

MR. HINNEFELD: -- so, you know -- am I right?

DR. ZIEMER: Okay. That will be changed to a 1 then, NIOSH agrees. I wonder if the -- well, in fact it says in the original response NIOSH agrees.

MR. GRIFFON: Right.

DR. ZIEMER: 8.3 and -- 8.3(a) and (b), defer to the Savannah River site profile. Any objection?

MR. GRIFFON: Here we go again.

DR. ZIEMER: 8.4?

MR. GRIFFON: This is the same, the 1 --

DR. ANDERSON: 1 and 7, yeah.

MR. GRIFFON: -- 1 and 7 issue, I think -- 1 comma 7.

DR. ZIEMER: 1 comma 7. There is ultimate -- yeah, both sides have sort of agreed. We'll change that one.

9.1, Stu, that one says NIOSH agrees --

MR. GRIFFON: I think this is your issue that

you won't -- you'll investigate it. If it requires a change, you'll make it, but otherwise you'll leave it. Right?

MR. HINNEFELD: That's correct, we agree to evaluate the impact of the -- of the finding.

DR. ZIEMER: Okay. 9.2.

MR. GRIFFON: Is dropped. Right?

UNIDENTIFIED: Yeah.

DR. ZIEMER: It was what?

MS. BEHLING: SC&A concedes this issue. We are in agreement.

DR. ZIEMER: So this is a 7? That's correct. 9.3, listed as a NIOSH disagrees.

MS. MUNN: Agreed (unintelligible) procedure.

DR. ZIEMER: Okay. 9.4?

DR. ROESSLER: It says it agrees and then it says --

DR. ANDERSON: No, it's not a...

DR. ROESSLER: It's not 3, is it?

DR. ANDERSON: Isn't that just a 1?

DR. ZIEMER: Well, the initial column says NIOSH agreed with the issue.

MR. GRIFFON: And as a result modified the procedure, yeah.

MS. MUNN: And modified --

DR. ZIEMER: So is the -- the correct one for 9.3 is a 1?

MR. GRIFFON: Maybe, yeah.

DR. ZIEMER: Yes.

MR. GRIFFON: It's a 1, sorry.

DR. ZIEMER: 9.4, this says NIOSH disagrees.

MR. GRIFFON: I think this was a -- a question of the imp-- application of procedures. Right, Hans? If -- previously --

DR. BEHLING: Yeah, I believe there are two options for assigning tritium doses in the absence of data. One procedure would allow you to assign 71 millirem for a given year and that's based on one microcurie per liter, and the other one would allow you five-fold times higher, 355 millirem. And it's not clear which one really applies in -- in the absence of -- of data. Because I think in some instance they did not record tritium doses that were less than five microcuries per liter for some period of time.

MR. GRIFFON: So -- so there's still a little disagree-- you know. I think it remains a 3 in this case.

DR. ZIEMER: Yeah, sounds like it remains a 3,

unless the Board decides it wants something done on it. Okay? 9.4 and -- 9.4(b), rather, and (c) are referred to the site profile, so they get deferred.

We're up to 10.1, making good progress. We're halfway through this, folks. Feels like we should be further, doesn't it?

MR. GRIFFON: Should go quicker.

DR. ZIEMER: This is a 1. Any ob-- Stu, are -- NIOSH okay with a 1 on that? You've concurred and accepted?

MR. GRIFFON: We have a group of Savannah River Sites here -- cases here together. They should go quickly.

MR. HINNEFELD: I don't dispute anything on the page. I -- I guess it's...

DR. ZIEMER: It sounds like the -- the response basically sounds to me like you disagreed with the fin--

MR. HINNEFELD: Sounds like we disagreed --

DR. ZIEMER: -- the finding was that --

MR. HINNEFELD: -- with the original finding.

DR. ZIEMER: -- they didn't -- they didn't use photofluorographic, and you said yes, because we had actual information on what was used and

that overrides --

MR. HINNEFELD: A default.

DR. ZIEMER: -- the default assumption --

MR. HINNEFELD: Yeah.

DR. ZIEMER: -- that if you don't know what was used, you --

MR. HINNEFELD: Right.

DR. ZIEMER: -- assume...

MR. HINNEFELD: That seems to be what -- how we responded.

MS. BEHLING: Actually this one should be a 7 because we did concede on this one, Mark.

DR. ZIEMER: Yes.

MR. GRIFFON: Yeah.

DR. ZIEMER: Thank you, Kathy. 10.2 and -- 10.2(a) and (b) deferred to the site profile? Okay. Any objection?

MS. MUNN: No.

DR. ZIEMER: 10.3, this says NIOSH agrees, but from the response I'm not sure that that is correct then.

MR. GRIFFON: I think they --

MS. MUNN: (Unintelligible) insignificant.

MR. GRIFFON: I think they agreed, but there's no --

DR. ZIEMER: They agreed, but it wouldn't change anything?

MR. GRIFFON: -- (unintelligible) facts, right. Agreed, but no significant effect in this case.

MR. HINNEFELD: I think we both agree it doesn't have any significant effect. I mean there's -- the information wasn't available at the time the dose reconstruction was written because it came out in the closeout interview, so the dose reconstruction was written the way it was because the information led -- you know, the -- the claimant provided information that came in the closeout interview and the determination was essentially made that it wouldn't affect the dose reconstruction, so it went as -- as it was.

DR. ZIEMER: So you agree with the finding, however, with --

MR. HINNEFELD: Sure, we agree that the information mentioned in the closeout interview wasn't described in the --

DR. ZIEMER: Right.

MR. HINNEFELD: -- dose reconstruction, you bet.

DR. ZIEMER: Okay. Up to 11(a).
MR. GRIFFON: NIOSH agrees and I have a 3, so maybe this (unintelligible).
DR. ZIEMER: This should be a 1, it appears.
MR. GRIFFON: Right.
DR. ZIEMER: Likewise in 11.1(b), which is already a 1.
MR. GRIFFON: I was just trying to keep you guys on your toes.
DR. ZIEMER: 11.2 is shown here as a 7, that SC&A accepts NIOSH response. Kathy's saying yes.
11.3 is deferred to site profile --
MR. GRIFFON: Right.
DR. ZIEMER: -- as -- that's 3(a) and 3(b). Okay, we'll keep going.
11.4 is --
DR. ANDERSON: It's a 1-7 again.
MR. GRIFFON: Right.
DR. ZIEMER: What's that?
DR. ANDERSON: It's a 1-7.
DR. ZIEMER: It's a 1-7?
MR. GRIFFON: I think so.
DR. ZIEMER: Where both sides have come together.

Then we're up to 12.1, is this one --
MR. GRIFFON: Same thing. Right?
DR. ZIEMER: -- where NIOSH agrees but it --
MR. HINNEFELD: Yeah, this issue has been identified in a couple of other cases.
DR. ZIEMER: Thank you. Item 12.2 identified as SC&A accepting. That is correct. Okay. 12.3 --
MR. GRIFFON: Yeah, I think they...
DR. ZIEMER: This is NIOSH disagrees --
MR. GRIFFON: Right.
DR. ZIEMER: -- but unless we require action, it stands. Okay.
12.4, currently identified as SC&A accepting.
MR. GRIFFON: And 12.5(a) and (b) are the same again.
DR. ZIEMER: Well, I'm waiting to hear --
MR. GRIFFON: Oh.
DR. ZIEMER: -- from Kathy or Hans on --
DR. BEHLING: Yeah, it just seems that it's strange where you have a badge that concurrently monitors gamma and neutrons concurrently from probably a common source, and one is considered chronic and one is acute, and the justification is that it's claimant-

favorable to do so. It just doesn't make scientific sense that if I'm going to be exposed concurrently to a source that both emits neutrons and gammas and it's basically registering on my dosimeter where you would classify for IREP one as being chronic and one as being acute. And it may very well be claimant-favorable and that may be a justifiable reason for doing so, but it's scientifically questionable. That's -- that's the only reason I raised the issue.

DR. ZIEMER: This is more of a 3, I think, than --

MR. GRIFFON: Right.

DR. ZIEMER: Yes, thank you.

MR. GRIFFON: And -- and under the NIOSH resolution box there, just to be complete, I should say that you would contend that it would not affect the -- Stu, can you -- can you help me with the resolution there?

MR. HINNEFELD: Well, the -- making the change suggested on either of the photon or the neutron delivery rates would lower the probability of causation number from what we arrived at the way we did it.

DR. ZIEMER: Yeah, Hans --
MR. HINNEFELD: So we would (unintelligible) --
DR. ZIEMER: -- Hans's argument is from a scientific --
MR. HINNEFELD: Right.
DR. ZIEMER: -- point of view, not --
MR. HINNEFELD: Right.
DR. ZIEMER: -- from the outcome point of view, I guess.
MR. HINNEFELD: Right.
DR. ZIEMER: Understood. So the -- you could add in the resolution that --
UNIDENTIFIED: It's claimant -- claimant-favorable.
MR. GRIFFON: Right, low-- it would actually lower the dose estimate.
DR. ZIEMER: Yeah. I mean that's -- the original response basically is -- is the response. It stands. The original response really stands. They've -- they've already said that.
MR. GRIFFON: Yeah.
DR. ZIEMER: Okay, 12.5(a) and (b) are deferred to site profile.
12.6 is indicated as a disagreement, but no --

let's see.

MR. HINNEFELD: I think we've called these a 1 comma 7 in the past.

DR. ZIEMER: 1-7?

MR. HINNEFELD: Right, that's what I -- we agree that the wording could have been better in the dose reconstruction and SC&A agrees that if we had -- you know, it wouldn't change the outcome of it.

DR. ZIEMER: Okay. Is that agreeable?

13.1(a) and (b) are both deferred to site profile.

13.2 currently indicated as NIOSH disagrees. Is this a 1-7?

DR. ANDERSON: Yeah, that's another 1-7.

DR. ZIEMER: Appears to be a 1-7.

DR. WADE: 13.2.

DR. ZIEMER: NIOSH and SEC (sic) agree that that's correct?

Up to case 16.1(a) and (b), both indicated as NIOSH accepting. The NIOSH response here says that it wasn't discussed. I -- so --

MR. GRIFFON: Yeah.

DR. ZIEMER: -- I'm not clear, I --

MR. GRIFFON: So waiting for resolution here.

Yeah.

DR. ZIEMER: Where do we actually stand on this one?

MR. HINNEFELD: I think -- I think we'll need to find some open category to put this in so that we can go look at it because I -- I don't recall right now. Is there any of these categories that means it's open for future evaluation?

DR. ZIEMER: That's category 8.

MR. HINNEFELD: I'm sorry to do that.

DR. ANDERSON: That's okay.

DR. ZIEMER: Actually it's --

MR. HINNEFELD: I just don't recall this.

DR. ZIEMER: Is this a procedural...

DR. MELIUS: I think you could modify category 6 and just use it as the general --

DR. ANDERSON: Yeah.

DR. ZIEMER: Category 6, it could be deferred to site profile, TBD, procedures or other issues.

MR. GRIFFON: Yeah. Or further investigate --

DR. ZIEMER: Or other -- or further investigation. It's a deferment, in any event.

DR. BEHLING: Dr. Ziemer, the -- the issue of

.277 and .240 is possibly an error that was introduced by the DOE records where you have yearly doses as opposed to a breakdown, and I think if you look at the yearly doses, they showed .240. If you look at the individual monthly records and tally them up, they're .277. So it's one of those issues that -- it involves an error perhaps on the DOE records themselves and the dose reconstructor chose to use one as opposed to the other and perhaps the prudent thing would have been to go to the higher dose, but you know, it's really an error on the part of the DOE records that identified both -- both values.

DR. ZIEMER: Right. In any event, it appears that NIOSH has to look at this and --

MR. GRIFFON: Yeah, I should say we -- I probably could have coordinated this better ahead of time 'cause I think these ones with blanks were actually non-issues when we had the first workgroup meeting, so they were -- they were -- it was my understanding that they were -- weren't even questions raised by NIOSH. They were kind of accepted in the original report, but -- but anyway, we'll put a 6 for --

for now. Move on. Right?

DR. ZIEMER: The 16.2 would be in the same category then, I gather. Right?

DR. ANDERSON: Yeah.

MR. GRIFFON: Three of those, yeah.

DR. ZIEMER: 16.3, currently indicated as a NIOSH disagrees, and no action would be taken. Does that still stand? It appears to be.

MR. HINNEFELD: Like a 1-7.

DR. ZIEMER: Hans?

DR. BEHLING: Yeah, this is -- this is one of those examples that I alluded to earlier in my presentation. I think it involves TIB 8 and 10, which are consistently being misinterpreted where you have a maximized dose reconstruction using either 8 or 10, and then they refer back to the implementation guide 1 and they combine two -- two mutually exclusive procedures, one using LOD over two, which is the implementation guide procedure for best estimate, versus LOD times N, and it's a repeated problem and it's a misinterpretation of -- of those two procedures.

DR. ZIEMER: Okay.

MR. GRIFFON: How about we defer that to

procedures review, number 6?

DR. ZIEMER: Yeah.

MR. HINNEFELD: Well, we can do that 'cause I think there's a -- it will come up in the procedure review anyway. I mean can do that. I was going to just offer it could be a 1 because I -- I think --

MR. GRIFFON: Oh, 1?

MR. HINNEFELD: -- I think that I agree with the SC&A position on this. Okay?

DR. ZIEMER: Okay. You agree with --

MR. HINNEFELD: I think it's probably a 1.

MR. GRIFFON: All right.

DR. ZIEMER: Okay.

MR. HINNEFELD: That what they have pointed out is correct.

DR. ZIEMER: Okay.

MR. HINNEFELD: It is in fact and we should do the -- we should proceed in the way they say we should proceed on these issues. It comes up repeatedly in the second 18 DR reviews, the same issue.

DR. ZIEMER: That -- that means that the resolution as described here needs to be altered, Mark, the narration.

MR. GRIFFON: Well, do -- do -- can you help me with that, Stu? Do you -- do you say you're -- accept the -- procedures will be modified or what -- what's -- what -- what is the resolution then? I don't think it affects the claim, does it?

MR. HINNEFELD: It doesn't affect these claims because the error consistently overestimates the dose, and these --

MR. GRIFFON: Right.

MR. HINNEFELD: -- claims had less than 50 percent POC.

MR. GRIFFON: But --

MR. HINNEFELD: The procedure is in fact hard to interpret. It -- it is -- in fact, it's downright misleading in terms of what you should appropriately be doing on this particular aspect of missed dose. So --

MR. GRIFFON: So will NIOSH modify --

MR. HINNEFELD: Yeah. So we expect to modify that procedure.

MR. GRIFFON: Which procedure is it again?

MR. HINNEFELD: 8 and 10 -- it's two of them. Right?

DR. BEHLING: Yes.

MR. HINNEFELD: TIB? O--
DR. BEHLING: (Unintelligible)
MR. HINNEFELD: Yeah, OTIB 8 and OTIB 10.
DR. ZIEMER: Okay, so I think the resolution is no change in the dose reconstruction is needed, but NIOSH will modify the procedure, and they --
MR. GRIFFON: (Unintelligible) listed the two procedures.
DR. ZIEMER: -- procedures, and this becomes a 1. Thank you.
MR. GRIFFON: Thanks.
DR. ZIEMER: 16.4 -- is this the same issue?
MS. BEHLING: Yes.
DR. BEHLING: Yeah, it is.
DR. ZIEMER: It is. Same resolution then?
DR. BEHLING: Yeah, again, there are a multiplicity of errors that associate -- are associated with those two procedures, and when you use, for instance, a maximized dose that uses LOD over two, you're dealing with the 95th percentile and therefore exempts you from the use of a -- of a -- the sigma value or -- or GSD value, and -- and they usually in combination. With those two procedures there

are three errors, the first two cancel each other out and you're left with a value that should not have an uncertainty associated with it.

DR. ZIEMER: All right. This is the same resolution then. It doesn't affect this particular -- but the procedure will be changed, so NIOSH accepts that. Yes. 16.5 is currently --

MR. GRIFFON: Is this -- is this a -- a 1 but no change necessary or is this a 3? I don't...

DR. ZIEMER: It -- it -- it looks like -- like there was an agreement that too much dose was assigned, so it doesn't change the outcome, but --

MR. GRIFFON: A 1, but no change in the outcome.

DR. BEHLING: 'Cause there's sometimes when we've reviewed the DOE records we realize the person was monitored on a quarterly basis, but the dose reconstructor chooses to give a 12-cycle -- a missed dose assignment for every year of employment, so you're basically overestimating it by a factor of four.

DR. ZIEMER: Right. Okay, 16.6 --

MR. GRIFFON: What -- what --
DR. ZIEMER: I'm sorry, am I ahead of you here?
DR. ANDERSON: (Unintelligible) a 1.
MS. MUNN: He gave him (unintelligible).
DR. ZIEMER: 16.5 became a 1, NIOSH agreed with the finding.
16.6, this says --
MS. MUNN: It's a 1-7.
DR. ZIEMER: Yeah, the response says NIOSH agreed, but the -- category 4 says they disagreed, so we need to resolve that.
MR. GRIFFON: Disagreed, however...
DR. ZIEMER: They agreed, however.
MS. MUNN: It's a 1-7.
MR. GRIFFON: Okay, yeah, it's...
DR. ZIEMER: Is this a 1 or a 1-7?
MS. MUNN: Yeah, it's a 1-7.
DR. ZIEMER: 1-7?
MR. GRIFFON: Okay.
DR. ZIEMER: 16.7, again it said NIOSH agreed with the finding. NIOSH also agreed that tables and data are available in the TBDs to select organ-specific doses which would be more accurate.
MR. GRIFFON: So it's not a 3. Right?

MS. MUNN: It's not a 3.
DR. ZIEMER: It appears not to be a 3. Is this a 1?
DR. BEHLING: Again, we find a lot of maximized doses where the dose reconstructor was overly enthusiastic and, for instance, if you have a cancer involving specific tissue that is clearly identified in -- in one of the tables for occupational medical, and let's assume the -- the organ in question turns out to be colon or rectum or something --
DR. ZIEMER: Yeah.
DR. BEHLING: -- he chooses to put the lung dose.
DR. ZIEMER: Right.
DR. BEHLING: And of course, you know, it doesn't make sense to use a different organ that is not related to the cancer of concern. And -- and for effeciency's sake, those cannot be justified as surrogate because the same table contains the very tissue that you're -- of concern.
DR. ZIEMER: Yeah.
DR. BEHLING: It's easy to say okay for a surrogate, if one of the tissues is not

involved, to maybe default to a comparable or higher one. But clearly when the table identifies the organ that involves the cancer, why not use it? And efficiency cannot be justified.

DR. ZIEMER: Yeah. This says that NIOSH agrees with the finding already.

MR. GRIFFON: Yeah.

DR. ZIEMER: Rich, do you have some additional comments on this?

DR. TOOHEY: Well, I just want to make one comment on that because it relates to the issue of assuming you've got a well-collimated beam. And if the colon could have been in the primary beam of an AP chest, I think it is appropriate, if we're doing a claimant-favorable assumption, to give the maximum lung dose.

DR. ZIEMER: Okay.

MR. GRIFFON: I knew we'd get side--

DR. BEHLING: That's the reason why we have multiple tables. There are some tables that have a specific date associated with them where the collimation was not there and -- and if you look at the tables in the medical exposure procedure, you will see different doses as a

function of time. And for earlier years, yes, the collimation wasn't there and therefore tissues that were, in subsequent years, out of the primary field are -- are -- are included and the doses are significant. But over time those -- those doses are diminished because the collimation was introduced. And so I will take exception to that. When the -- the organs are cited by time period, they take into consideration the issue of collimation.

DR. ZIEMER: Okay. Well, this says in fact that NIOSH agreed with the finding, so --

MR. HINNEFELD: Yeah, if we're on 16.7, we -- that's a 1, so --

DR. ZIEMER: That's a 1, yeah.

Okay, 16.8, this --

DR. ANDERSON: This is a 1, too.

MR. GRIFFON: Yeah, I think it's a 1.

DR. ZIEMER: It says NIOSH concedes that in this case this would have been appropriate, so --

MR. HINNEFELD: This was a -- an intentional overestimate maximizing internal exposure, and it was a matter of fact the first way we did that was to choose colon as the highest non-

metabolic, because in virtually all cases it is. Okay. And so colon was selected. This particular cancer calls for a target origin -- of lower large intestine, which is marginally higher than the colon 'cause the colon is a weighted average of the lower and upper large intestine, but it's marginally different. The intake was vastly overestimated. So it's -- it's a case where -- yeah, it doesn't matter. I don't know if there's a -- that number 8, it doesn't matter or not, but that's --

MS. MUNN: A 1-7.

MR. HINNEFELD: -- however -- 1-7?

DR. ZIEMER: Well, I think it's a 1-7, which coincidentally adds up to eight.

MR. GRIFFON: And averages 4.

DR. ZIEMER: Okay, we're getting there, folks -- 17.1. It says that NIOSH agrees but defends their method by indicating that it was a reasonable approximating method. So again, this is one where they agree with the finding, I believe. Is that correct, Stu?

MR. HINNEFELD: I -- I don't necessarily think we agreed with it. Again, it doesn't -- it doesn't matter. It was a compensable case.

DR. ZIEMER: Oh -- yeah.
MR. HINNEFELD: It was an underestimating approach to a skin dose, and so --
DR. ZIEMER: So maybe the word "agree" should be deleted, just says NIOSH defends the method by indicating...
DR. BEHLING: That -- that just -- I -- I don't disagree with Stu, but the issue here was one of a skin cancer, and when you have a shallow dose which incorporates obviously the combination of deep dose and shallow dose, what they did was subtract the shielded component of the shallow dose, which is a whole different new step and it's time consuming, and the skin dose is in fact the shallow dose, so why wouldn't you have assigned it. So for -- from a proficiency point of view, going through that extra step of subtracting each of -- each cycle the shielded component from the open window is -- is obviously going to minimize the dose, but it's an extra step that certainly wasn't warranted from the viewpoint of efficiency.
DR. ZIEMER: Okay.
MR. GRIFFON: I think it might be a 3, I don't know. I mean --

DR. ZIEMER: Well, it's currently --
MR. GRIFFON: -- (unintelligible) --
DR. ZIEMER: -- currently listed as a 3.
MR. GRIFFON: Right.
DR. ZIEMER: And I'm going to suggest, for clarity, that NIOSH responds be changed slightly to read "NIOSH defends the method" --
DR. ANDERSON: Yeah.
DR. ZIEMER: -- "by indicating"... So -- Okay, 17.1 also is -- this is one where there is also disagreement.
MR. GRIFFON: Stays as a 3?
DR. ANDERSON: Yeah.
MR. HINNEFELD: I think we should leave it as a 3. Again, this was an underesti-- an underestimating dose we don't necessarily apply uncertainty because we say it is at least that high, so we don't include uncertainty value on --
DR. ZIEMER: Right.
MR. HINNEFELD: -- on an uncertain...
DR. ZIEMER: Okay. 18.1, this says SC&A agreed.
MS. BEHLING: Yes.
DR. ZIEMER: Yes. This is a 7. Okay. 18.2 is

similar, SC&A agreed, no revision?

MS. BEHLING: We agree.

DR. ZIEMER: Yes. Okay. 19.1 and 19.2 both NIOSH agreed with the findings.

MR. GRIFFON: I might ask Stu to -- to look at these.

DR. ZIEMER: Has this been res...

MR. GRIFFON: (Unintelligible) case.

MR. HINNEFELD: Okay, these are the TIB-8 and 10 issues, apparently.

MR. GRIFFON: TIB-8 and 10 for both of those?

MR. HINNEFELD: Is it -- yeah, it's 19.1 and 19.2, I'm sure. Is it -- is it 3(a) and (b), as well? All the way through to the bottom of the page.

DR. ANDERSON: It's all 1s.

MR. HINNEFELD: Right? We -- we think that everything -- 19.1 through 19.3(b) -- are the TIB-8 and TIB-10 issue. That's what we -- is that...

DR. ZIEMER: Are what?

MR. HINNEFELD: The -- the issue with TIB-8 and TIB-10 that I tal-- we talked about earlier that was mis-- that is misleading. I use the word misleading --

MR. GRIFFON: And NIOSH agrees to modify --
MR. HINNEFELD: Yeah, uh-huh.
MR. GRIFFON: -- TIB-8 and --
MR. HINNEFELD: Yeah.
MR. GRIFFON: -- TIB-10. Right?
MR. HINNEFELD: I believe all of these fall into that, if I'm not mistaken.
DR. ZIEMER: So 19.1, 19.2, 19.3(a) and (b), 19--
MR. GRIFFON: And 3(a) should be changed from a 3 to a 1, also. Right.
DR. ZIEMER: Yes, 3(a) should be a 1. And --
MS. MUNN: TIB-8 and 10 -- TIB-10 modifications will resolve it.
DR. ZIEMER: Did it go beyond 19.3? Just -- is it through 19.3 that we're talking about there, Stu?
DR. ANDERSON: Yeah.
MR. GRIFFON: Yeah. (Unintelligible) close.
MR. HINNEFELD: Certainly through 3(a), we're trying to decide 3(b) right now. We can't remember for sure. I think it's along that line, though, of an issue we've already addressed in one of the others.
DR. ZIEMER: Can we move on ahead or -- yeah.

MR. GRIFFON: Yeah.
DR. ZIEMER: 19.4 is currently listed as NIOSH disagrees, although the initial response says NIOSH agrees. I -- this is a 1, I guess, is it?
MR. GRIFFON: I guess the reason I started putting these 3s and 4s is 'cause they agreed, but defended. Or agreed, but pointed out. So there was howevers in them so I was (unintelligible).
DR. ZIEMER: I think we can interpret that as they're not going to change that particular dose reconstruction, but they agree with the finding. Is that not correct?
MR. HINNEFELD: Right, I think the difference probably between a 1 and a 3 would be that a 3 would say boy, we should do that different in the future.
DR. ZIEMER: Yeah.
MR. HINNEFELD: On a case like this where we say this is an overestimate, it's not a compensable case, we won't necessarily do that different in the future. Okay. This would be -- you know, I -- I -- you know, there's that qualitative difference. You know, there's --

in some cases we'll say yes, we'll do something different in the future. I guess that'd be a 1. And then in a case where we say yeah, we agree that this is an overestimate, but an overestimate on a -- on a non-- on a less-than-50-percent case we do routinely and we don't necessarily intend to go change that overtly.

MR. GRIFFON: That would be a 3 then.

MR. HINNEFELD: If that's -- that would be a 3 probably.

DR. ZIEMER: Okay, 19.5, cur-- it says SC&A accepts.

DR. ANDERSON: It's a 1.

DR. ZIEMER: Yes, okay. 19 -- or 20, now we're up to the last case.

MR. GRIFFON: Wait, so 19.4 should be a 1 or 3?

DR. ZIEMER: 1.

MS. MUNN: A 1.

MR. GRIFFON: A 1.

MR. HINNEFELD: Based on what I just said, I think it would be a 3 because we agree that the dose was an overestimate, but we wouldn't intend to behave differently if we got -- you know, today, necessarily.

DR. ZIEMER: Okay, so it's a 3. 19.5 is a 7.

20.1, this is currently listed as a 3, NIOSH disagrees and they would not change unless the Board mandated.

MR. HINNEFELD: Number 20.1 is the -- is the TIB-8 and 10 issue. I believe that's probably a 1. Okay, so 20.1, 20.2 and 20.3 are all in that category.

DR. ZIEMER: Where you agree with the finding.

MR. HINNEFELD: We agree that the procedure should be changed -- well, the procedure really needs to be changed so it's clear.

MR. GRIFFON: So it's 6 or 7?

MR. HINNEFELD: We agree, it's a 1. We agree.

DR. ZIEMER: Okay, so 20.1 through 4s are all --

MR. GRIFFON: Through 3.

DR. ZIEMER: Through 3?

MS. MUNN: Through 3.

DR. ZIEMER: Through 3 are all 1s.

MR. GRIFFON: And they're -- and they're the OTIB-8 and 10 modification?

DR. ANDERSON: Yeah.

MR. GRIFFON: Is that the resolution? Yeah, okay.

MR. HINNEFELD: Yes, it is.

MR. GRIFFON: Sorry.
MR. HINNEFELD: And 20.4 would be a 3 because, again, it's an overestimate. We agree it's an overestimate. We don't necessarily agree that we should do it differently.
DR. ZIEMER: Okay. 20.5 is listed as a 7, that SC&A concurs or accepts NIOSH's response. And then a few final things.
MR. GRIFFON: Can we go -- Paul, can I ask you just to go back --
DR. ZIEMER: Yes.
MR. GRIFFON: 20.1, 2 and 3 turn into 1s then -- right? -- 'cause they're agreeing to modify -- just a minute.
DR. ANDERSON: Yes.
MR. GRIFFON: I fell behind a little here.
DR. ZIEMER: All right.
MR. GRIFFON: And can I just go back to 19.4, just for my own clarification, in the NIOSH response I'd suggest to change it maybe NIOSH disagrees, pointing out that it was an overestimate? I'm just a little worried about having a ranking of 3 where we say the ranking of 3 means that NIOSH disagrees and then the first sentence in here is NIOSH agrees. I mean

I think we -- we understand the explanation that you -- it's an overestimate so you don't have to change anything, and you're not going to change anything in the future. I just want -- the -- the language in the response to look consistent with our ranking system, you know.

DR. ZIEMER: I would suggest we word it as NIOSH defends this method --

MR. GRIFFON: Oh, okay.

DR. ZIEMER: -- of overestimating dose.

MR. GRIFFON: That's better.

DR. ANDERSON: Yeah.

DR. ZIEMER: Then we have some final items. The -- the next one here covers all cases and it has to do with the report itself, and this says NIOSH agrees with the comments on changing the format of the report. Is that correct, Stu?

MR. HINNEFELD: Yes. Yes, we don't dispute that finding.

MR. GRIFFON: Can I just back up for one second -- 20.4 remained a 3. Right?

MS. MUNN: Correct.

MR. HINNEFELD: Yeah.

DR. ANDERSON: You use the same --

MR. GRIFFON: Same language in the response.
DR. ANDERSON: -- same language as 19.4.
MR. GRIFFON: Right.
DR. ZIEMER: Okay?
MR. GRIFFON: Okay.
DR. ZIEMER: Stu, did you have a comment on the dose -- on the report that --
MR. HINNEFELD: Actually I was reading the final three, and I think they're appropriately characterized and that our resolution is presented appropriately, as well.
DR. ZIEMER: As 1s?
MR. HINNEFELD: Well --
MS. MUNN: 3.
MR. HINNEFELD: -- one is a 1 -- two of them are 1s and then next to last one is a 3.
DR. ZIEMER: Oh, the second -- the second -- the one called "several"?
MR. HINNEFELD: Well, I would con-- I'm sorry, I'm -- I would characterize the last one as a 3. The one that says -- where the finding number is "all," third one from the end --
DR. ZIEMER: Yes.
MR. HINNEFELD: -- that I believe is characterized as a -- well, a 1 I believe is --

DR. ZIEMER: Correctly?
MR. HINNEFELD: -- correct on that. Yes.
DR. ZIEMER: Yes, you agree. Okay.
MR. HINNEFELD: The second one is them questioning the application of conservative or overestimating when -- when more specific information is available. You know, we understand that approach, but we tend -- you know, we don't necessarily feel like we're going to stop doing overestimates on -- on less-that-50-percent cases.
MR. GRIFFON: Right.
MR. HINNEFELD: And then on the final one --
DR. ZIEMER: So that would be a 3 on the second one.
MR. HINNEFELD: Second to last one, right.
DR. ZIEMER: So it shouldn't say NIOSH accepts.
MR. HINNEFELD: No, it doesn't accept -- we don't accept the comment. What that means to say is we accept and approve dose reconstructions that are overestimates for non- - for non-compensable claims, meaning we accept them from the contractor. Okay. So that's what's implied there. We don't -- it's not that we accept the comment. We accept them

from the contractor, overestimating dose reconstruction.

DR. ZIEMER: Oh, okay.

MR. HINNEFELD: That's what -- that's what that means there.

DR. ZIEMER: I -- I think we need a different word there. It sounds like you're accepting the finding.

MR. HINNEFELD: Okay.

DR. ANDERSON: No, that's agreed.

MS. MUNN: Or NIOSH defends reconstructions.

DR. ZIEMER: Well, I think we can word that, Mark, so it expresses what Stu said. You're -- you're --

MR. GRIFFON: Well, I think the --

DR. ZIEMER: This sounds like they're accepting the finding.

MR. GRIFFON: I think what -- what the resolution is, you're saying no action required, and then in the next sentence, NIOSH accepts and approves DRs that are overestimates. Right? You're saying NIOSH --

MR. HINNEFELD: It's a matter of practice. It's just a matter of practice --

MR. GRIFFON: Right, no --

MR. HINNEFELD: -- that we will perform --
MR. GRIFFON: NIOSH says no action required --
MR. HINNEFELD: -- or approve --
MR. GRIFFON: -- and then the next sentence explains why, 'cause they're saying that they -- - that you accept and approve -- right?
MR. HINNEFELD: Well, or we -- or we --
MS. MUNN: You can say --
MR. HINNEFELD: -- prepare --
MS. MUNN: -- NIOSH defends and continues to approve --
DR. ZIEMER: Well, I don't think they have to say accepts. They can just say they approve dose reconstructions that are overestimates.
MR. HINNEFELD: Right.
DR. ZIEMER: I just want to get the word "accepts" out of there so it doesn't sound like you're accepting the finding --
MR. HINNEFELD: Okay.
DR. ZIEMER: -- 'cause you aren't.
MR. HINNEFELD: All right.
DR. ZIEMER: And then, Stu, the last one on that page, did you say that that -- you agreed with that finding?
MR. HINNEFELD: Well, certainly we understand

that the use of an efficiency method and an intentional overestimate on a case that may subsequently be returned when information -- additional information is provided by Department of Labor which may require more detailed rework of that dose reconstruction, that can lead to confusion and we understand that. But we still feel that the importance of getting the dose reconstructions done in a timely fashion is such that we intend to continue to behave in this fashion.

MR. GRIFFON: So it's a 3.

MR. HINNEFELD: Yes.

DR. ZIEMER: And then the final one on the very last page, again it's a general one, procedures complicated and seemed as though the individual dose reconstructors had difficulty applying the procedures. Is this --

MR. HINNEFELD: That's a 1.

DR. ZIEMER: -- a 1.

MR. HINNEFELD: That's a 1.

DR. ZIEMER: Oh, you understand -- okay.

MR. GRIFFON: The resolution, though, is worded the same as the one before it. Should -- should we modify that in any way?

DR. ZIEMER: I think, Stu, you indicated there's already some efforts to modify some of those procedures.

MR. GRIFFON: Right.

DR. ZIEMER: NIOSH intends to modify procedures as appropriate.

Now I'd like -- I'd like to ask for a motion to accept this summary finding as -- as the Board's findings for the first 20 cases.

MR. GRIFFON: Can I -- can I just ask -- I don't want to just let that last one go. I mean can we be more -- I think that's pretty -- pretty broad. We've identified OTIB-8 and 10.

MR. HINNEFELD: Well, do you want to make it a -- you could make it a 6. I mean there's a whole procedure review effort under way --

MR. GRIFFON: We could make it a 6, yeah.

MR. HINNEFELD: -- and you could address it through that.

MR. GRIFFON: Okay, we -- so we can say that, and then -- and then maybe defer it to 6 --

MR. HINNEFELD: Yeah.

MR. GRIFFON: -- where you'll consider further --

DR. ZIEMER: It could be a 1-6, even.

MR. HINNEFELD: Sure.
MR. GRIFFON: Yeah, okay. Right.
DR. ZIEMER: A 1-6, meaning it remains open to the procedures review.
MR. GRIFFON: Okay, that's -- thanks.
DR. ZIEMER: Now I'd like to call for a motion to accept the summary of findings matrix as modified, together with -- well, let's -- let's just do this. There actually is a preamble that goes with this, Mark.
MR. GRIFFON: Right.
DR. ZIEMER: And I don't know if the folks have that today, but we might be able to get that out this afternoon. Let's accept this document as --
MR. GRIFFON: I think we've actually accepted the other one, but I -- I think we also --
DR. ZIEMER: Yeah, we'll -- we'll check on that.
MR. GRIFFON: -- we have to change some numbers in there and --
DR. ZIEMER: A motion to accept the summary of findings matrix --
MS. MUNN: So moved.
DR. ZIEMER: -- as -- as -- as part of the

Board's report on the first sum-- first 20 cases. So moved, and seconded?

DR. ROESSLER: Second.

DR. ZIEMER: Okay. Any discussion?

DR. MELIUS: Could Mark read that back for us so...

DR. ZIEMER: The Chair declares that request out of order.

DR. ANDERSON: Table it.

DR. ZIEMER: All in favor of the motion, say aye.

(Affirmative responses)

Those opposed, no?

(No responses)

Any abstentions?

(No responses)

The motion carries. I didn't ask if -- if Mike was on the line today. Mike is not able to be with us today, okay. Thank you very much. Roy?

DR. DEHART: Just one question, and that deals with any generic findings that have come up that might improve a -- a claimant's favorability. Do you know whether that has in fact occurred? I couldn't keep track of the --

MR. HINNEFELD: On any of these 20 cases?
DR. DEHART: Yes.
MR. HINNEFELD: No, we've evaluated them all and I don't -- there won't be a change in the --
DR. DEHART: My point --
MR. HINNEFELD: -- decision.
DR. DEHART: -- would have been, had they been, are we going back and look at --
MR. HINNEFELD: Oh, certainly. If we identify at any time, through this process or any other process, that kind of a -- a mistake, we would go back and reopen that and revisit that.
DR. DEHART: Thank you.
MR. HINNEFELD: Sure.
DR. ZIEMER: I think we need to break for lunch.
MS. MUNN: I think so.
DR. ZIEMER: We need a break, in any event, and if we're -- if we're going to take a break, we'd better grab some lunch and we'll proceed with -- with the report on the second 18 cases right after lunch.
MR. GRIFFON: The only thing I would ask, Paul, is -- is -- it would be nice to close this

whole thing out. We have -- we have voted and accepted the letter, I believe the front end. There's only -- there's only a few edits and I've been working on them today --

DR. ZIEMER: Yeah, if we can get a confirmation, we'll check our minutes, make sure it's been approved --

MR. GRIFFON: Okay, I think it'd be good to --

DR. WADE: Or if you have the modified letter, we can print it out and give it to people or have it when they come back.

DR. ZIEMER: Okay, we'll do that.

DR. WADE: I just need to be sure that -- is everyone who's sitting around the table intending to be here through the full afternoon? I want to make sure we have a quo--

DR. ZIEMER: No, some have to leave -- Presley had to leave.

DR. ROESSLER: I have to leave about 3:30.

DR. ANDERSON: I have to leave about 2:00.

DR. ZIEMER: I think Leon at 2:00.

MR. OWENS: Dr. Ziemer, I can leave at 3:30.

DR. ZIEMER: 3:30.

DR. WADE: 3:30.

DR. ZIEMER: Okay, we're --

DR. WADE: How many at 2:00?

DR. ZIEMER: We're good for a little bit.

DR. WADE: Five until 3:30, we'll --

DR. ZIEMER: Try to get back as soon after 1:00 as you can. Let's try to get rolling. Thank you.

(Whereupon, a recess was taken from 12:00 p.m. to 1:20 p.m.)

BOARD DISCUSSION

DR. ZIEMER: We do have Mike Gibson with us by phone, also, this afternoon. And Mike, we are going to try to modify the agenda somewhat so that we address issues that -- particularly that require votes by -- by the Board. One of those is a continuation of business that we conducted just prior to lunch, and that business was the -- the Board's summary of the first 20 dose reconstruction cases. We had gone through the matrix that had been developed, primarily by Mark Griffith, and -- Griffon, and taking the findings of SC&A, the NIOSH responses and finally addressing how the Board would close out each of those items. We have completed that.

I want to make sure that Mike gets copied on

this latest version of the matrix. Can we be sure that Mike gets that?

DR. WADE: We'll make sure of that.

DR. ZIEMER: And -- and the other part of this action is the -- the narration, which is basically a narration to the Secretary of Health and Human Services. It would constitute our first report on dose reconstruction findings to the Secretary, and this you've seen in several versions at earlier meetings. It's been modified over time, and we've distributed the current version which includes all the updates to date to this memo to the Secretary. The memo, as we have it currently, is a four-page memo. It includes the -- an introductory two paragraphs discussing the review process. It has several paragraphs talking about the findings and referring to the matrix.

MR. GIBSON: (Via telephone) Uh-huh.

DR. ZIEMER: It identifies several specific items that we're calling attention to, one being concerns about the dose reconstruction final report, and that's reports I believe that go to the claimants, as I recall, asking for some improvement in those reports so that

they're more sort of user-friendly. There's some comments about internal quality control, procedural issues, and then concerns about the telephone interviews, validation and verification procedures and consistency of cases and concerns relating to the efficiency approach.

I think -- Mike, particularly -- you should have at least a version of this that came before the Board at the last meeting, the April meeting. There was a version of this.

MR. GIBSON: Correct, yes.

DR. ZIEMER: The changes I think are very minor -- if indeed there were any. Mark, can you tell us if there were any substantive changes since we last saw this?

MR. GRIFFON: The on-- the only changes I made were just this morning while we're all sitting here, and I just totaled again the case rankings and the site/program-wide rankings and reflected that and --

DR. ZIEMER: Just updated from --

MR. GRIFFON: -- updated those numbers so the numbers were --

DR. ZIEMER: Right.

MR. GRIFFON: -- consistent with what we had --
DR. ZIEMER: With what we had just done.
MR. GRIFFON: Right.
DR. ZIEMER: Otherwise, the -- the narration remains the same.
MR. GRIFFON: Yeah. The only other -- the only other slight difference was in -- in several of the examples, like -- like for -- for example, in number two on page 3 I give example -- examples where this -- this particular thing, internal quality control, was an issue. And before I had -- have -- I wanted to reference the individual finding. I just settled on referencing the case number.
DR. ZIEMER: Yes.
MR. GIBSON: Okay.
MR. GRIFFON: But I (unintelligible) --
DR. ZIEMER: Otherwise it remains substantially as it was before, but it has been modified very slightly and I think to handle this the Chair would entertain a motion to approve this document, and it would be accompanied by the matrix, as our report to -- to the Secretary.
MR. GIBSON: Okay.
DR. ZIEMER: Okay? Yes, Dr. Melius.

DR. MELIUS: I so move.
DR. ZIEMER: Okay. Dr. Melius has made a motion that we accept this report --
DR. DEHART: Second.
DR. ZIEMER: -- and seconded by Roy DeHart. Now it's open for discussion. Questions, amendments?
MR. GRIFFON: There are a few slight changes, and I think Stu has already -- I forget if you provided this to me or not, but there's a table that we reference in here summarizing the cases and -- and the -- the POC, the site -- remember, the --
DR. ZIEMER: Yes, there was a table that was to accompany this.
MR. GRIFFON: To -- yeah.
MR. HINNEFELD: That -- yeah, that table essentially reproduced the table you saw at selection time.
MS. MUNN: Uh-huh.
MR. HINNEFELD: Case number, site number, POC result, employment decade, things like that.
MR. GRIFFON: I've yet -- I've yet to insert that, so I don't know if I got it electronically or -- or you may -- you may --

MR. HINNEFELD: I believe I did send it to you electronically.

MR. GRIFFON: Okay.

DR. ZIEMER: We'll double-check and make sure we have it, but it's understood --

MR. HINNEFELD: Oh, yeah.

DR. ZIEMER: -- that that would be part of this report.

MR. GRIFFON: That would be part of it.

DR. ZIEMER: And in approving this we're indicating inclusion of that particular table.

MR. GRIFFON: And then just -- just to finalize this thing, I think there's -- on the first page there's a few Xs that you'll see as place-holders where I didn't -- I just didn't know -- the first one comes in the second paragraph there where it says at the time of the case selection for this initial audit, only XXX cases had been... And I just wanted to -- we need --

DR. ZIEMER: We have to go back and get the exact number.

MR. GRIFFON: Or -- or even -- we can even put appro-- only approx-- or approximately so many cases were available. I'm -- I mean -- we need

a number there, one way or the other.
DR. ZIEMER: And actually --
MR. GRIFFON: Can we get that number, is the question.
DR. ZIEMER: We -- and we actually need the date for that. You referred to August XX, 2004 in the -- in the -- is that the second or third paragraph?
MR. GRIFFON: Right.
DR. ZIEMER: So we need the date that corresponds to that, as well.
Larry?
MR. ELLIOTT: We'll certainly get that for you, the date and the -- the --
MR. GRIFFON: Right, the date and the number --
MR. ELLIOTT: -- approximate number.
MR. GRIFFON: Right.
MR. ELLIOTT: I don't know --
MR. GRIFFON: That -- that's fine, that's --
MR. ELLIOTT: It'll be in the 1,000, probably -- ball park.
DR. ZIEMER: Okay.
MR. GRIFFON: That's it.
DR. ZIEMER: Okay. Wanda?
MS. MUNN: It's only a clerical thing, but I'm

wondering, since I was sort of sensitized this morning to how important the order of things can be when you're making sense of something trying to read it, in the second paragraph, as I was reading through it and getting past the -- getting down to the set of Xs there, I was stopped when I saw the word "unrepresentative". The following sentences clarify what that means, but having that particular word in that spot seems to cause the reader to stop and try to identify what does unrepresentative mean.

DR. ZIEMER: What sentence are you in on this second paragraph?

MS. MUNN: The second paragraph, third line.

MR. GRIFFON: Yeah, I agree.

MS. MUNN: The 20 cases covered in this report were selected from an unrepresentative pool, and one thinks why is it unrepresentative and why did they choose those. And as I said, the following sentences clarify that, but --

MR. GRIFFON: Can we flip them?

MS. MUNN: Yeah, could -- could you put the word somewhere else, is really what I'm asking.

DR. ZIEMER: Is it important that we have that word in there at this time? I think -- I think

the -- the impli-- or the intent was to -- was related to the fact that those early cases adjudicated early don't really represent a cross-section of the kinds of cases. This is the -- the low -- low-hanging fruit cases. Right?

MS. MUNN: Yes.

DR. ZIEMER: Is that -- that was the issue.

MS. MUNN: And that's what we say -- that's what we say in the next few sentences.

DR. ZIEMER: So I'm -- I'm wondering --

MS. MUNN: I'm just questioning --

DR. ZIEMER: -- if -- if we can just say selected from a pool of those cases available for audit.

DR. MELIUS: Or the pool --

MR. GRIFFON: Yeah.

DR. MELIUS: -- really is --

MR. GRIFFON: That's fine.

DR. MELIUS: -- it's not like there's more than one pool. There was the pool.

DR. ZIEMER: From -- is that -- would that be agreeable and --

DR. MELIUS: Yeah.

DR. ZIEMER: -- to the mover and the seconder,

a friendly amendment, so it's selected from the pool of cases which had been adjudicated. And then it goes on to describe that anyway, so -- okay. Thank you, Wanda.

Other comments?

MR. GRIFFON: Can --

DR. ZIEMER: Mark?

MR. GRIFFON: Can -- I just want to ask one -- one process question. Can I, at this point, turn this document over electronically and let you guys insert that table and do the final -- not that I'm sick -- I've got like Rev. 8 on it, you know -- revision eight on my computer, so...

DR. ZIEMER: If they can do that and then I -- they need to get it to me so I can prepare the letter to the Secretary, but would that work, Larry or Stu, if he gave you a copy and you just inserted the numbers and sent them on to me? Okay. Thank you.

Okay, any other comments or questions?

(No responses)

Are you ready to vote then? Mike, do you have any questions?

MR. GIBSON: No.

DR. ZIEMER: Okay. Thank you.
MR. GRIFFON: Just one -- one --
DR. ZIEMER: Another comment from --
MR. GRIFFON: -- one final --
DR. ZIEMER: -- Mark.
MR. GRIFFON: -- thing. Are we -- we're voting on the -- the letter at this point or --
DR. ZIEMER: Right, with the understanding that that letter, together with the table that NIOSH will supply and the matrix --
MR. GRIFFON: And --
DR. ZIEMER: -- will become --
MR. GRIFFON: -- and --
DR. ZIEMER: -- the re--
MR. GRIFFON: -- and also SC&A's matrix and -- and --
DR. ZIEMER: The items --
MR. GRIFFON: -- the methodology --
DR. ZIEMER: -- that we've referred to here --
MR. GRIFFON: All the attachments.
DR. ZIEMER: -- all the attachments --
MR. GRIFFON: Yeah, which we've --
DR. ZIEMER: -- referred to in the document --
MR. GRIFFON: -- gone through.
DR. ZIEMER: -- become -- become the report to

the Secretary. Understood, for the movers? Yes.

Okay, all in favor, aye?

(Affirmative responses)

Any opposed?

(No responses)

Any abstentions?

(No responses)

The motion carries. Thank you very much. It is so ordered.

MR. GRIFFON: It's good to complete something.

DR. ZIEMER: And especially thank Mark for his work, both on the main document and the matrix, as well. It's very helpful to the Board and that's been ongoing and laborious effort, actually.

DR. MELIUS: Yes, and -- and just to clarify or follow up, we just make sure that when it is transmitted to the Secretary that we all receive the --

DR. ZIEMER: Oh, yes.

DR. MELIUS: -- final copy so we have --

DR. ZIEMER: Yes, right.

DR. MELIUS: And Mark can erase his hard disk, all eight versions or whatever.

MR. GRIFFON: And I'll send -- Paul, do you want me to forward electronically the matrix, the methodology -- that's slightly revised 'cause I've got a number 7 item on there.

DR. ZIEMER: Yes.

MR. GRIFFON: Along with the letter.

DR. ZIEMER: Right, thank you.

MR. GRIFFON: To -- to you or to --

DR. ZIEMER: Just send that part to me, that's fine.

MR. GRIFFON: Okay.

DR. ZIEMER: In the interest of addressing issues that need votes, and while we have Mike Gibson on the line, I would like to have us address a recommendation from the subcommittee pertaining to issues and tasks that have been identified with relation to the Mallinckrodt site profile and the Mallinckrodt petition. The subcommittee is recommending to the full Board, and actually most of you were present, but the adoption of a document which is entitled "Priority Issues for Demonstrating Feasibility of Dose Reconstruction for MCW Destrehan Street Workers for the Time Period 1949 to 1957, List of Tasks". Again, are we

able to get Mike a copy of this list of tasks?
DR. WADE: You want me to do it immediately or --
DR. ZIEMER: Mike, do you have quick access to your e-mail if this is e-mailed to you?
MR. GIBSON: Yes. Yes, I do.
DR. ZIEMER: Do we have an electronic version we can send, or does it have to be FAXed?
DR. WADE: I would like -- Mark, do you have an electronic version?
MR. GRIFFON: Of -- of Mallinckrodt, yeah.
DR. ZIEMER: If -- if there is an electronic version -- yes, we have it on a flash strip or --
DR. WADE: We'll do it on --
DR. ZIEMER: -- memory strip and -- Mike, we're going to try to get that to you shortly.
MR. GIBSON: Okay, I'll be watching for it here.
DR. ZIEMER: Now Board members, if you have your copy, I want to identify for you the modifications recommended by the subcommittee in the printed copy. I know many of you already have these from the session this morning, and so the recommendation from the

subcommittee will be this document, as amended. And the first -- the first part of the document includes a timetable as to -- it's really a milestone type of thing as to when certain things will be completed or accomplished or take place, and there are specific dates that we want to make sure that we're all in agreement on those dates.

The first of these, and I -- I'm simply going to identify the recommended changes. We will act on the document as a whole in a moment. And it's the first bulletin -- bulletin -- first bullet after the first paragraph, work group conference call for status report and task clarification by July 26, so you should change the number that is on the original number to 26.

MR. GRIFFON: Paul, did we get printouts of -- I -- I revised this, and I thought they printed it off --

DR. ZIEMER: Oh, is there a revised --

MR. GRIFFON: -- for me and I don't think I handed it around, though.

DR. ZIEMER: Maybe they're already --

MR. GRIFFON: I made all those changes. I

don't know if it got printed off, though.

DR. ZIEMER: I don't think I've seen it, and -- and I think these changes are --

MR. GRIFFON: Fairly --

DR. ZIEMER: -- minor enough I think we can catch them by handwriting, if it's not already out.

The next date is in the second bullet where NIOSH completes the following tasks in consultation with SCA by August 7. And the third bullet, those dates remain unchange, workgroup meeting between July 31st and August 7th.

Fourth bullet remains unchanged, SCA to review NIOSH response by August 16. And the last bullet, workgroup conference call between August 16th and August 22nd, remain the same.

But in relation to all of that and not on -- as part of the document, I would like to insert here for information the fact that there's a likelihood now that the Board meeting will be rescheduled or delayed by a couple of days to August 25 and 6 perhaps, instead of 3 and 4?

DR. WADE: That's what I believe. Let me just double-check.

DR. ZIEMER: Double-check that. And Mike, I don't know if you had those dates down, in any event, but we had talked yesterday about scheduling the next meeting for August 23rd and 4th. We're looking for a little breathing space there and now looking at 25th and 6th, and I believe Cori just checked with you on those dates a moment ago.

MR. GIBSON: Yes, she did.

DR. ZIEMER: Thank you.

DR. ROESSLER: If -- if we change that, you'll have to change, I would assume, the first paragraph. There's a date there. We had August 23rd. We'd go to August 25th then, I would guess.

DR. ZIEMER: That's correct.

MR. GRIFFON: That's fine.

DR. ZIEMER: That's correct.

MR. GRIFFON: Yeah.

DR. ZIEMER: Thank you. So that -- that's where that change would show up --

MR. GRIFFON: Right.

DR. ZIEMER: -- in this document. Thank you, Gen.

DR. WADE: They said they could.

DR. ZIEMER: Okay.
MS. MUNN: And also, did I misunderstand? On the third bullet, I thought we had sort of tentatively chosen August 8th rather than August 7th.
DR. ZIEMER: I think the 7th was the one that turned out to be a Sunday?
MS. MUNN: Yes.
DR. ZIEMER: I think there's no harm in changing that to the 8th. Mark, did you have any objection to that?
MR. GRIFFON: On the third bullet it was between -- what does it read, between July 31st and August 7th? I mean it --
MS. MUNN: Yeah, but we had talked about the possibility of making it August 8th, but...
MR. GRIFFON: That's fine, I don't (unintelligible) --
DR. ZIEMER: One -- one day is okay --
MR. GRIFFON: -- it's between, it's -- yeah.
DR. ZIEMER: Then on the list of tasks, under task one, handling of raffinate exposures, under item (d), after the words "estimating intake when," insert the words "any combination of urine, air sampling and breath radon data" -

- "any combination" are the words -- "any combination of," those words should be inserted.

In item two, item -- subheading (b), item 2(b), NIOSH must specify their approach -- wait a minute, let me see. There's something missing here on my -- their approach to --

DR. ROESSLER: Handling.

MR. PRESLEY: For handling.

DR. ROESSLER: For handling.

DR. ZIEMER: Approach for handling --

MR. GRIFFON: Approach for handling, yeah.

DR. ZIEMER: -- for handling job-related radon ex-- job-specific radon values.

Item (c) would read NIOSH/SCA must further discuss and, if possible, resolve -- add the words "further discuss and, if possible,".

DR. ROESSLER: Professor Ziemer?

DR. ZIEMER: Yes.

DR. ROESSLER: NIOSH should be its, rather than their.

DR. ZIEMER: Which item is this, by the way?

MR. GRIFFON: I just -- I actually put it NIOSH must specify approach for handling --

DR. ROESSLER: That gets away from it.

MR. GRIFFON: -- instead of its or their.
DR. ROESSLER: Yeah.
DR. ZIEMER: Well --
MR. GRIFFON: It's --
DR. ZIEMER: -- it is an entity. It's also kind of a collective noun, isn't --
DR. ROESSLER: It's not a dangling participle.
DR. ZIEMER: It's not a dangling participle, that we know. Even though it collects low-hanging fruit.
Okay, item three, 3(a), NIOSH must specify the approached used to determine, insert "the approach used to determine".
In item four, line two, this is 4(a), line two, delete the word "bounding," so it reads "what the approach to estimating cumulative intake will be".
Item five, specification of dose reconstruction methodology -- no, that's not the problem.
MR. GRIFFON: Scientifically (unintelligible) --
DR. ZIEMER: That's the next line, 5(a), NIOSH needs to outline scientifically defensible, add "l-y" (sic) to the word "scientific". And then in the next line after "unmonitored," add the

word "workers," just ahead of the parentheses sign.

Item six, instead of "detailed dose reconstructions" it will now read "example" or "sample" -- "example"?

MR. GRIFFON: Example.

DR. ZIEMER: -- "example" dose reconstructions -- I think DRs -- D-R-s, dose reconstructions --

MR. GRIFFON: I just spelled out dose reconstructions instead, yeah.

DR. ZIEMER: Yeah, dose reconstructions. Item (a), "Example" internal dose reconstruction. Item (b), "Example" internal dose reconstruction -- I'm sorry, item (a), at the end of the sentence delete the words "for all organs associated with the 22 SEC listed cancers" and replace it with the word "for selected metabolic and non-metabolic organs".

MR. GRIFFON: Right.

DR. ZIEMER: Likewise in (b), "Example" internal dose reconstruction, and then delete the last phrase "for all organs" and replace it with "for selected metabolic and non-metabolic organs".

Item (c) is deleted.
Item (d) becomes item (c) and is "Example" internal dose "intake estimates for selected organs for Plant 7". In other words, deleting the word "reconstruction" in this case, so as to read "Example internal dose intake estimates for selected organs for Plant 7", and then delete the phrase that follows the parentheses relating to the 22 selected organs (sic).
Now did everybody get those changes, if I need to repeat any?
MR. GRIFFON: I --
DR. ZIEMER: Mark?
MR. GRIFFON: Actually I don't even think we needed "for selected organs" on that last point. We're just asking for intake estimates.
DR. ZIEMER: That's correct, once -- that -- that is correct. We don't -- once you have the intake estimate, we agreed it doesn't matter for --
MR. GRIFFON: (Unintelligible).
DR. ZIEMER: -- yeah. So the last one would read "Example internal dose intake estimates for Plant 7 thorium extraction workers." Thank you.

Adoption of this protocol, if I can call it that, comes as a recommendation from the subcommittee. It therefore has the force of a motion. It does not require a second. It is open for discussion. Wanda?

MS. MUNN: Did we catch the misspelled ruptures in the first line?

DR. ZIEMER: We probably didn't.

MS. MUNN: First line on the second page, dust bag ruptures.

DR. ZIEMER: Well, these are rupters (sic) here.

MS. MUNN: Yeah.

DR. ANDERSON: Did we mean raptors?

DR. ROESSLER: While we're doing that sort of thing, in the heading ABWRH should be ABRWH.

MR. GRIFFON: AB-- yes, yes, it should be, huh?

DR. ZIEMER: Yes, thank you. With those additional changes -- which are friendly amendments --

DR. ROESSLER: I -- I would like to comment that while the rest of us are doing normal things like eating dinner and sleeping that Mark is working hard to develop this sort of thing, and I think the Board owes a great deal

of gratitude toward him for --

DR. ZIEMER: Exactly.

DR. ROESSLER: -- doing it.

DR. ZIEMER: Thank you, Mark. Arjun, a comment?

DR. MAKHIJANI: Excuse me, Dr. Ziemer. Jim and I were just talking here, the second bullet now says NIOSH complete the following tasks in consultation with SCA by July 31st. That still is that way, and the workgroup meeting is between July --

DR. ZIEMER: No, it was changed to August 7th.

MS. MUNN: 8th.

MR. GRIFFON: Or August 8th now, I guess.

DR. ZIEMER: Or August 8. We -- we had changed --

DR. MAKHIJANI: I thought -- oh, I --

DR. ZIEMER: We had changed that. The working group could still meet ahead of that, just to discuss issues.

DR. MAKHIJANI: Oh, I see.

DR. ZIEMER: I think that was the concept, was it not?

MR. GRIFFON: Yeah.

DR. MAKHIJANI: A point of clarification then

for us is it would be important for us to have something in hand from NIOSH before the meeting. Otherwise -- you all know the experience, I guess. You walk into a meeting and you're confronted --

DR. ZIEMER: Yeah, that --

DR. MELIUS: -- something collects.

DR. ZIEMER: That is a very good point that if SC&A doesn't have anything from NIOSH -- for example, if we met on July 31st, they don't have anything, what -- is the phone call simply going to be how are you doing, NIOSH; great, glad to hear it -- or what?

DR. MAKHIJANI: Yeah, so I -- I would request that -- that -- I had interpreted the second -- before we had five bullets and the second bullet was NIOSH complete the following tasks in consultation with SCA by July 31st, followed by a workgroup meeting. I didn't interpret that second bullet as having any resolution or anything, but that NIOSH would finish a kind of a rough draft and deliver it to us so we could look it over be-- and then talk about things at the working group meeting and the Board members and the working group could also similarly look

it over. But I'm afraid if we don't have anything in hand it'll be very --

DR. ZIEMER: That's a very good point. Let me ask --

MR. GRIFFON: Well, what -- what if we then said workgroup meeting on August 9th? I mean I just had -- I was trying to give us a range with that workgroup meeting 'cause I knew -- but I -- I also wanted time between the workgroup meeting and the time that SC&A had to provide a -- a report back, so...

DR. MAKHIJANI: Yeah, Mark, I -- you know, the August 8 or 9 --

MR. GRIFFON: Yeah.

DR. MAKHIJANI: -- doesn't bother me, one way or another. It -- it's much more important I think for us to have a document several days before, a very rough draft document that'll be on the table during the workgroup meeting --

MR. GRIFFON: Oh, yeah, I see what you're (unintelligible).

DR. ZIEMER: Yeah.

DR. MAKHIJANI: -- so that we can actually talk about something that we've reflected on, had a chance to go to the documents, our own report,

and we're not scrambling on the airplane or something.

DR. ZIEMER: I think it's a valid point and we need to either move the NIOSH completion date up or move the working group back a little bit.

DR. WADE: Possibly those issues could be resolved on the July 26th call.

MR. GRIFFON: Yeah.

DR. ZIEMER: Well, I think, though, if -- if we're going to put this thing in motion, we need to be specific so it's clear that there is time for SC&A to have something in their hands.

MR. GRIFFON: Well --

DR. ZIEMER: We could have that -- you see, if we get too much after August 8th for this, then we're starting to encroach on SC&A's deadline.

DR. MAKHIJANI: Thank you, Dr. ...

MR. GRIFFON: Right.

DR. ZIEMER: Now is -- it'd be possible that we could move the -- find a date between August 3rd and -- or July 31st and August 8th that -- since we modified some of these other things so --

DR. NETON: I think I'd just like a little clarification on what means complete. I mean

if we have to have this completed -- I mean complete-complete -- by July 31st, then -- you know, that's a -- that's a tough order to fill. I mean I think we're going to have substantial progress and be able to discuss all of our approaches and that sort of thing. But you know, if we're required to complete this -- what, several weeks before the August 16th deadline for SC&A --

DR. ROESSLER: (Unintelligible) August 8 (unintelligible).

DR. ANDERSON: It's now August 8th.

DR. NETON: What's this -- July 31st is the date that's on here to have -- complete the following tasks.

MULTIPLE SIMULTANEOUS SPEAKERS: We just changed it.

DR. NETON: But now we're talking about moving it back --

MR. GRIFFON: (Unintelligible) talking about moving it back --

DR. ZIEMER: August 8th is where it is now.

DR. NETON: Right, and I was totally fine with that, but I understand SC&A's issues --

MR. GRIFFON: Right.

DR. NETON: -- with getting a --
MR. GRIFFON: But I see the dilemma there. I think -- but I was really thinking July 31st because then that gives us time before the workgroup meets to have a -- a look at it, you know. I don't think we can show up cold to the workgroup, so --
DR. NETON: Right, and I guess that's my -- question I have is complete the following tasks, I mean --
DR. ZIEMER: We might be able to slip the SC-- SC&A date a couple of days since we've moved the -- the Board meeting.
DR. MAKHIJANI: I think, Jim, we might be in agreement if we change the word "complete" because I'm not looking for something complete, and I imagine Dr. Mauro also would not be. If we got a rough draft, as Jim as just said --
MR. GRIFFON: How about NIOSH report on the following tasks?
DR. MELIUS: Yeah.
DR. MAKHIJANI: A NIOSH draft report on the following tasks by July 31st, then we could have a meeting a few days after that. We'd have some flexibility in the meeting date.

It's not going to take a long time to look it over, but it'll take a few days.

DR. ZIEMER: How would this sound for bullet two? NIOSH complete -- or NIOSH provide a draft report on the following tasks in consultation -- by August 8th.

UNIDENTIFIED: July 31st.

DR. ZIEMER: Oh, 31st? I -- I thought I heard Jim say --

DR. NETON: Yeah. Well, it depends on what a draft report -- I mean I think we are going to substantially have the approaches outlined, but I don't know that we're going to have all the --

DR. ZIEMER: By July 31st?

DR. NETON: Right, all the --

MR. GRIFFON: All right, let's --

DR. NETON: -- organ documentation included by -- I think we'll be able to discuss in some depth the approaches and issues that would be surrounding those proposed approaches, but -- but to have them complete just sounded a little too final.

MR. GRIFFON: Let's just -- all right. Yeah.

DR. NETON: Okay.

MR. GRIFFON: Provide draft report on, and we'll stay with July 31st, though, and then we'll be able to have that workgroup meeting (unintelligible) --

DR. NETON: Right, 'cause I think it'd be -- it's worthwhile, it has merit.

MR. GRIFFON: Yeah.

DR. NETON: But to meet on July 31st, I totally agree, I just don't want people to show up with the expectation that NIOSH is going to have everything finalized by then.

DR. ZIEMER: So you're okay with July 31st in that case?

DR. NETON: I think so. I think if we've agreed that this is a -- a work in progress and -- and will be substantially --

DR. ZIEMER: Yeah, now --

DR. NETON: -- you know, fleshed out --

DR. ZIEMER: -- I believe what you're saying is that will be the point at which SC&A will see your draft initially so that the words that you're going to have this draft in consultation with them may not be quite correct.

DR. NETON: I think that -- that's okay. I -- I think we're going to discuss at this meeting

the draft approaches that we have and there will be a report available, but they're not --

MR. GRIFFON: Well, I -- I guess the reason I put "in consultation with" there was that I was trying to allow for flexibility so that if you needed to call Arjun and check on a -- on certain issues that they -- have been raised through this whole process, we didn't -- we didn't want to restrict you from doing that --

DR. NETON: I think that's --

MR. GRIFFON: -- on certain things.

DR. NETON: That's --

MR. GRIFFON: So in consul-- that's all "in consultation with" meant.

DR. NETON: That's fine then.

MR. GRIFFON: Yeah.

DR. MAKHIJANI: Yeah, I'm happy to do that, provided the Board explicitly authorizes these conversations -- informal conversations because up to now things have been -- and -- been very formal. If you direct us to have that, I think it'll be useful. I don't know if you want us to keep any notes or minutes or keep it completely informal.

DR. WADE: I can deal with that.

DR. MAKHIJANI: That's fine.
DR. ZIEMER: Probably important that there is a record of when such exchanges take place. It doesn't have to be transcribed, but there should be a record of whatever the exchange is.
MR. GRIFFON: Yeah.
DR. ZIEMER: So what's being proposed is to change the second bullet to read "NIOSH will provide a draft report on the following tasks, in consultation with SC&A, by July 31st." Is that agreeable? Can we take that as a friendly amendment or do you want to formal -- formally vote? It appears to be agreeable.
And then -- and then the workgroup would still meet then the -- sometime that following week, and so on.
Okay, thank you for helping clarify that.
Other -- other points of discussion on this document?
(No responses)
Okay. Are we -- Mike, did you get a copy yet or do you know?
MR. GIBSON: Yes, I did. I'm --
DR. ZIEMER: Okay. Any comments? Are you okay?

MR. GIBSON: Yeah.

DR. ZIEMER: Great. Are we ready to vote on this then?

Okay, all who favor proceeding with this document as amended, please say aye.

(Affirmative responses)

And any opposed, no.

(No responses)

Any abstentions?

(No responses)

The motion carries.

DR. WADE: Could I speak a bit to the -- just the engagement and -- let me talk a little bit about how these engagements should take place, from my perspective, and then the Board could -- could modify that as it would.

We're going to do this work largely as working group activity. That would represent members of NIOSH, representatives of SC&A and members of the Board would be present. What we'll agree to do is we will -- we will issue a *Federal Register* notice in advance of any working group meeting. We would invite the public to the working group meeting. We would keep a transcript of the working group meeting.

We would be sure that the petitioners were not only made aware of the meeting but were available to attend as they would, and they could participate in those discussions.

I would also ask that if SC&A and NIOSH find it appropriate to have telephone discussions toward the goal of clarifying issues prior to or after a working group meeting, we allow those interactions to take place and we would ask both parties to keep a record of those calls and make those records available to the Board, should the Board request them. I wouldn't say those interactions need to be working group meetings because I don't want to limit your ability to have interchanges. But we will issue *Federal Register* notices of the working group meetings. We'll make it available for the public to attend and we will keep transcripts of the working group meetings. Of the interactions we only ask that the parties keep records of those calls.

DR. ZIEMER: Okay. Thank you very much. Denise?

MS. BROCK: I just was curious if it's possible for the communication to be open between SC&A

and myself, as well, through any of these proceedings with NIOSH.

DR. WADE: Sure.

MS. BROCK: Phone conversations --

DR. WADE: Yeah.

MS. BROCK: -- besides the meetings.

DR. WADE: Certainly.

MS. BROCK: Great, thank you.

DR. WADE: I would ask both parties to be sure to -- to see that the petitioner is aware of potential calls and can join those calls.

DR. ZIEMER: Wanda?

MS. MUNN: Dr. Wade, I had been under the impression that the significant difference between a subcommittee and a working group meeting was that the working group would not be required to have a *Federal Register* notice and therefore give us the flexibility to -- to be able to call such a meeting quickly if -- if that was possible. Am I uninformed?

DR. WADE: No, you're correct. We're not required to do it. I'm proposing in this case that we do it, given the --

DR. ZIEMER: Go through a Register notice?

DR. WADE: -- yeah, that we notice these

working group meetings, given the -- the various -- the very obvious interest in our deliberations on this matter. So I'm proposing that we notice these working group meetings. We are not required to do that.

DR. ZIEMER: Yes, Arjun and Jim.

DR. MAKHIJANI: Dr. Wade, by "record of the calls," you mean the time of the call, who we spoke to and the topic of the call? Would that be sufficient?

DR. WADE: It would be, yes.

DR. MAKHIJANI: Thank you.

DR. NETON: Sorry I'm being somewhat dense this afternoon, but could we go over the dates for the five bullet items that have been agreed upon? I just --

DR. ZIEMER: Yes.

DR. NETON: -- want to make sure we got those...

DR. ZIEMER: We'll make sure that everybody agrees with what they are.

DR. WADE: And if I could ask Denise if you'd pay particular attention to these dates. Go ahead.

MR. GRIFFON: (Unintelligible) get a clean

copy.

DR. ZIEMER: The date in the first bullet is July 26. The date in the second bullet now, as I understand it, is July 31. The third bullet, the dates are July 31 to August 8. Fourth bullet remains at August 16. The last bullet, August 16 to 22nd. Is that --

MR. GRIFFON: Yeah.

DR. ZIEMER: Yes, NIOSH agreed to do that. Does that coincide with what you have, Jim?

DR. NETON: The working group meeting is still a range between July 31st and August 7th? I thought at one point we --

MR. GRIFFON: August 8th, yeah.

DR. NETON: -- decided to have it on August 8th. Is that not --

MR. GRIFFON: Oh, no, I -- I was --

DR. ZIEMER: It could be. It could be.

MR. GRIFFON: Between then. I think we slide it away from the July 31st --

DR. NETON: July 31st through August 8th is the current...

DR. ZIEMER: Time window, uh-huh.

MR. GRIFFON: Yeah. I was giving us flexibility, but logically I think it would

tend to be toward August 8th more than toward July 31st 'cause we've just gotten the reports.

DR. NETON: And then the meeting to finalize this all was schedule the end of August.

DR. ZIEMER: 25 and 6 now for the Board --

DR. NETON: 25 and 6, right. Okay, thank you.

DR. WADE: Denise, for your purposes, the only scheduled working group meeting at this point is on July 26th, and I'm going to propose that that meeting take place at 11:00 a.m. Eastern time. Okay?

MS. BROCK: That's fine.

DR. WADE: Now we'll notice you again on that, but just to give you a -- a preliminary warning. There will be another meeting scheduled sometime between July 31st and August 8. That has yet to be determined. Possibly the time will be set on that first working group call.

MS. BROCK: That's fine.

DR. WADE: Thank you.

DR. ZIEMER: The Chair recognizes -- who do I recognize? Oh, Wanda Munn has her (unintelligible) --

MS. MUNN: I'm sorry, leftover from

(unintelligible).

DR. ZIEMER: Okay. Roy, did you have a comment?

DR. DEHART: Just a question. Since it will be a working group, we're limited to what number of participants before we cross --

DR. ZIEMER: Less than --

DR. DEHART: -- over --

DR. ZIEMER: -- a quorum.

DR. DEHART: So --

DR. ZIEMER: Less than a quorum and --

DR. DEHART: Right, do those need to be --

DR. ZIEMER: -- I think in general we're talking three or four individuals and we'll --

DR. WADE: Do you know who the working group members will be now?

DR. ZIEMER: Well, let's identify who would be available and interested for that date or that -- during that week. We'll get the names -- okay, Wanda Munn.

MR. GRIFFON: If -- it would be nice if whoever volunteers for that first call can also make the meeting during the July 31st to August 8th -- probably July (sic) 4th, 5th, that time frame -- in Cincinnati I think is the --

DR. ZIEMER: Okay. Rich is interested.
MR. ESPINOSA: I'm available but would prefer to be an alternate.
DR. ZIEMER: Okay.
DR. MELIUS: What date are we -- I'm sorry. What date are you looking for availability on?
DR. ZIEMER: We have a conference call for July 26, 11:00 o'clock, and then a workgroup meeting sometime between July 31st and August 8th.
DR. MELIUS: And I am available for the conference call and I'm also available that week, except for the July -- for August 4th.
DR. ZIEMER: Okay.
MR. GRIFFON: Okay.
DR. ZIEMER: Mike, are you -- do you have an interest in this?
MR. GIBSON: Yes, and I believe -- I believe I'll be available for those dates, barring my situation. But I believe I'll be available for those.
DR. ZIEMER: Okay. Mark?
MR. GRIFFON: Yeah.
DR. ZIEMER: We have four names and an alternate right now. Anyone else? Then I would -- I'll specify Mark, Wanda, Jim and Mike

as being the working group, with Rich as an alternate. And Mark, if you would serve as Chair then.

If for any reason any of you cannot come -- there are a variety of things, sometimes hurricanes interfere or illness or whatever -- there are others available and simply let me know or let Lew know and we'll -- we'll -- we have a -- one alternate. If we need more, we can get others, but this, let us say, will constitute the working group.

DR. WADE: Thank you.

DR. ZIEMER: And I know that general counsel likes to make sure that we have specified the task for the working group. I think the task is spelled out in the document and -- and they will be following the -- the dictates of this document in their work, so that will be the task.

Now the Chair recognizes Dr. Melius for purposes of making a motion.

DR. MELIUS: Yeah, actually two issues I'd like to raise. One actually is a -- references some of the things we've already discussed, but I think we've been, up until this meeting, a

little bit unclear about what our communication has been with our audit contractor and who does the communication and about keeping everybody informed about it. And it's not to fault anybody 'cause I think we've been sort of laboring under some tight deadlines and some dif-- difficult issues, so I'd like to offer a motion -- consists of three parts. It's actually fairly consistent with the procedures we just adopted for the Mallinckrodt workgroup and -- and follow-up. And let me read the -- the motion and then we can offer -- if we get a second, we can discuss it.

So the motion is the Advisory Board, Radiation and Worker Health adopts the following provisions governing communication and program direction for the Bo-- with the Board's audit contractor.

Number one, all communications initiated or received by the Chair, NIOSH and/or the audit contractor regarding the scope, performance or activities of the audit contractor will be copied to the entire Board. The audit contractor shall prepare and disseminate to the Board a written summary of all telephone calls

and meetings with NIOSH regarding issues related to -- to contact-- contracting scope or performance.

Number two, no approvals, changes or directives related to task orders or procedures may be provided by the Chair and/or NIOSH to the audit contractor without first securing concurrence from the Board for these approvals, changes or directives in ad-- and directives in advance to the entire Board. If three or more Board members raise concerns or objections about the proposed changes, then the Chair shall convene a meeting of the Board forthwith to review the proposed changes.

Number three, all working groups and subcommittee meetings, including conference calls, involving NIOSH and the audit contractor to review findings of the audit contractor will include the participation of at least two Board members. All Board members will be notified about the meetings at least two weeks prior to the meeting, and the Chair will ensure that adequate Board representation will be present at the meeting. Such meeting shall be noticed in advance to the public through the e-mail

list and on the NIOSH web site and open to the public, consistent with the Open Governments Act. Such meetings, including those by teleconference, shall be transcribed.

And I think it gives --

DR. ZIEMER: That was your motion.

DR. MELIUS: Huh?

DR. ZIEMER: Is there a second to the motion?

MR. GIBSON: Dr. Ziemer, I would second that motion.

DR. ZIEMER: The motion's been seconded. I'm wondering if we can easily get -- that's fairly extensive. We may want to see the words. The motion is on the floor for discussion. I want to ask for clarification. There -- there's a whole set of things that I get from the contractor's office, which are the -- the monthly progress reports which include the financials and so on. Those are -- are you asking that those be included in this so that everyone gets a copy? This can be done, but the practice has not -- has been to not distribute those widely, but --

DR. MELIUS: Yeah, I -- we actually voted at one point not to have those distributed --

DR. ZIEMER: That's exactly right.
DR. MELIUS: -- but I think it would be better actually I think --
DR. ZIEMER: I just want to make sure everybody's aware of the all-encompassing nature of this. There -- there -- you will get a lot of stuff.
MR. GRIFFON: We already -- we get a lot of stuff.
MS. MUNN: Yeah.
DR. ZIEMER: Liz?
MS. HOMOKI-TITUS: I may have missed what you said. Could you re-read number two?
DR. MELIUS: Well, why -- I think we're going to get this printed out, so --
MS. HOMOKI-TITUS: You are?
DR. MELIUS: -- I would prefer --
DR. ZIEMER: Yeah --
MS. HOMOKI-TITUS: Okay.
DR. ZIEMER: -- we'll get it printed out before we act on it. Wanda?
MS. MUNN: I always thought Dr. Melius was a physician. I didn't understand that he was an attorney. I'm sure he's had benefit of same, but nevertheless, I have such strong

reservations about bringing such a complex motion to this Board at -- after 2:00 o'clock on an afternoon when we've already had a discussion indicating that Board members will be gone by 2:00 p.m., that I would not under any circumstances vote on this today. I would strongly object to it and I feel quite sure that I surely am not alone.

DR. ZIEMER: So are you making any particular motion?

MS. MUNN: I'm protesting the presentation of this motion to us in this manner at this time, and am stating categorically that I feel it is improper, that it is rude and I won't vote on it. If it's going to be voted on, it will have to be tabled. It will have to be provided to me in written format and I may even choose to have counsel before I decide whether to vote on it.

DR. ZIEMER: You are certainly in order if you wish to move to table the motion.

MS. MUNN: I so move.

DR. ZIEMER: I thought that's what -- where you were -- I'm not trying to influence you.

MS. MUNN: No, no.

DR. ZIEMER: Is there a second?
DR. DEHART: I would second.
DR. ZIEMER: Seconded tabling the motion. This is not a debatable motion, requires an immediate vote. A two-thirds vote will table the motion. I might indicate to you that if it is tabled you will have the written copy available to study. I think it's being run now and those will, in any event, be made available.
Yes, Leon -- again, you may not speak to the motion, but as a point of information.
MR. OWENS: Yes, sir. Dr. Ziemer, are we sure that a two-thirds vote is required to table?
DR. ZIEMER: Yes, I'm quite sure it is, unless -- I -- I've worked with Robert's Rules quite a bit.
MS. HOMOKI-TITUS: (Unintelligible) a table requires half.
DR. ZIEMER: Half?
MS. HOMOKI-TITUS: Half, yes.
DR. ZIEMER: Okay. Well, that's nearly two-thirds for this group. Thank you. Well, I stand corrected. Okay.
MR. GIBSON: Dr. Ziemer, unfortunately I'm not

there, but could I ask, is part -- other than me, is there some other Board members that are not in attendance? I'm just not aware of -- of the --

DR. ZIEMER: Actually --

MS. MUNN: Henry's gone.

DR. ZIEMER: -- Robert Presley had to leave.

DR. DEHART: Dr. Anderson.

DR. ZIEMER: And has Dr. Anderson left?

DR. DEHART: Well, he took a bag with him (unintelligible) material (unintelligible) there. I don't know where he is.

DR. ZIEMER: There are -- there are seven Board members here plus you, Mike, makes eight.

MR. GIBSON: Okay.

DR. ZIEMER: So this would require five votes to table.

DR. ROESSLER: Eight (unintelligible).

MR. GIBSON: Thanks for the clarification.

DR. ZIEMER: Actually there's nine. I didn't count myself, nine.

DR. MELIUS: It still takes five.

DR. ZIEMER: It still requires five, yeah. Okay, voting on the motion to table, all in favor raise your right hand. One, two, three,

the Chair votes, four, that's -- one, two, three, four -- and Mike, you vote --

MR. GIBSON: Not to table the motion.

DR. ZIEMER: -- not to table. That's -- so let me get the no's. One -- one, two, three, four --

UNIDENTIFIED: Mike's five.

DR. ZIEMER: -- and Mike is five. Okay, so the motion to table fails, so the original motion comes back to us. We do want to have the written copy, however. What's the status of that?

DR. MELIUS: I can get Cori -- I can give her...

MR. GRIFFON: Can we take up something else while we wait?

DR. ZIEMER: Yes --

DR. MELIUS: Can I make a comment, just in response to Wanda? I -- you know, Board meetings are scheduled for two and a half days. This was the first opportunity we've had to take up motions. I specifically talked to the Board Chair about doing this and what the time period should be and, you know, it's part of doing Board business. I don't -- it's not

meant to be rude or unfair to anybody, but it's -- we have to have some time to take up business and we are scheduled to do business through 4:00 o'clock today or 4:30, and...

MS. MUNN: I'm here (unintelligible).

MR. GRIFFON: That's -- yeah.

DR. MELIUS: So I mean it wasn't deliberately put aside until somebody left or whatever.

DR. ZIEMER: No, indeed, Dr. Melius asked me if -- if he could make a motion pertaining to the interactions with the contractor at the meeting this afternoon.

Do any of -- while we're waiting for that, you have a general sense of the motion, do any of you wish to speak for or against the motion at this point?

MR. GIBSON: Dr. Ziemer?

DR. ZIEMER: Yes, Mike?

MR. GIBSON: I would just like to say that Dr. Ziemer's -- or, sorry -- Dr. Melius's motion has a lot of issues that I know I for one have brought up at other meetings, and so have other Board members, concerning the way the Board is kept involved. And so I don't think this is a new issue. I think it's something that -- it's

been brought up before and it's, at least in my opinion, something that -- that's what we've all been charged to do is take care of the Board's business and -- and I think he has -- he's outlined our duties and it's -- you know, it's the business of the Board and I -- I just think the motion's completely in order.

DR. ZIEMER: Thank you. Anyone wish to speak for or against the motion? Roy.

DR. DEHART: We will be seeing the motion in writing and that'll perhaps be a clarification for me, but there were several things in there in terms of timing, et cetera, that tended to bind the Board rather tightly and avoid the possibility of flexibility. And that was one of the concerns that I had. In addition, I get enough mail as it is. I don't need other mail that isn't important for me to review and -- and go through. Perhaps there's a way that one can put themselves on a mailing list, if that's what some want, to receive all the correspondence that's generated that -- by the actions of this Board and its contractors well beyond what we normally already receive, that might be an option, rather than to imply that

it would go snowflake to everyone.

DR. WADE: I would like to speak, if I could.

DR. ZIEMER: Yes.

DR. WADE: As Dr. Melius read the motion, I didn't have any problem with it as it related to NIOSH. I do have to point out to you that the contract with SC&A is with CDC. The contracting officer is a CDC employee. I don't think that in any way the Board can limit communications between the contracting officer and the contractor, and -- and I point that out to you as a clarification.

DR. MELIUS: And that's why the motion specified NIOSH --

DR. WADE: Right.

DR. MELIUS: -- understanding that, and...

DR. ZIEMER: I would like to suggest that if the motion carries, if there are Board members who actually don't want all of the correspondence, this wouldn't exclude them from opting out of the e-mail list. And I -- I don't believe there -- typically that there's anything -- the most sensitive things are probably those monthly reports which include time and effort information --

DR. WADE: Uh-huh.

DR. ZIEMER: -- and so you would have to agree to keep all of that confidential --

DR. WADE: Right.

DR. ZIEMER: -- because -- other than that, the e-mails are similar to things that you have seen. They are exchanges or questions about when meeting times -- when we can get together and so on, or -- or John may say how much time do I have on the agenda for the next meeting to present this and so on. They are generally pretty innocuous.

MS. HOMOKI-TITUS: I probably need to see the written motion before I make this comment, but I'm a little concerned about getting Board approval and if three Board members are concerned, 'cause the Board is only supposed to act when you're -- have been called together or you're having an Advisory Board meeting that's been announced in the *Federal Register*. I don't know if that's language that you want to try to rework, but to try to get a majority or what would end up being a majority if three Board members are concerned -- consensus on something, is in violation of FACA.

DR. MELIUS: What -- well --
MS. HOMOKI-TITUS: And like I said, I need to see the written because I'm not -- didn't catch everything that you said.
DR. ZIEMER: I -- I think he -- the -- the three-member thing was -- was an issue of if three members raise a concern about something, I guess that arose in the --
DR. MELIUS: That is communicated from the Chair.
MS. HOMOKI-TITUS: So you're not looking for agreement for everyone and if three people say no, that's not what you're looking for. Right?
DR. MELIUS: If three people raise concerns and it may be then we need a --
MS. HOMOKI-TITUS: A meeting.
DR. MELIUS: -- mechanism for the Chair to -- so this is instructing the Chair that in that situation that he should call a meeting of the Board.
MS. HOMOKI-TITUS: Okay. Thanks for clarifying.
DR. MELIUS: I think that's -- and -- and again, that was I think trying to address the flexibility issue and so forth that there are

times when we need to move in other ways and it -- this kind of communication will do it. It also that -- this doesn't override actions we just took in terms of setting up a schedule and procedures for dealing with -- with Mallinckrodt. I just do think we have to be sensitive to the fact that we want to make -- we want to have transparency in terms of our dealings with the contractor and to -- transparency in assurances to the public and to the claimants that the contractor is working -- is not being unduly influenced by NIOSH in the technical is-- issues as taken. It's an awkward arrangement to have CDC/NIOSH running the contract that is auditing the work that NIOSH is doing, and I think we need to take -- I think it will -- some extra steps to try to make sure. And I think -- I don't think this changes a great deal from what we've done or it's not reflecting anything that anybody's done wrong, but rather let's try to have some rules in terms of governing this situation so that we all understand them and Paul's not put in a spot where he's not sure what to do and we're not put in a spot of do we second-guess

what Paul did because it's -- he's trying to react and do this, you know, under -- in not always easy circumstances, either.

MR. GIBSON: Dr. --

DR. ZIEMER: Also --

MR. GIBSON: -- (unintelligible) comment?

DR. ZIEMER: Yes, Mike?

MR. GIBSON: With all due respect to Dr. DeHart and his comments, you know, and people opting out of the list, you know, I think Jim's motion is important and I think that the obligation that we all accepted when we took the positions on the Board -- I know we get a lot of mail, and I know it takes -- it's very time-consuming. I know we have other things to do in our life. But we took the obligation to take this business at hand and, as Jim said, you know, it's an awkward situation and sometimes, Dr. Ziemer, you're put in a position that, you know, you may need to react or think you need to react and it's -- really should fall on the Board's shoulders on how to react and not put you in the awkward position that that -- these unfortunate time situations may do. So I -- you know, I'm not sure that all

Board members shouldn't be included in all these e-mails and whether they choose to read them or act upon them, I guess that's their prerogative. But this is an obligation that we accepted when the President appointed us.

DR. ZIEMER: Okay. Thank you for those comments.

I think we may have the document itself.

DR. WADE: Could you just pass them around?

MS. SHIELDS: Sure.

MR. GIBSON: But -- Dr. Ziemer?

DR. ZIEMER: Yes, Mike?

MR. GIBSON: I'm sorry, if I could make one more comment. You know, I -- I do want to apologize, but I think this is the first Board meeting I haven't been able to attend due to some unfortunate circumstances, and so I -- you know, I don't want to sit here on a conference call trying to act like I'm, you know, so involved. But you know, I have tried to be at every --

DR. ZIEMER: No, we understand that, Mike, and you're quite right. Mike has an exemplary record of attendance at the meetings and unfortunately his father is very ill and he's

had to help attend to him, but we appreciate your being on the call, Mike.

MR. GIBSON: Thank you.

DR. ZIEMER: I don't know if we can -- Mike, if you need a copy of this motion, you have already indicated support for it so maybe you're comfortable with just the sense of it, but the Board members now have a copy of the motion and the Chair is going to step us through each item. There's three parts to it. I'd like to ask first if any of the Board members have any comments or changes or concerns on item one.

DR. WADE: Can I ask a -- a clarifying question?

DR. ZIEMER: Uh-huh.

DR. WADE: I would understand then, Jim, that if I was to have a discussion with the audit contractor, it would be the audit contractor's responsibility to notify the Board.

DR. MELIUS: Correct.

DR. WADE: Okay.

DR. DEHART: Paul, you may want to read that for Mike. He doesn't have --

DR. ZIEMER: Okay, here's the item, and I'll

read it, Mike. (Reading) All communications initiated or received by the Chair, NIOSH and/or the audit contractor regarding the scope, performance or activities of the audit contractor will be copied to the entire Board. The audit contractor shall prepare and disseminate to the Board a written summary of all telephone calls and meetings with NIOSH regarding issues relating to contracting, scope or performance.

DR. WADE: I do need to ask another question. There are certain activities that I, as technical officer on the contract, undertake relative to rating the contractor's performance.

DR. MELIUS: Uh-huh.

DR. WADE: I'm not sure if I can share those with the Board. I -- I mean I need a determination from the contracting officer as to --

DR. MELIUS: Fine. I mean obviously we're not trying to violate contracting rules.

DR. WADE: Okay.

DR. MELIUS: To the extent that information can be shared, I mean I think that the fact that

you had such a call could be shared. To what extent the content of that discussion can be shared I think would be governed by, you know, the rules of -- that govern contracting.

DR. ZIEMER: Perhaps a phrase could be added to this first paragraph that would specifically mention that those -- those activities which are permitted by law -- because performance is mentioned here, and in fact --

DR. WADE: I don't know if that's the same performance as the performance I pass judgment on.

DR. ZIEMER: Right. Right. Perhaps Liz can assist us on item one here. Any issues there from a legal point of view?

MS. HOMOKI-TITUS: No, I'm sorry, I was going to comment on number two.

DR. ZIEMER: Okay. Let's get number one first.

MS. HOMOKI-TITUS: Okay.

DR. WADE: Arjun has a com...

DR. ZIEMER: Arjun?

DR. MAKHIJANI: Yeah, we were having a little caucus here, Dr. Ziemer. I wondered if the word "performance" would impact the conversations that you earlier authorized

between SCA and --

DR. ZIEMER: No, I think anything --

DR. MAKHIJANI: -- NIOSH.

DR. ZIEMER: -- anything specifically authorized by action is already authorized. This would be -- I believe -- aside from those items.

DR. MAKHIJANI: Thank you. Okay, no issues on item one.

Item two, (reading) No approvals, changes or directives related to task orders or procedures may be provided by the Chair and NIOSH to the audit contractor without first securing concurrence from the Board for these approvals, changes or directives in advance to the entire Board. If three or more Board members raise concerns or objections about the proposed changes, then the Chairman shall convene a meeting of the Board forthwith to review the proposed changes.

So in this case we're talking about, for example, if -- based on some circumstance -- the Chair said I believe the task order should be modified in some way --

DR. MELIUS: Right.

DR. ZIEMER: -- or something of that sort --
DR. MELIUS: We have -- there've been circumstances where the order -- priority has been changed for particular tasks or parts of particular tasks and so forth, really without knowledge of the Board, and it -- I'm -- I'm not sure to what extent --
DR. ZIEMER: Yeah.
DR. MELIUS: -- you were involved in those, Dr. Ziemer, but --
DR. ZIEMER: No, I --
DR. MELIUS: -- but again, it was not -- again, we're not objecting to what was done --
DR. ZIEMER: No.
DR. MELIUS: -- but just saying procedurally we should be notified, and then if --
DR. ZIEMER: Right.
DR. MELIUS: -- a number of us raise --
DR. ZIEMER: Right.
DR. MELIUS: -- sort of --
DR. ZIEMER: In essence, this was the case in Iowa, and in fact the Chair notified the Board that day when -- when the decision was made to make the change. So -- but there was not a mechanism to say -- well, we did -- we did then

try to set up a telephone conference to --
DR. MELIUS: Uh-huh.
DR. ZIEMER: -- which took a couple of weeks.
DR. MELIUS: Yeah, that's the --
DR. ZIEMER: And that still could be the case here. Forthwith, you know --
DR. MELIUS: Uh-huh.
DR. ZIEMER: -- when is forthwith?
DR. MELIUS: Yeah.
DR. ZIEMER: 'Cause we have to notify -- but the intent is clear and I have no personal problem with it. I think it's quite fine.
DR. DEHART: The question I had is how -- how are we defining concurrence? Can that be done with e-mail?
DR. MELIUS: Yeah.
DR. DEHART: Can we avoid all of us getting on a telephone call? Can it be done quickly or is -- or is it --
DR. ZIEMER: Well, we -- we cannot --
DR. DEHART: -- going to have to be (unintelligible) *Federal Register*?
DR. ZIEMER: -- concur on things by e-mail, is my understanding. We can't take actions outside the public frame-- I believe that's

correct. Liz? So if -- if there were something -- see, I don't know how we -- how we obtain the concurrence without meeting.

DR. MELIUS: Well, what if we modify this and take out "first securing concurrence" and just say without first communicating these to the Board?

DR. DEHART: I have no problem --

DR. MELIUS: And then -- and then if -- then the thing would -- if three or four or more Board members raise issues about -- in relationship with the communication, it would be in effect asking Paul to take the steps to convene a meeting.

DR. ZIEMER: I think that -- and Liz is nodding as -- she has --

DR. WADE: She's --

DR. ZIEMER: That was her issue, as well.

DR. WADE: Could I speak also to this one? And this is to the -- to the spirit of the motion. The actual instructions to the contractor would come from the contracting officer. That's the only person who can instruct the contractor as to change in scope. I understand the Board's intention that in my position you would not

want to see me initiate any action, and I understand the spirit of it, just as you understand that the actual instructions would come from the contracting officer.

DR. ZIEMER: That's correct, approvals, changes or directives -- I can't do any of those in any event, but the -- so we need to change the wording a little bit. I mean in essence I think we talked about having -- let me use the Iowa case where -- where we did ask SC&A to -- to begin work on that Rev. 1 -- was it the Iowa case? I guess it was -- site profile. I didn't direct them to do that. We asked the contracting officer to do that on behalf of the Board, so in essence yeah, it sort of becomes our directive, but it's --

DR. WADE: Yeah, we understand the spirit of it.

DR. ZIEMER: -- the spirit of it is... And may-- maybe you can change the wording there a little bit.

Other comments on item two?

(No responses)

Let me alert the -- let me alert the Board members to one other kind of activity that

occurs -- or has occurred on a semi-regular basis. Our contractor gets calls to the Hill on a fairly regular basis to give reports to staffers on the Hill of various things. John has always contacted Wade and contacted me to let me know of those requests, and has basically said should I do this. And the turnaround times are usually a day or two. Now we would probably be better to have a formal policy on this in the future. What I've done in the past is said yes, do this. I mean it's hard to turn those down. But I have raised the question with Wade and asked him to raise it with the contracting officer, these are outside the scope of the tasks, and the question is who's paying for that time for our contractor to brief people on the Hill. Now yes, it's -- it's Federal money that's paying for the program and so on, but in reality, those resources that are used to do that come out of the program. So -- and -- and frankly, you -- you will probably start to see some of these requests 'cause they seem to come on a fairly regular basis. In fact, there was one this past week. People on the Hill want -- want a

briefing on -- on everything that they produce, really.

DR. WADE: Now is it the sense of this motion that we would bring those requests to the Board?

DR. MELIUS: No, I think the sense would be that those would be communicated to let -- there'd be a communication on it.

DR. ZIEMER: Right. And in general there's very little response time --

DR. MELIUS: Right.

DR. ZIEMER: -- even if -- if I said yes, go, and three Board members said I don't think you should go, it's going to be too late.

DR. MELIUS: Yeah, right, and -- and --

DR. ZIEMER: So we'll -- we'll have to have a policy --

DR. MELIUS: No, no, that's a communi--

DR. ZIEMER: -- in the future.

DR. MELIUS: To me it's a communication issue. It's something that we have a policy of allowing, I would think --

DR. WADE: Right.

DR. MELIUS: -- and --

DR. WADE: And I don't know the contracting

officer is going to -- is going to surrender that prerogative anyway.

DR. MELIUS: No, I -- yeah.

MR. GRIFFON: Right.

DR. ZIEMER: Anything else? Jim, did you revise item two in any way that --

DR. MELIUS: Yeah, I have -- and -- and let me -- I have a question whether this first part's right, that no approvals, changes or directives related to task orders or procedures may be provided through the contracting officer -- excuse me, let me do this right -- may be provided by the Chair and/or NIOSH through the contracting officer to the audit contractor? Is that -- Lew, is that -- you think --

DR. WADE: It's okay. I mean it doesn't rule out the contracting officer.

DR. MELIUS: No, no, I --

DR. WADE: That's fine.

DR. MELIUS: I think it covers the -- okay, through -- without first communicating these approvals, changes, directives in advance to the entire Board.

So we've taken out concurrence there, and then the second sentence there reads the same.

DR. ZIEMER: So after the words "audit contractor" -- what follows that?

DR. MELIUS: Okay. No approvals, changes, directives related to task orders, procedures may be provided by the Chair and/or NIOSH through the contracting officer to the audit contractor without first communicating these approvals, changes or direction -- directives in advance to the entire Board.

DR. ZIEMER: Thank you. Any objections to those -- that change? I'm not going to take a formal motion on it. If there's no objections, we'll consider that change a friendly amendment.

Ready for item three? (Reading) All working group and subcommittee members (sic), including conference calls, involving NIOSH and the audit contractor to review findings of the audit contractor will include the participation of at least two Board members. All Board members will be notified about the meeting at least two weeks prior to the meeting, and the Chair will ensure that adequate representation is present at the -- at the meetings. Such meetings shall be noticed in advance to the public through the

e-mail list and on the web site and -- and open -- to the public?

DR. MELIUS: Yeah, open to the public.

DR. ZIEMER: -- to the public, consistent with the Government in the Sunshine Act. Such meetings, including those by teleconference, shall be transcribed.

Okay, any discussion on that, there -- it seems to me that the two-week thing is pretty limiting in some cases.

DR. DEHART: I was going to ask if NIOSH and the contractor could comment whether or not, in their experience, would two weeks have been limiting.

DR. ZIEMER: In other words, if -- if you -- if there -- if an issue arose and let's say that -- that Hans needed to speak to someone at NIOSH, does he have to wait two weeks or can he say, you know, I need -- I need to discuss this issue, we're working on something, if I can -- if I can schedule it and get some Board members and get a notice out, is the two weeks that critical?

DR. MELIUS: Well, I think we have to have adequate time to notify the public and people

that have an interest in the -- in the particular issue, so I think there needs to be some time -- if I recall correctly when we were dealing with some of the security issues, then some of those meetings took place in pretty short -- much shorter time frame because I think Mark -- I was talking to Mark one day and he suddenly got called the next day to go down to Washington area, but in general I think we should -- I mean if two weeks -- anybody feels is too long, if one week is fine, but I think we should at least strive for some time period -- again recognizing that we may -- hopefully would have some understanding ahead of time that there would be situations -- like with the security clearance issue and so forth where we need to move faster and in general I think the Board would be aware of that and (unintelligible) but at the same time we don't want to have the appearance that we're trying to exclude, you know, the public from participating or knowing about this and -- and Board members. So if -- would prefer to change it to one week, that's fine with me.

DR. WADE: But two weeks, if possible. I mean

-- you know.

DR. MELIUS: Okay, how about that?

DR. ZIEMER: At least two weeks, if possible?

DR. MELIUS: Yeah.

DR. ZIEMER: Which opens the door for a special situation.

DR. MELIUS: Yeah.

DR. ZIEMER: Is that -- anyone object to that? I -- I think flexibility there is important.

DR. WADE: I would like to ask a clarifying question about this, as well. As we did on the Mallinckrodt issue, there -- there -- it seems to me there are times that there could be telephone calls between NIOSH and the contractor that wouldn't represent a working group or a subcommittee meeting. Are we going to rule out all such phone calls?

DR. MELIUS: No, I think we've not. At the same time I think we do have to be careful that, to the extent possible, we know about those in general ahead of time. Like -- which we did with Mallinckrodt. We authorized those calls, but --

DR. ZIEMER: This is not a -- this only pertains to official workgroup or --

DR. MELIUS: Correct, and --
DR. WADE: That's right.
DR. MELIUS: -- and we have to be careful that these other types of calls don't --
DR. ZIEMER: And that they are recorded and --
DR. MELIUS: Right, right, and do that. But --
DR. ZIEMER: Okay, so it doesn't exclude those exchanges --
DR. MELIUS: No.
DR. ZIEMER: -- if needed. If there's a question on some point, what did you mean by this phrase --
DR. MELIUS: Yeah, I -- I would think there'd be --
DR. ZIEMER: Yeah.
DR. MELIUS: -- that kind of call or --
DR. ZIEMER: Okay.
MR. GRIFFON: I guess the --
DR. MELIUS: Or where is this proc-- you know, I don't understand --
DR. ZIEMER: Or -- or how do we get this document --
DR. MELIUS: -- this particular procedure, you re-- you refer to, you know --
DR. ZIEMER: Right.

DR. MELIUS: -- 2(a) and I don't see this listed --

DR. ZIEMER: Right.

DR. MELIUS: -- in 2(a), it's -- you know, maybe it's in 3(b) or something, that kind of thing is kind of --

MR. GRIFFON: I certainly understand the intent, in two weeks where possible I think would be good. I don't want to fall into a situation where we're violating that all the time. I don't know if we need to -- to parse out -- because I think that the workgroup conference calls can -- can -- we may not need as much time for those. I mean I think -- I think where possible is a good addition, and I think it's much more important when people have to physically go to Cincinnati or -- you know, if they can dial in or be on a call, maybe less notice is required, but I -- I'm just also thinking about the flexibility of being able to meet our deadlines. So -- but I guess where possible covers us there.

DR. WADE: There is another clarification. The meetings will be open to the public, and I think that's fine. It doesn't necessarily mean

that there'll be public participation in the meetings.

DR. ZIEMER: Doesn't have to be a public comment period.

DR. WADE: Do we have -- did we have to have a public comment period?

DR. MELIUS: No, I -- no.

DR. WADE: Okay.

DR. MELIUS: Open to the public I think is --

DR. WADE: Okay. And that's what I tried to say when I --

DR. MELIUS: Yeah.

DR. WADE: -- we spoke before.

DR. ZIEMER: Okay. Now let me ask if you are ready to vote on this motion, as amended -- with the amendments that have been identified?

(No responses)

It appears that we're ready -- comment first, John?

DR. MAURO: I appreciate the opportunity. I did not -- but at -- one question I did have that did not -- was not clarified I think in discussion is -- the word "performance" in here, does that mean the performance of any work or -- or can I call EVA* up to get a

document? I guess that's my question. Very often -- or can I call up someone at NIOSH? EVA's -- is a contact point we have to get documents. Very often we'll need help in -- in arranging for meetings with site experts where we are required to coordinate with NIOSH whenever we do that. Is this -- fall within this -- the term "performance"?

DR. ZIEMER: I don't think this --

DR. MELIUS: Not at all, no.

DR. ZIEMER: -- is the intent, no.

DR. MAURO: Thank you.

DR. MELIUS: That's...

DR. MAURO: Thank you.

DR. ZIEMER: Yeah. Okay, let's then vote. All in favor of this motion, as amended, please say aye.

(Affirmative responses)

Those opposed say no.

(No responses)

And those abstaining?

MS. MUNN: Aye.

DR. ZIEMER: One. The motion carries. I'd like to determine whether Cori is here.

DR. WADE: I'm sure she's available.

DR. ZIEMER: Could we get Cori out here briefly? Roy?

DR. MELIUS: I have one other issue, also, which you --

DR. ZIEMER: Yeah, I'm going to delay you just a moment if Cori's here.

DR. MELIUS: It's just informational. I hope it's not...

(Pause)

DR. ZIEMER: Cori, could you just be available just for a moment while we handle our next item of business?

MS. HOMER: Okay.

DR. ZIEMER: The Chair recognizes Roy DeHart.

DR. DEHART: I have a motion to propose for the Board.

The Advisory Board on Radiation and Workers Health, at the 31st meeting, held in St. Louis, Missouri, on the 7th day of July in the year 2005, on the occasion of Ms. Cori Homer's final presence in the support of the Board's performance and activities, this resolution is prepared.

In the year 1998, or approximately, on the Board's formation, Ms. Homer received the

charge to provide much of the administrative support, a task that she has accomplished with efficiency and effectiveness; and

Further, her efforts have been accomplished with flexibility, warmth, humor and dedication to the mission; and

Further, she has been available to advise and, when possible, resolve issues to the members who must travel with special needs and unusual requirements; and

Further, during the meeting her presence has been a source of assurance that even unexpected events can be addressed toward the meeting's success.

Therefore, be it resolved that the Board fully assembled recognizes Ms. Cori Homer for her superior administrative support and assistance to individuals and the Board.

DR. ZIEMER: Is there a second to the motion?

MR. ESPINOSA: Second.

MR. GIBSON: I would -- I would second that motion.

DR. ZIEMER: All in favor, aye.

(Affirmative responses)

(Applause)

DR. ZIEMER: (Unintelligible) work.
MR. GRIFFON: A few words, I think.
MS. HOMER: Oh, no --
DR. ZIEMER: Cori, if you want to say something, you'll have to approach the mike. Ray wants to record it.
MS. HOMER: Okay.
(Pause)
I'm going to try really hard not to cry. Working with you folks the last three years has -- has really been, as I indicated before, a real experience -- in very many ways. I'm going to miss every single one of you. I will miss the work, as well, but it is time for me to move on, and it will in some ways be difficult to move on, in some ways not. I have left the Board in the capable hands of LaShawn Shields and I believe she will care for you as well as I tried to. Thank you very much for the last three years.
MULTIPLE SPEAKERS: Thank you, Cori. Good luck, Cori.
(Applause)
DR. ZIEMER: We actually have -- I'm looking for items -- do we have any other items that

are going to require a vote on, for Mike's benefit?

DR. MELIUS: I have one that may, but I'm hoping --

DR. ZIEMER: Okay. You may proceed.

DR. MELIUS: -- it doesn't.

DR. ZIEMER: Proceed.

MR. GRIFFON: SEC task order, too.

DR. ZIEMER: Oh, SEC task order.

DR. MELIUS: Yeah. I would just -- in -- one of the issues that came up in the public comment period was issues related to conflict of interest. And while not commenting directly on that -- particular issues that were raised, but it did remind me about some issues where I don't think we've been quite as vigilant about dealing with this as (unintelligible) and that's the issue of transparency. And I believe it was about a month ago that I tried to find SC&A's conflict of interest statements on the web site and was unable to find it. And I thought we've dealt with this before and I don't know if it's been taken care of, but I think we should try to make sure that it does get taken care of so that those are available -

- so forth.
Related to that, I do wish that ORAU would make theirs a little less difficult to find. Every time I go to look at it -- which is not very often -- and I have to hunt around quite a while and it'd be nice if there was a link or if NIOSH could consider, on their web page, having some direct link -- statement where people could go and find conflict of interest statements.
And finally, something I think the Board should consider is having our own conflict of interest statements, also, up there. Not our financial statements, but the conflict of interest things, just -- again, for consistency and transparency. I -- I think it would -- would be helpful to have those available.
DR. ZIEMER: Ours can certainly be added, can they not, to the web site on --
DR. WADE: I believe so.
DR. ZIEMER: I actually thought they were, but where do we stand on SC&A and -- are we -- are we talking about their web site or our web site?
DR. WADE: Do you want the SC&A materials on

the NIOSH web site?

DR. MELIUS: I would just like some place where it's easy to find, for people -- for claimants. I mean, again, I was unable to find it. Now maybe it's available on theirs and I --

DR. WADE: I don't know that John -- I don't know, do you have such materials available on your web site?

DR. MAURO: Our conflict of interest plan and procedures of course has been delivered and you folks have it and it has been finalized.

DR. WADE: Right.

DR. MAURO: That plan and procedure requires certain forms to be filled out by everyone on the project, and all those forms have been filled out and are on file in hard copy at our headquarters office. Certainly those could all -- I do not believe you folks have copies of those forms. That is the forms individually signed by everybody on the project. And so -- but certainly if you require that, also, we -- provide you with that and that material could be put on the -- provided electronically and, if you care to, be placed on your web sites.

DR. WADE: Is it your suggestion that it be

placed on the NIOSH web site?

DR. MELIUS: Actually I think the Board had requested that some time ago and maybe we -- it was miscommunicated, but I certainly think that's -- needs to be done in terms of consistency and...

DR. ZIEMER: It could either be a link to our web site to yours, if it's on the SC&A web site, or it can be put on ours directly, I suppose.

DR. MAURO: The actual forms, the hard copy signed forms, and dated, by every participant is in hard copy.

DR. ZIEMER: Yeah, okay.

DR. MAURO: We could of course get it into electronic form and deliver -- deliver it to you, or put it on our web site --

DR. ZIEMER: I don't know that we need the signed forms on a web site. I think it's the information --

DR. MELIUS: The information on the...

DR. ZIEMER: -- what are the -- the conflicts or --

DR. MAURO: Well, we have a proc-- we have a procedure that requires certain forms to be

filled out by each individual that would be in effect testifying that they -- regarding all -- the conflict of interest requirements that pertain to our contract, so it flows down from our contract. For example, the main -- the main provisions are that the individual has not in the pa-- has -- does not -- the comp-- whether a subcontractor -- or there are several --

DR. ZIEMER: Right.

DR. MAURO: -- but the big ones are did not defend the government against claims in the past. The other one is if the person's working as a lead, let's say on the site -- the site profile review, that they were not an employee of that -- Savannah River, so they could work on it as an expert, technical support expert, but they cannot provide lead, so there are several criteria --

DR. ZIEMER: Right.

DR. MAURO: -- and we -- those forms are filled out, signed by the individual and they're on file. And we keep a record of those -- actual a separate form that says who has restrictions and what their restrictions are regarding

working on the project. All this material is on file in hard copy, and it certainly can be made available to you folks in any form you care to have it.

DR. MELIUS: Yeah, I -- I think the format that ORAU follows and has used is -- was appropriate in terms of what information -- the type of information and level of detail and so forth.

DR. ZIEMER: Rich.

DR. TOOHEY: I'd just like to mention all the ORAU forms are posted on our project web page, which is www.oraucoc.org.

DR. MELIUS: Yeah. No, I -- I realize that. I think the -- the issue I was raising was getting to them -- understanding where to find them, particularly for the site profile reviews from the NIOSH web site, is not straightforward and I -- so it's -- criticism wasn't of you, it was of -- essentially asking NIOSH to -- to make all this -- and I think we had something saying, you know, here's the Board members, here's how you find the -- the forms for ORAU and here's how you find the forms for SC&A. I think then we -- everybody's -- we're all consistent, it's all available, that's all.

DR. ZIEMER: I don't think this requires a formal action.

DR. MELIUS: Okay.

DR. ZIEMER: I think it's understood that we all want the information out there. We'll make sure it's pub-- publicly available. And if -- we can work with SC&A to make sure it's... Let's see, the -- well, help the Chair out. It's getting late in the day. What -- what did I overlook?

DR. WADE: We want to do the SC&A task order --

DR. ZIEMER: Oh, SC&A task order, yes.

DR. WADE: The SC&A SEC task order. Let me give you just a very brief report. You have at your place a task order that was developed by the Board. I transmitted that -- the contracting officer has transmitted that to SC&A and asked for a proposal from SC&A on this material. It was sent on Monday, John. My hope is that by the -- by the Board meeting in August we should have the SC&A proposal, and I would ask the Board to consider that proposal at that time.

That would require us going into closed session to look at the specific costs that will come

back to us, and I guess I just alert the Board to that. And if there are any concerns the Board has, let me know. It would require a closed session that I would intend to schedule for the August meeting.

DR. ZIEMER: Right. And this -- this task order -- did we approve the content of this at a prior meeting. Is this verbatim?

DR. WADE: Yes, it's the mat-- it's the material that was provided to me.

DR. MELIUS: I have a question on that, and it may be that -- it is late and maybe -- I don't recall, but item number two, did we ask the contractor to develop and draft Board procedures? Or proced-- I mean for them to develop draft procedures for the review, but are they -- I mean the -- implies here they're -- they're developing our -- the Board's procedures.

DR. DEHART: I guess we did.

DR. MELIUS: We're asking them to do our own -- I mean it...

MR. GRIFFON: Well, I guess -- I guess the intent was to draft procedures that -- that we, along with our contractor, would use to review,

but ultimately we have to approve those procedures. So I -- I know it's kind of funny wording, I think, but --

DR. MELIUS: That -- that's the intent, fine. I just --

MR. GRIFFON: Yeah. Yeah.

DR. MELIUS: -- it sort of looks -- it struck me when I read this that --

MR. GRIFFON: I mean --

DR. MELIUS: -- sort of --

MR. GRIFFON: And I think draft implies that they supply it to us and then we -- we can change the lang-- you know.

DR. MELIUS: That's sort of like telling us what to do to tell them what to do. I mean it just looks a little... Okay, I understand.

DR. WADE: But to complete the --

DR. ZIEMER: This is verbatim from what we approved? I -- I honestly don't remember that part of it, either.

DR. WADE: Well, yes, in my -- it's my hope that it's verbatim. I mean Mark wrote it, so... I, on your instruction, have developed an independent government cost estimate that I've provided to the contracting officer. But

again, you'll see the proposal and we'll discuss the proposal in closed session.

DR. ZIEMER: And actually I think we'll have the opportunity to -- we -- we can reword this slightly if it's not what we want, or -- or we can say we're not actually going to task you to actually do our procedures.

DR. MELIUS: I think my concern was somebody on the outside looking at this is going to say what is this Board doing, you know, telling the -- you know, again, asking a contractor to tell us what to do to tell them what to do. This whole -- something's not --

MR. GRIFFON: Yeah, you --

DR. MELIUS: -- quite right there.

MR. GRIFFON: -- (unintelligible) you know the intent (unintelligible).

DR. MELIUS: Yeah, I don't (unintelligible).

DR. ZIEMER: Yeah, I -- I think I thought the intent was they would draft procedures on how they would review the petitions on behalf of the Board.

DR. MELIUS: Yeah. Yeah.

DR. WADE: Okay. So that's the status of the...

DR. ZIEMER: Okay, this requires no action today, however.

DR. WADE: Right. There is one other item that I -- I brought to you last time and that is to get a sense of the work you would like to task SC&A with next year.

MR. GRIFFON: Can -- can we -- I'm sorry, just to go back to the last item, but one question on a closed session. Is there any way -- I know we've brought this up before, but I don't even know if we'll have any of this information beforehand, but I think this is critical to get this moving. I mean it's -- in my mind, I thought we would have been having a closed session by now to approve the proposal, but is there any way to expedite this by having a phone session? I know we've asked this before, and I don't -- I think the answer is that we cannot have a closed session on phone.

MS. MUNN: That's what we were told.

DR. ZIEMER: There was a -- the issue of -- of assuring the privacy of the...

DR. WADE: SC&A has recently received this. They have a month to prepare, so it --

MR. GRIFFON: Oh, okay.

DR. WADE: -- it sort of coincides with our August meeting.

MR. GRIFFON: So (unintelligible) doesn't matter anyway, yeah.

DR. ZIEMER: Very good. Thank you.

MR. GRIFFON: It's moot.

DR. ZIEMER: Lew, I don't -- I -- I think we still need to hear from Kathy --

DR. WADE: Okay.

DR. ZIEMER: -- and we need to do this, and I know she's been waiting patiently. I think we should go ahead with the report on the second 20 -- actually 18 -- cases. Let's do that.

UNIDENTIFIED: (Unintelligible)

DR. ZIEMER: Oh -- then we'll -- we're going to come back to this. I think we need to hear from Kathy.

REPORT ON THE REVIEW OF THE SECOND 18 DOSE RECONSTRUCTIONS

MS. BEHLING: Can you hear me?

DR. ZIEMER: Make sure it's on. Is the light on?

MR. GRIFFON: (Unintelligible) hearing it on the...

(Pause)

MS. BEHLING: Okay. Can you hear me?
DR. ZIEMER: Yes.
MS. BEHLING: All right. So good afternoon. I'm Kathy Behling with SC&A and I appreciate having an opportunity to present an overview of our findings of the second set of 18 cases -- case reviews.
Since submitting our report to the Board on May 9th of this year, we've conducted and we've held discussions with the two-member Advisory Board teams regarding findings associated with their assigned cases. I think we've contacted most everyone on the Board.
We've also met with NIOSH on May 31st in Cincinnati to discuss their findings -- to discuss our findings of these cases, and we, during that meeting, attended a -- attended a two-day familiarization training on the work books at the ORAU facility. And I'll get into that discussion a little bit further -- a little bit later.
We also or I also initiated generating the matrix for the second set of 18 cases, which I have submitted to Mark and I'm sure Mark and I will be working over the next few weeks to

compile the matrix and submit that to the Board within a few weeks.

I'd like to start by just explaining to you SC&A's approach to doing dose reconstruction reviews, and this approach parallels what the -- the Board-approved statement of work to SC&A when we started this project.

And there's three key elements that we look at. First of all we review all of the data that's collected for the case and we assess those records for the completeness and adequacy for use in estimating doses.

Second we look at internal and external doses, and we first of all take the IREP input sheets and we attempt to reproduce all of the doses assigned by the dose reconstructor. As you heard earlier as we were going through the matrix for the 20 cases, I'm sure there were times you questioned why we cited certain issues, but one of the things we do try to do is reproduce each of those doses. Even if there's only minor chan-- or differences in what we reproduce and what the dose reconstructor reproduces, we do cite that or bring that to the attention of NIOSH.

We assess whether the dose reconstructor estimated those doses based on the appropriate procedures and guidance documents, and whether that dose reconstructor understood and complied with the applicable procedures. We also lastly, under the dose estimate review, evaluate whether the assumptions used in the dose reconstruction to estimate doses are fair, consistent and well grounded in the best available science, as stated in the regulations.

And then lastly, we look at the Computer-Assisted Telephone Interview to evaluate whether NIOSH has addressed all of the work histories, the monitoring and work practices, and incidents and events that were discussed or that were addressed or discussed by the claimant. If there's any other documentation that's available from the claimant, we also look at that information and review -- or determine whether NIOSH did address anything else that the claimant may have provided.

Now this next slide, here's something you have seen quite a few times. This has become a reoccurring theme during this meeting, but

because of the importance of understanding NIOSH and ORAU's approach to the dose reconstruction process, I'm going to repeat it one more time.

Initially when NIOSH sits down and starts to look at a case they have a group of individuals that screen these cases and prejudge or categorize them into one of these three -- these three categories. And this is important to the dose reconstructor because she or he will use different procedures or different steps in the procedure based on what category that case falls under.

Specifically -- and I won't belabor this because, as I said, I know you've heard this many times over the last two days -- but the minimizing approach is an approach that is used when it's determined that there's most likely enough data available that the dose reconstructor does not need to possibly complete the entire dose reconstruction. It's considered an underestimating asses-- assessment because the -- even with the partial data, the POC will be greater than 50 percent. And once they've determined that the POC is

greater than 50 percent, they can stop the dose reconstruction process.

The second case, the category two, is the maximizing or overestimating -- yeah, overestimating approach which, again, uses very conservative and overestimating claimant-favorable -- sometimes excessively claimant-favorable -- approaches to the dose reconstruction.

And in the third category is the best-estimate approach, which obviously is going to look at more site-specific data and attempt to use information that's as scientifically defensible as -- as the information will allow.

Now this table provides you a list of 18 cases. And as you can see, these 18 cases are represented by 13 sites, by eight types of cancers and a range of POC values. Typically they're a little bit higher range of values.

And I'm going to once again explain to you, in each of these cases I looked at that particular case -- and you can review these in your tabs, and I make examples of the tabs as we go along.

The -- when you see maximizing external, that means that in this particular case on tab 21

the dose reconstructor used maximizing assumptions. And if I can give you an example in tab 21, it just so happens that they in that case used -- they took the reported and missed annual doses and they multiplied it by a standard correction conversion factor of two, implementing the ORAU-TIB 8 guidance document, and they also took an organ dose correction factor of -- they also multiplied organ dose correction factor of 1.244 and applied that to a 30 to 250 keV photon dose for all years of employment. So it gives you an idea of the type of overestimating assumptions that are applied in these maximizing external dose cases.

And I indicate here also the hypothetical internal dose. The -- ORAU has a procedure, OTIB 2, which is the maximizing internal dose estimates for certain DOE complex claims. And this is often used by the dose reconstructor or typically used by a dose reconstructor in a maximizing case. And what this procedure allows the dose reconstructor to do is he has a maximum -- a maximum internal dose calculation work book, and he can select whether that

worker was -- worked at a facility that had a reactor, and in that case this work book will automatically generate the internal dose associated with 28 radionuclides and that's what gets entered into IREP.

The dose reconstructor can also select a model that is a non-reactor site, and that looks -- that then takes into account 12 radionuclides. This approach of using a hypothetical internal dose is only used in maximizing cases where you're not going to compensate because it is a very ov-- very conservative assumptions built in.

One of the other things I'll point out here, I think tab 26 I mention, rather than a hypothetical internal, it's an overestimated internal. In that particular case that was an Iowa case that we had looked at a ways back and that case they used -- the technical -- the Technical Basis Document which specifies how to -- how to calculate internal dose using an overestimating approach, so that's why I differentiated between hypothetical internal because in that particular case they did not use the TIB 2 guidance document.

Tab 34 (sic) you'll see a partial dose reconstruction which was based on external dose, and that's the category one, which is the minimizing or underestimating dose. They could utilize -- in that particular case the dose reconstructor was able to reach a POC value of greater than 50 percent by just estimating the external dose, and so that particular case was compensated, both tab 33 and 38.

Now the only one I haven't touched on is tab 27, 28 and 30 where you see a best-estimate external dose. In this particular case -- this is a very good example of a case where the dose reconstructor started using a maximizing approach for this dose reconstruction. He or she must have realized that using that maximizing approach and using a hypothetical internal dose assessment the dose reconstruction -- dose reconstruction resulted in a POC value of greater than 50, and the procedures that are used in these maximizing exposure scenarios and approaches cannot be used to compensate. And so therefore this -- those three cases had to be reclassified and re-- and reworked. The external dose had to be

reworked using external -- using a best-estimate. And once they calculated the external dose using a best-estimate approach, the POC was below 40 percent.

Okay. Now the next slide, I've taken these 18 cases and I've -- using the criteria -- the approach that SC&A uses in evaluating each of the cases, I identified the number of findings for each of those different categories by case. And as you can see, the external dose is the overwhelming majority of -- area where we have findings, actually represents about 83 percent of the total findings of 113 findings.

Within that -- that column of external dose, the -- over 50 percent of that dose is represented by the tabs 27, 28 and 30, which as I mentioned in the previous slide were the dose reconstructions that were conducted using the best-estimate approach. The reason there are so many findings under external dose for the best-estimate approach because as we began working on reviewing these case, we realized that the dose reconstructor had used a work book. And at the time, SC&A was not aware of the use of these best-estimate work books that

employ Monte Carlo methods. And so we sat down with the procedures and we could not reproduce the numbers that the Monte Carlo methods had produced. We couldn't reproduce the uncertainties using the procedures, although I will tell you we got close in some instances. So that is why there are so many findings associated with those three tabs. It had to do with us not being aware of the work books. Since then we have -- as I mentioned earlier, we have had a two-day familiarization training on the work books, and I'll discuss those a little bit later.

Okay, this chart took those 18 cases and the 113 findings and I broke down those findings based on -- categorized those findings to give you an understanding of what those findings really represent. And I'm going to start with the top, the review -- reviewer could not reproduce assigned dose, which is what I just discussed. The reason we couldn't reproduce a lot of the assigned dose was the use of these work books, and I'm going to go counterclockwise (sic) and try to give you some examples of each of these cases -- of each of

these categories.
The second category is the procedure used to estimate doses was not referenced. Again, this goes back to the -- a lot of the cases that fell under this category goes back to the three cases, tab 27, 28 and 30, because based on what the dose reconstruction report told us as to how that dose was reproduced, we could not -- we could not reproduce that dose and therefore we had to assume that there was -- that these procedures were not properly referenced and because the work books are not referenced in the dose reconstruction report.
The next category is procedures error -- procedural errors and inconsistencies, which represents four percent. And I won't belabor this one because I think Hans spoke to this issue earlier today and had -- gave you quite a few examples. I can point out tab 37 and various tabs that do have some procedural inconsistencies. If you want to go to those tabs and look specifically at those findings, tab 37 would be one example.
The only other issue I will bring up under the inconsistency -- it just happened we had two --

we were -- we were working on an Iowa case and we were also working on a Paducah case, and in both instances this -- this points out a con-- an inconsistency that Hans didn't necessarily discuss earlier, but we took notice that in the Iowa Technical Basis Document there was a dose estimate for the lumbar spine, which recommended a dose of 330 millirem to the colon. And when we compared that to the dose that is recommended for the -- in the TBD for the Paducah site, they recommended 2.9 rem for that same lumbar spine dose estimate to the colon and there's an area of inconsistency that is rather significant and -- and we could not -- you know, could not come to an understanding on why that was.

The next area is unresolved CATI issues. As I said, one of our areas of review is looking at the CATI report and trying to determine if NIOSH looked at all the data provided in that report and attempted to resolve any incidents and include any -- any of that information in the dose reconstruction. In this particular case we have a fairly low -- fairly low incidence of unresolved CATI issues at six

percent.
The next item is the data collection issues and here is also a very small incidence of findings. And typically this again will go back to a CATI issue. An example is tab 36, which the -- the finding is associated with the data collection relative to the -- a CATI issue. In this case NIOSH -- DOE's reply to NIOSH's initial request for an incident investigation record -- report failed to acknowledge whether the data -- there's a form that the -- NIOSH includes with any documentation it sends back, and it must indicate on that form whether the data was not readily available or if the data did not exist. And in this particular case, NIOSH had requested an incident report from DOE. However, they didn't send any information back and they didn't indicate whether the data was actually available or if it did not exist. So it just raised a red flag in our mind as to whether the -- all the data was actually collected.
Now this next category is misinterpretation of procedures or procedural noncompliance. And

again, I won't belabor this issue because Hans addressed this earlier. Misinterpretation of procedure goes back to these two procedures that we routinely see the dose reconstructor being confused by, and that's the TIB-8 and TIB-10 procedures, which -- the TIB -- these are both standard complex-wide conversion correction factors for overestimating external dose, either associated with TLDs or with film badge dosimeters.

An example of procedural noncompliance is -- a good example is one we talked about earlier, also, and that was the issue of rarely or if -- I don't think we've ever seen a case where the dose reconstructor has recorded dose and has actually attempted to determine what that uncertainty is based on the guidance provided in the Implementation Guide 001. It's just, as Hans indicated, too complex. And so I considered that a procedural noncompliance issue.

Moving on, the inappropriate procedure, method or assumption used, there 14 percent of our cases -- of our findings fell under that category. An example of that would be tab 22.

In fact, tab 22 has three findings that fall under this category. The first one is -- there was what we considered an inappropriate assumption used for calculating missed doses where -- again, I think this is something we talked about during the matrix. In this case the dose reconstructor assumed 12 cycles per year rather than a quarterly -- quarterly badge exchange. And as we noted when we went through the matrix on the first 20 cases, we cite issues that are not only underes-- overestimate -- or underestimates but also overestimates because we're trying to look at issues that -- we're trying to ensure that these dose reconstructions are done in a consistent manner and also done in a scientifically sound manner. In fact, that leads to the next category -- oh, let me finish the -- let me go back to tab 22 and finish the other two findings associated with the inappropriate procedures, methods and assumptions.

The second finding under tab 22 was the use of an inappropriate procedure for estimating electron doses, at least based on our understanding of the procedures. And the third

issue was that the dose reconstructor selected an LOD value that we could not verify based on the Technical Basis Document, based on complex-wide procedures. We don't -- we were not con-- we could not convince ourselves where he -- he or she got that LOD value, so that particular tab identifies three findings that fall under that type of category.

The next category is model or assumption selection is not scientifically sound. And here again at tabs 36 and 37 are good examples where the findings that fall under this category are typically obviously excessive overestimations of dose that cannot be justified based on efficiency, and they lack scientific merit. For example, the hypothetical internal dose model that we were talking about, when the dose reconstructor selects a model for the hypothetical internal, they'll often select that highest non-metabolic organ, which was the colon, and in some cases they will -- even though the -- the actual organ of interest would be available for them to select, as opposed to selecting the highest non-metabolic, which is the colon.

And in addition, they'll often select the 28 radionuclides, which are associated with facilities that have reactors, as opposed to when the individual actually worked at a non-reactor facility they could have selected the 12 radionuclides, which will give a lower dose. And so we do cite that as a finding.

Then the last category is the dose reconstructor did not consider all potential sources of exposure or the exposure was not properly accounted for. And as is obvious based on the title of this, in most cases these are generally underestimations of dose and they're due to judgments typically by the dose reconstructor. An example would be in tab 23 of our report. In that particular tab the dose reconstructor did not assign any missed neutron dose for that particular case. And based on the work locations that the individual worked, we felt that it would have been appropriate to assign neutron doses.

(Unintelligible) see a -- oh, okay, an example of exposure not properly accounted for is al-- can also be seen in tab 21 where the dose reconstructor considered occupational medical

exposure. However, he only -- he or she only considered it for one year of employment rather than an annual X-ray throughout the employment period. And so that -- in tab 21 gives you another example of exposures not properly accounted for.

Then finally, to give you a complete picture of the breakdown of these findings for the first 38 cases that we've reviewed, I've compiled -- I've added to the second set of 18 cases the findings from the first set of 20 cases and reproduced this chart. And as you can see, there's really very little difference. There was one category added, which is a calculational error category where I think we discussed that this morning in the 20-case matrix where there was an input value into IREP that was an error -- calculational error that was put in there. But as you can see throughout these first 38 cases, most of the types of findings are very consistent.

So in summary, I believe that the root cause of a lot of these findings have to do with procedural issues. The -- as Hans discussed this morning, the procedures are somewhat

ambiguous. It's obvious that the dose reconstructors in some cases are having difficulty following them. There are overlapping procedures and sort of competing procedures. It gives the dose reconstructor numerous options as to how they want to go about calculating the dose.

A good example -- well, an example of various options that can be used is -- can be seen in our tab 27. The -- in that particular case I believe we've included a table that indicated the variations of calculating the on-site ambient doses and the -- the Technical Basis Document gives you about three or four options, plus you have other procedural options. And when you get right down to it, the dose associated with those options -- there's very little difference in the dose and, again, this is one of those issues that does not seem to comply with an efficiency or timeliness process.

The third root cause finding under the procedures is procedure inconsistencies and errors which, again, Hans discussed this morning and I won't belabor that.

Another category of what we consider root cause findings are judgments or assumptions that are made by the dose reconstructors. As I pointed out, there are -- failure to consider all potential sources of exposure -- it's typically a judgment issue. The dose reconstructor reads -- or looks at all of the documentation and where the individual works, and in a lot of cases we feel he -- he or she should have considered neutron doses when maybe they didn't, or should have considered additional missed photon dose. It's -- it's just an issue of -- of a -- of a judgment call by the dose reconstructor which differs from what we think would be a more appropriate judgment.
Again, failure to properly account for all doses. I gave you an example of that.
Selection of model and parameters that are not scientifically sound. In this particular case it results typically in an un-- an overestimation of dose, but we still feel that based on what is required under the regulations that the dose reconstructor should be consistent and scientifically sound in making their judgments when it doesn't necessarily

impact efficiency. And many of the procedures do have tables and appendices that allow that dose reconstructor to select line items such as the example that I use, as opposed to -- when they're calculating an internal dose as opposed to using the colon, they do have the option of using a prostate or a breast as the organ of interest, which may be the actual -- they should select the actual organ of interest for that particular case in -- in our way of thinking, even if that is a less claimant-favorable dose that results.

And lastly, the selection of inappropriate procedures or methods for assigning doses, and I believe this speaks back to the procedural issues. And once we go through our iterative process of trying to identify inconsistencies and clarifying the procedures, this may be an item that will -- where we'll see a reduction in the findings.

Now I -- one of the things I wanted to point out throughout this is -- to date, the impact of the dose reconstruction audits that we have done -- the majority of these dose reconstructions, in fact the large majority,

have been maximizing approaches to dose reconstructions. And therefore, even if we find areas where we feel there was missed photon dose, a missed neutron dose that wasn't accounted for, it has very little impact on the potential for affecting a change in compensability because this approach cannot be used for compensation. If that dose were to be considered, if -- if NIOSH agrees, as in one particular case we -- they did agree that there may have been some neutron dose that wasn't accounted for. However, if that would have put that dose reconstruction over 50 percent, the dose reconstructor would have had to go back and reclassify that particular case as a best-estimate approach and they would have attempted to -- usually they'll start to go into -- they'll first of all go into the external dose because it's a little bit easier to refine that dose. And if that gets that particular case below the 50 percent -- to 50 percent, then that -- that will be adequate for that dose reconstructor. He can stop at that point. But it's important for you to understand that currently the impact that our audits have had,

although they have not changed -- they have not impacted changes in compensability, I think they have still pointed out areas where the procedures need to be clarified and there is some room for the -- for improvement.

Now when we start getting into cases that are much -- that -- that -- where the do-- the dose reconstruction is being -- is -- is being done using best-estimate approaches, then I believe that our findings may be more significant.

Now with that being said, we have had familiarization training on the work books and, based on our understanding of those work books, it appears that NIOSH is preparing for doing more of the best-estimate doses. And the work books utilize a lot of the information in the site profiles and allow that dose reconstructor to take a work book and the -- a lot of the site-specific information that comes from the -- from the Technical Basis Document is part of that work book and will possibly help to eliminate a lot of the misinterpretation of procedures that we're seeing in our -- in a lot of our findings.

However, it's important to note that SC&A or --

or -- there's only 2.5 percent of the dose reconstructions are expected to be audited as a part of this task four, so therefore it is important that we take corrective actions in behalf of the other 97.5 percent of the claims. And I believe that sum-- that summarizes my -- and if you have any questions, I'd be happy to answer them or if Hans wants to -- I don't know if Hans wants to add anything to my presentation. Okay.

DR. BEHLING: Yeah, just as a comment, I think Kathy just summarized it in a final slide, the impact of our findings -- and of course they were quite a few -- seem substantial, but right now we all know that the maximized doses are very much immune to -- to errors because there's so much fat built in there. I think Kathy tried to summarize this in one of the particular cases where we feel that in one instance the missed neutron dose may have amounted to about 12 rem, possibly, if you were to collate all of the missed neutron doses, et cetera.

On the other hand, that particular case had a hypothetical internal dose of about 15 rem, and

of course this person had no indication of having been exposed. There was no data on internal exposure from bioassay data. So had that additional neutron dose pushed him over the limit, the first thing that would have happened is that -- well, I guess we're going to have to take away your hypothetical, so we would have ended up with the same dose as we would have without the correction. And this is the -- the immunity of maximized doses from any findings. The -- the real test of dose reconstruction in terms of precision and accuracy will come when we deal with best-estimate doses.

DR. ZIEMER: Thank you. Thank you, Kathy.

DR. WADE: Yes.

DR. ZIEMER: I -- thank you very much. One comment, in the future -- it might be helpful if we do some of these pie charts in the future to be consistent both with color and location. It would be much easier to -- it's a little bit --

MS. BEHLING: I meant to apologize for that. I realized that afterwards, I --

DR. ZIEMER: You're aware of it then. Thank

you.

MS. BEHLING: I do apologize. I should have kept them consistent.

DR. ZIEMER: They're very colorful, however. Gen Roessler.

DR. ROESSLER: I have a comment and then a question. My comment is that I attended the subcommittee meeting in Cincinnati recently when these cases were presented, and I was really impressed with the procedure. I think this is a very effective way of looking at the audit summary of the dose reconstructions, and then hearing NIOSH's interaction, it just seems very effective and I think a lot can be learned from this.

My question I think is directed toward Mark. As I sat there at the meeting and went through the big notebook and saw the amount of detail that went into the review of these dose reconstructions, I kept thinking what's going to happen with the advanced dose reconstructions? What more is going to be done? And I went back to when this was all defined and I think one of the things that will happen with the advanced is that the contractor

will do more searching for data to see if there's any data that's missing. But then what else is going to happen? Can -- can you enlighten me, Mark?

MR. GRIFFON: I'm -- I'm not sure. I mean one -- one cri-- I think one part of it -- I'd have to look back at the scope myself, but one part I think is the -- the data question. Verifying the source data I think was -- was one area where we expected that. I -- I think -- you know, we -- we've -- some of that is happening in site profile reviews, so there might be some overlap there, too. But I -- I think that's one area. I think the -- I think the best estimates, as Kathy described, will be the more extensive reviews, just by their nature 'cause they're more detailed assessments. But I'm not sure ex--

DR. BEHLING: Yeah, let me --

MR. GRIFFON: -- how much we're going to add onto an advanced review in reality, you know.

DR. BEHLING: I think the real test for the auditor will come in looking at the internal doses. Right now most of the internal doses have been relegated to the hypothetical 12 or

28 radionuclides, which is a simple code that we run. We look at the numbers, we say yes, these are -- and the only findings we had up to this point in time is the use of a surrogate colon organ when in fact they should have used let's say the rectal tissue, which is the issue -- the tissue of interest and so forth. But in the future when best estimates will have to address internal exposure, we're going to have our work cut out, as well as of course NIOSH will. When you look at urine data, when you look at chest counts, when you look at whole body counts and you have a guy who's worked there for ten, 20 years and you're trying to assemble his bioassay data and make sense of it, there's going to be a lot of subjective thinking here. And -- and the IMBA code is not as prescriptive as might be. There's a lot of room for judgment here, and of course we'll have to look at this and saying is this a claimant-favorable judgment, how do you interpret your bioassay data, is it done in a claimant-favorable way. This is going to escalate by orders of magnitude in terms of sophistication, both for the dose

reconstructors as well as for the auditor.

MR. GRIFFON: I -- I guess another way -- I'm -- I'm just reflecting on Kathy's presentation and one possible example where the advanced review might differ in this case is that that form that they found where they -- it was a data request to DOE about an incident report, and there was no indication as to whether it -- you know, they didn't get the document, but it wasn't clear whether it was available and not provided by DOE or it wasn't available. And I think on that kind of -- that might -- in an advanced review we might ask SC&A to say -- follow through on that and see -- you know, what -- was it one or the other, what happened to that and is it available and would it have impacted the case. So I guess if I had to draw an example -- but I think Hans is right, too, on the -- on the best estimates I think we're going to get into more of the internal dose questions where you have to...

MS. BEHLING: And if I can just interject, yes, these first 38 cases have been basic reviews. But as I started out by saying, we do try to reproduce all the doses and we sit down

initially with the IREP input forms. And to reproduce the dose, you need to go through this extensive process.

I believe that in addition to -- in the advanced reviews, which is our next set of 22 cases, as Mark indicated, we have a little bit more latitude to possibly go to or contact the DOE facility to try to get documentation that NIOSH maybe did not get.

I also believe there's a little bit more latitude with regard to information that we may find in the CATI reports. I believe we can possibly contact coworkers or if there's a discrepancy there we -- we can go a little bit further with the CATI reports, based on the guidance that was provided to us for the advanced reviews.

DR. ZIEMER: Jim.

DR. MELIUS: Yeah, I'm not a member of the subcommittee, but maybe somebody could help me out a little bit in terms of this issue of, you know, where's the appropriate place for us to put our resources in terms of this review. Seems to me that this work book concept, which I now understand a little bit better and I

understand why NIOSH and their contractor is taking that approach, but at the same time it certainly raises the possibility that an error in a site profile gets carried over to a work book, which can then have a very significant effect on a whole series of dose reconstructions with, in some ways, less opportunity for the dose reconstructor to catch that error 'cause it will not be as transparent or involved a process. Now it's good 'cause it -- it's much more efficient for them and I think we want that. At the same time I think it -- it does raise issues regarding potential for -- for errors and sort of where we go if -- if a problem is undiscovered from a site profile it's going to get carried through this process and could potentially affect very significantly a number of these, you know, best-estimate dose reconstructions and therefore affecting some of the outcomes. So have -- has the subcommittee discussed where we go in terms of resources and priority?

DR. ZIEMER: Jim, excellent question, and let me in a sense postpone the answer for a few moments 'cause we're going to hear from John

Mauro in just a few minutes and this will relate to particularly the topic of note books and some tasking that we might have before us for our contractor that would address that very question. But it certainly is a pertinent question to -- to follow up now, not only on the dose reconstructions but on the procedures review itself.

Let me see if there's other questions for Kathy.

DR. WADE: Kathy, where are we in terms of the next round of reviews? Just could you fill us in on status?

MS. BEHLING: Actually we have just really started doing the next round of -- I think we've looked at about two of them.

DR. BEHLING: We are -- I -- I had hoped to have been well into the next 22 cases, but due to the changes in -- in -- in interests regarding some of the TBDs I was drafted into, I've had to forego some of my time and -- and not dedicating too much to those cases --

DR. ZIEMER: Understood.

DR. BEHLING: -- but I hope to, as soon as -- in fact, starting tomorrow we'll get back into

the next 22 cases. And unless there's some recommendation that perhaps we may not want to even do that, but I think that's a topic for discussion by the Board.

MS. BEHLING: If I can also just expand on the work books, one of the things I intended to say on the tab 27, 28 and 30 that I talked about at length that indicated that it was a best estimate for the external dose, there were quite a few findings that SC&A had because we couldn't reproduce all of those doses. And once we have an opportunity to take a more thorough look at that particular work book, which happens to be the Savannah River Site case, many of those findings may be withdrawn. But to us I think it's very important that we have a -- a full understanding of the work books. And as you indicated, Dr. Melius, if the Technical Basis -- the work books seem to be being developed as the Technical Basis Documents are developed, and it is -- it's actually a very good approach for the dose reconstructor to -- for consistency purposes and ensuring that the site-specific information is incorporated into one -- one work book,

which would -- certainly helps them. But right now we don't fully understand those work books and I do think that's an important aspect and we will contin-- we will, at least in these 18 cases, look at the work book associated with the Savannah River Site to get a much better understanding of that.

DR. ZIEMER: Thank you. Other questions for Kathy? Okay, thank you very much.

Now let me just point out where we are in the scheme of things here. We have a task three follow-up document, I think, to act on, do we not, from out of the subcommittee? Am I correct?

MR. GRIFFON: Talking about the matrix?

DR. ZIEMER: Help me remember what -- yeah.

MR. GRIFFON: I mean I think we wanted -- I think we wanted to just discuss the process for going forward with --

DR. ZIEMER: Right, for task three.

MR. GRIFFON: -- accord-- to -- yeah.

DR. ZIEMER: We have -- we -- we need to hear from Larry Elliott yet on the status report. That can -- Larry can make that pretty brief, I know. Right? We have --

DR. WADE: Well, we can also forego that.
DR. ZIEMER: It's a program update.
DR. WADE: Right.
DR. ZIEMER: Also --
DR. MELIUS: Can I e-mail my usual questions to Larry?
DR. ZIEMER: Also I -- I guess there's tacit understanding, but we need to make clear what the next steps are on the -- the 18 cases that Kathy just reported on. I think there's an assumption that we would proceed in a process parallel to what was done in the first 20 cases where we get the NIOSH responses and -- and -- and go through the matrix and basically I think that's the expectation of both NIOSH and SC&A. Does that require any specific Board action for that to proceed or can we take it by consent that that process will move forward as it was done previously?
MS. MUNN: I thought we'd established that at our -- at our second round, that that's --
DR. ZIEMER: I believe that's been put --
MS. MUNN: -- the way we were going to proceed.
DR. ZIEMER: -- in pace -- place. I just want to make sure everybody's comfortable that

that's what will happen and that --
MS. MUNN: Unless --
DR. ZIEMER: -- we will move forward in --
MS. MUNN: -- we decided we were going to change our procedure.
DR. ZIEMER: Was that the understanding of both the contractor and NIOSH, that we would proceed on the second 18 cases in a manner similar to what we did with the first 20 in terms of going through the matrix process, the NIOSH responses and --
MR. GRIFFON: We -- we started already but, you know --
MR. HINNEFELD: Well, we -- we can certainly --
DR. ZIEMER: Yeah, under way already, yes.
MR. HINNEFELD: We expect that we would do that, I think.
DR. ZIEMER: Right, thank you.
MS. BEHLING: And in fact I believe that process --
DR. BEHLING: (Unintelligible) pretty far along.
MS. BEHLING: -- has been started, our meeting in Cincinnati on the 31st of May.
DR. ZIEMER: Yeah. Just make sure that the

Board is aware that this --

MS. BEHLING: Yes.

DR. ZIEMER: -- will continue and will come to a closure time similar to what we did earlier today on the second 18.

Does the group wish to have a break, or do you want to plow ahead?

DR. WADE: Well, I wonder about John's availability, though. I...

DR. MAURO: Yes, I have a relatively brief presentation that it would be helpful to me if we can take care of that now, if that's okay with...

MR. GRIFFON: You know, I -- I do have one question, though. I -- I'm worried that you've got public comment on the agenda and I --

DR. WADE: At 4:15.

MR. GRIFFON: -- I fear that we're not going to have a quorum 'cause a lot of us have -- I know that I have a 7:00 o'clock flight and so I don't know if -- if there's people that are signed up, maybe we should --

DR. WADE: I think --

MR. GRIFFON: -- instead of --

DR. WADE: -- we should hear John while he's

here.

MR. GRIFFON: Okay. All right.

SC&A CONTRACT ISSUES

DR. ZIEMER: Okay, John Mauro. I think John just has like one slide.

(Pause)

DR. MAURO: My slide is not here. Unless I'm -- I don't see it.

DR. WADE: Well, it has been handed out, John.

(Pause)

DR. ZIEMER: John's slide is a -- what would look like an organizational chart. It was I believe e-mailed to the Board members earlier.

UNIDENTIFIED: Correct, nobody's got it.

DR. MAURO: Okay. Well, we'll -- we'll make do with the -- if everyone has a --

DR. ZIEMER: We have copies, John.

DR. MAURO: You have a hard copy and I think we can work with the hard copy. What -- what this -- everyone should have in front of them this one -- this little chart. What -- what -- what this represents is -- as a result of the work we've done over the past year and a half, we all know -- and we're -- we're in the home stretch. That is, we're going to be through

with the period of performance for all our work, for the four tasks, by the end of September. And what we really have is 22 additional cases to do. We've got three more site profiles, and we will have accomplished fulfilling our mission for the first four tasks.

What this chart is is over this year and a half we asked ourselves -- we regrouped about two weeks ago and said listen, can we be doing our work in a better way, are there other things that we should be doing or do things in a different way than we did over the past year and a half. You know, we have our four tasks. And the question becomes do we need to change anything to -- to help the Board accomplish its mission in a more efficient and effective way. Well, what I did is I asked myself the question well, is -- is NIOSH's dose reconstruction process changing, and if it is changing in a way that -- does that mean that we need to change the way we go about our business of auditing and reviewing their work. And the answer to that is yes. And this chart is my attempt to capture the changing nature of the

activity -- the dose reconstruction process that NIOSH has employed in the past and how it's changing and it's going into a new direction.

Let -- let me explain this chart. You'll notice on the top half of the chart is a box that's -- where I make reference to minimal use of site profiles, and a box right beneath that that says original sets of procedures, and the to the right is arrows pointing to primarily min/max dose reconstructions. What that says is in the past -- and based on our review of the cases that we've just heard, the 38 cases, what's been -- what we see is that the -- the cases we've been looking at have been primarily min/max type analyses as opposed to these realistical (sic) best estimates. And -- and in order to perform those dose re-- dose reconstructions, the -- NIOSH has made -- basically has made use of, of course, its site profiles, but made minimal use because using the min/max approach you don't really have to get into the nuts and bolts of the details. And in addition, they have their sets of procedures.

Now -- so our work has been to review this -- a selected number of site profiles, review their procedures -- and you heard about that today -- and of course review the dose reconstructions themselves. And what we found is that yes, there -- we find a long list of findings in regard to the -- the site profiles themselves, a long list of findings related to the procedures that were used, and of course -- this is re-- we all saw how -- are making certain findings related to the actual dose reconstructions. Now -- and -- and you have all our reports and everything's before you and now we're actually in the process now of trying to achieve some closure. So to me, everything's proceeding as planned.

But then I asked myself where -- where were we falling short or where may-- may be some weaknesses in -- in what we've been doing, and -- and maybe we should think about a new way of doing things. And one of the first things that comes to mind is that when we review a dose reconstruction, as described by Hans and Kathy, we -- we really emphasize the procedures that are being used, the written procedures, trying

to understand what those procedures say. We don't -- when we review the case -- the actual cases, we read the site profile and the supporting TBDs, but to the extent we can, we -- we get a feel for whether or not it looks like they've got a good scientific basis for their -- for the -- to base their dose reconstruction. But most of the time, the on-- there's only one set of actual cases where -- that we reviewed where we benefited from the -- the site profile review and that was Bethlehem Steel. So that -- in fact, one -- one of the first sets of cases -- and in fact I reviewed those cases -- had to do with Bethlehem Steel and I was fortunate enough to be able to stand on the shoulders of all the folks that did the review of Bethlehem Steel. We were -- now that's not the case for just about any of the others. That is, most of the other studies that -- dose reconstructions that was reviewed were being done about at the same time that some of the site profiles were reviewed. So what happens is our commentaries and findings certainly reflect the deficiencies or issues that we raised as described by Hans and Kathy

really don't fully reflect perhaps some problems might -- that might exist in many of the site profiles that -- that are being described and discussed at these meetings, also.

See, there's a -- we have a disconnect. That is, we could probably do a better job if we had more of the site profiles under our belt. And as we do more and more site profile reviews, we're going to be in a better position to -- to do a more thorough review of the actual cases. Now -- now what's happening, though, is we -- we have all these findings, 103 findings on the last 18 cases, but what we found out is none of them really -- as Kathy pointed out, though we have these findings, the -- and the root cause of many of these findings go back to the procedures. Well -- and some problems that we're finding with the procedures, but they really have no -- have not had a profound effect on the outcome of what we've reviewed so far because the min/max cases are really pretty robust. They -- you -- it's really hard to flip any of those, so -- so -- but, now here's what -- now we're going to move to the bottom

half of my little chart here. Okay? What's happening now is NIOSH is moving out of a mode of min/max and they're moving into a mode of doing realistic cases. Okay? The tough ones. Okay? The low-hanging -- they're getting away from the low-hanging fruit. But -- and -- and -- and what's happening now is -- so NIOSH is moving away -- now what's happening is in order to support that, lot -- lots more Technical Information Bulletins are being prepared to supplement the -- the -- the site profiles because they have to address more and more sophisticated issues. More procedures are being written and the whole methodology for doing dose reconstructions get -- are -- are maturing and getting more and more sophisticated, to the point where -- to make sure that they're being done correctly, quickly, efficiently, to do realistic estimates they need work books. So the work books are in -- are moving in place. And so all of a sudden the mode of operation, as I see it -- and you know, our -- our view of the world is now -- NIOSH is shifting away from let's say just using the simple site profiles, the simple sets

of procedures to do min/max calculations. Now they're moving into much more sophisticated work books, spreadsheets, you -- more advanced Technical Information Bulletins in order to do best estimates or realistic analyses.

Now, so what -- what does that mean? Okay. If -- if they're moving into that mode of operation, we have to move into that mode of -- mode of operation. And what does that mean regarding our tasks? The tasks, as we've crafted them to date, are inadequate to meet that demand. And what I see is -- in the future to -- is tweaking task one and tweaking task four, and let me explain what I mean by that.

I see -- let's say we -- we're going to move on and do a review of another site profile. I think that -- and -- I think that in the process of reviewing the site profile we should also review not only all the TIBs that go with it 'cause they have all these supplements that are always being added, but we should also be reviewing the work books that implement that site profile because the work books really come in two types. There are generic work books

that sort of cut across the board, but there are also work books that are primarily site-specific. There are INEEL work books, there are Savannah River work books. And so what I see is -- in the future as being very important is review your TBD or site profile reviews and their supporting Technical Information Bulletins, but simultaneously review the work books to see the degree to which the work books faithfully capture the guidance contained in the TBDs, so this -- because the work books, as far as I'm concerned -- the site-specific work books -- are really part and parcel of a TBD. They're part of the instructions and guidance. In fact, the work books appear to me to be coming where the rubber meets the road. This is how they're going to -- how dose reconstructions are going to be implemented. So it seems to me that when we're reviewing a site profile we should also be reviewing these work books and spreadsheets. But I'll take it a step further.

When we're reviewing the work books, I think we should also be reviewing some cases. Now this is a difficult problem, but you see, it's

really a three-step process. You -- you come up with the -- detect the science, the approach in the work book and TIBs. You convert that into a work book. Then the next step is they take the work book and they implement it and they do some -- they do some ca-- some realistic cases. And they say we're not doing min/max now. It was on with the real thing now. And in my mind, we have to integrate. We have to cut across the -- the three separate tasks that we have now where we're separately looking at procedures, separately looking at TIBs -- Technical Information Bulletins, and separately looking at dose reconstructions. I think that is -- I think that it -- we would benefit greatly and it -- and I'll tell you why -- what the great benefit is. It's going to make these much more -- we're going to come to closure much more quickly.

So we have this long list of findings. Right? I mean list of findings go on forever on -- on whether we're reviewing TIBs or reviewing procedures or reviewing dose reconstructions. If we integrate the three, we're going to find out what's important and what's not important,

because we're going to be -- in fact, in a way, this happen -- it's happening on Mallinckrodt. That's exactly what we're going to be doing on Mallinckrodt. We're looking at some real cases 'cause we -- we have to validate that the procedure that's been laid out -- whatever that procedure is that's being developed -- is in fact implementable and works. So it seems to me that that -- that is -- that just emerged out of this process we're in. I mean it wasn't by design. We sort of came to that consensus, this is how we're going to get through the -- the Mallinckrodt issue and this -- of course that was for an SEC, but I see that -- in a similar way, we need to cut across.

So my first recommendation is, in light of the new -- to shift toward work books. I -- I think that whenever we do review of a site profile under task one, it should also include work books and it should also include at least a selected handful of cases which are deliberately selected because they're best estimates so we could -- so we could find out whether the -- the process from cradle to grave is working, and whether or not it's an

efficient process and what -- and what issues are important. So that -- that's one of my first recommendations on how to do things differently, and it's all triggered because of moving from min/max to best estimates, and we're moving away from let's say just hand calculations or follow procedures and be -- and using these spreadsheets and work books. So I would tweak task one to do this full -- this flow I just described.

With regard to task four, which is our site -- I -- I think if we continue to do our two and a half percent, but I think we've got to get away from the min/max cases. You see, we've done -- we've done 38 cases. We're coming back with the same results over and over again, over and over again. So I mean it's almost like we -- we can do them, but are we really adding value now.

It seems to me that an effort -- when -- when -- when the cases are selected, when you go through your case selection process and you have your criteria -- you have all your criteria -- well, I think one of the criteria has to be is it a best-estimate. In fact, when

I was talking to Paul the other day and Paul said well -- well, doesn't -- well, if it's a 45 percentile POC, 'cause that's one of your criteria, POC, wouldn't that automatically make it one that's probably realistic. The answer is no, not necessarily. In fact, most of the times no. So part of your selection process should be specifically make sure we get some realistic ones in there 'cause I don't think we're going to get -- that we're going to get very much more out of our audits of min/maxes. We're going to start to really get -- we're getting a lot more out of reviewing the -- the -- the best estimate cases.

So my second recommendation is that we -- when -- when the cases are selected for task four, the next round, that an effort be made to get some realistic cases in there so we could really test it, you know, as opposed to just these min/max. So I mean I -- that really is the essence of the point I wanted to make and some of my thoughts on looking to the future and perhaps changing the way we're doing things a little bit. Thank you.

DR. ZIEMER: Thank you very much, John. And it

immediately poses a question. In fact I asked John this, also, and I'm not sure we knew the answer to it, but perhaps Stu or Jim could answer this. Do we have a way, a priori, on -- on closed cases of determining -- you know, we know what sites they're from and we know POCs and so on. Can we tell in advance whether it's a best-estimate case, or can we readily tell whether it's been a min/max versus a best estimate as a sorting tool?

MR. HINNEFELD: We -- we have a way to select that choice, but it's a -- the field is populated by the approving HP at the time he approves the dose reconstruction. He -- he decides is this an internal overestimate, internal both, internal -- you know, overestimate, both internal and external. And so they choose in that fashion. And probably a best-estimate is chosen fairly reliably. Now the reason I say that is we can pull up cases from that field -- you know, final cases with that field that's saying best estimate, but it may require a manual look to determine if a work book was really utilized in that approach. Okay?

DR. ZIEMER: Yeah.
MR. HINNEFELD: So it would be sort of a two-step selection.
DR. ZIEMER: And we don't have to come to closure on that today, but I wanted to find out if it's at least feasible to have that as a selection criteria, and I think you're saying it probably is feasible.
MR. HINNEFELD: It might be a two-step, and there's some Board working group members would probably want to look and see -- I would see -- I don't want us to do it because then we would potentially censor it --
DR. ZIEMER: Right.
MR. HINNEFELD: -- so -- so a working group member perhaps look at the --
DR. ZIEMER: Right.
MR. HINNEFELD: -- pulled on the -- you know.
DR. ZIEMER: Right. And --
DR. BEHLING: Actually, Dr. Ziemer, if I can add something.
DR. ZIEMER: Sure.
DR. BEHLING: In principle we should have been able to do that on the basis of POC. But as we now know, that has not been a successful

criteria. If you look at --

DR. ZIEMER: Right, that's why I'd asked --

DR. BEHLING: Yeah.

DR. ZIEMER: -- John that originally 'cause I think we thought that --

DR. BEHLING: Yes.

DR. ZIEMER: -- would capture these when we selected that -- the area --

MR. GRIFFON: Or I think --

DR. BEHLING: Yes.

DR. ZIEMER: -- just below 50 percent.

MR. GRIFFON: I think we had asked before whether we could --

DR. BEHLING: Well, let me -- let me --

MR. GRIFFON: -- come up with some criteria --

DR. BEHLING: -- explain something --

MR. GRIFFON: -- for efficiency, but I think we're asking the better question now, you can sort by --

DR. BEHLING: Well, and let me explain something. If you look at Procedure 6, ORAU Procedure 6, it does in fact state that if a best estimate exceeds 30 percent POC, it should be converted into -- a maximized procedure exceeds 30 percent it should be redone as best

estimate, which is not currently being done. So the procedure that exists currently is not being used. So any time you maximize a dose and the POC exceeds 30 percent, the procedure calls for revising that estimate and turning it into a best estimate. And so I'm sure in the past when we have selected -- when the Board has selected these cases and looked at -- oh, here's a case that's 42 percent, the -- the illusion is that it must be a best-estimate, otherwise --

DR. ZIEMER: Right.

DR. BEHLING: -- you wouldn't have gotten there.

DR. ZIEMER: Right.

DR. BEHLING: But the truth is, that 42 percent should have never occurred to a maximized dose reconstruction based on the procedure requirement that says any time you exceed 30 percent you convert it to a best estimate. And there's -- there's multiple benefits to that. One, you don't obviously give the false illusion to the claimant that oh, my God, I got very close. I think there's a multitude of benefits from doing --

DR. ZIEMER: Right.
DR. BEHLING: -- exactly that, but it's not being used.
DR. ZIEMER: Right. So the -- the tweaking of task four is more realistically a change in our selection criteria rather than a change in the task.
DR. MAURO: Exactly.
DR. ZIEMER: Whereas the tweaking of task one may be more than a tweak.
MS. MUNN: Sounds like it.
DR. ZIEMER: May be a double-tweak, but it -- it -- it is a -- a modification, at least, of task one, if -- if we were to do this. Again, Lew, I don't know what it would take for us to move into that mode if we -- if we want to begin to think about this further or to do something more concrete very soon, but we -- we certainly need to consider that because that's the issue of the use of the work books and the review of those and how that fits in with the site profile. So it would seem that we have to move in that direction fairly soon, get --
DR. WADE: Right, with some --
DR. ZIEMER: -- something under --

DR. WADE: -- dispatch. I mean relative to task four, we could at our next meeting, in the subcommittee, undertake the selection of the next 20 cases with this information in mind and -- and accomplish what John has asked for. And I think we can do that within the original task structure.

On task one, we would need to modify task one, if the Board agrees, to include what John has asked, which is when they review a site profile, have them review the work books and include as part of that review package several specific best-estimate cases. If the Board wants to move in that direction it can go in one of two directions. It can prepare the task order or it can ask me to prepare the task order. But I think we want to move with some dispatch on this.

DR. ZIEMER: Okay.

DR. MELIUS: Can I --

DR. ZIEMER: Jim and then --

DR. MELIUS: -- can I com--

DR. ZIEMER: -- Mark.

DR. MELIUS: Yeah, I -- I have some concerns about including actual cases in the procedures

review -- in task one. I think there's going to be some delays involved in those cases getting adjudicated, and I think that I would rather keep case review part of -- of task four. I think we have to keep in mind, you know, in terms of our sampling and so forth, that -- that we want these best-estimate cases and so forth --

DR. ZIEMER: We could keep in mind what site profiles are being reviewed --

DR. MELIUS: Right.

DR. ZIEMER: -- and select accordingly --

DR. MELIUS: Yeah.

DR. ZIEMER: -- but keep the tasks separate, would be a good point.

DR. MELIUS: Yeah, I think so. But -- so we include work books, these technical (unintelligible). I think the first step we need to take, though, is -- is to inventory those, if that hasn't been done already to -- so -- that -- I think we ask our contractor maybe to -- I think this is appropriate, to do an inventory I think of sort of the matrix, what's -- okay, there's the Savannah River site profile and there's these eight, ten, 12 or

whatever kind of -- you know, whatever the number is of work books and so forth that are currently there or currently -- hopefully we'd include --

DR. ZIEMER: Or does this inventory already exist or readily --

DR. MELIUS: Well --

DR. BEHLING: Can I ask -- or -- or make a comment here?

DR. ZIEMER: Sure.

DR. BEHLING: I think the benefit -- I fully understand what Dr. Melius's concern is, but there's also benefit that John I think brought out but maybe needs to be re-emphasized. When I for instance do a dose audit, a dose reconstruction audit -- and let's assume we do get best estimates and it -- they do in fact make use of a TBD, my assessment will be very limited. It will be a stage one review in a sense where my evaluation of that audit -- as an auditor will be looking at the -- the dose reconstruction and saying did you comply with the TBD, which is the first step. The second step, is the TBD correct. And what John is proposing is to integrate the task one and task

four so that the audit under those conditions would not only say did he comply with the TBD, but is the TBD correct, which may even be a much more important issue, which would be lost if we segregate task one from task four.

DR. WADE: Is Michael Gibson still on the phone?

(No responses)

DR. WADE: Okay. If Mike is not, when Gwen (sic) leaves we lose a quorum, by my count, so it means we just can't conduct any formal business. We can continue to have a discussion, but we lose a quorum.

The issue I'd like to get a sense of the Board on is the modification of task one to include work books. Is that something that you want to pursue?

MR. GRIFFON: I --

DR. ZIEMER: Mark.

MR. GRIFFON: You know, I -- I suppose that's a modification. I mean I -- it -- it -- it strikes me that this is such a revelation. These work books have been used forever. They continue to add some, I know that continues to evolve. But I mean I've been looking at and --

and -- and I haven't had the training, so I've stumbled through some of these work books. I admit they're comp-- there's a level of complication there that maybe wasn't expected or anticipated. But for instance, the Savannah River site profile, the findings in the dose review were deferred to the site profile review, and one of the big issues is the high five, which we all know is in the -- is in this spreadsheet that they've been using. So isn't that under the scope already there? I -- that's a question -- part of my question. I understand that as -- as -- I think part of what John's saying is that as we've learned what these work books are and -- and the level of complication, programming, they do have Monte Carlo techniques integrated into some of the work books -- I mean maybe there is additional scope there --

DR. WADE: Let me expl--

MR. GRIFFON: -- but I --

DR. WADE: Let me explore with the contracting officer the --

MR. GRIFFON: Yeah.

DR. WADE: -- the premise that the review of

the work books is -- should already have been included or is already included in the scope of our task one, and see what -- what answer I get from the contracting officer.

DR. MELIUS: And then parallel to that, if we can develop this inventory, if it hasn't been done already -- at least -- or make it available to the Board so that we understand.

DR. WADE: Yes, we'll keep the work going. When we meet in August we can have the subcommittee meeting that can pick the next 20 cases and we can try and consider the things that John has spoken to us about, about increasing the number of best-estimate cases.

DR. ZIEMER: If -- if in fact the -- the contracting official believes that the work books are somewhat apart from the defined task, then we need to be in a position to tell him that the sense of the Board, if it is indeed the sense of the Board, is that -- if necessary -- they should be explicitly identified as being part of the task.

DR. WADE: Okay.

DR. ZIEMER: And I think -- well, we don't have a quorum anymore so we can't formalize that,

but at least we can explore the question with the contracting officer and -- and at the next meeting, if we need to take action, we can take that action and move ahead on it.

DR. WADE: Explore the question.

MR. GRIFFON: I mean I -- I think this -- this also came up in procedures review. You know, there is -- I mean one of the first procedures I looked at was -- and I can't remember the document number or the complete title, but it was the atomic weapons overes-- maximizing models, and ri-- you know, you read through it and right in there it references a work book. So my first question a couple of years ago was -- to Jim Neton, you know, where is this work book and that's how we started down this path of actually getting access to the O drive and finding these things. So I -- I think, you know, in my mind, part and parcel to reviewing that procedure -- I've got to look at that work book, you know.

DR. ZIEMER: Right, right.

DR. WADE: I understand. And I feel --

MR. GRIFFON: Yeah.

DR. WADE: -- I feel comfortable pursuing this.

Thank you.

DR. ZIEMER: All right. So thank you, John, we'll follow up on that.

Wanda?

MS. MUNN: Just a comment. It seems only reasonable and efficient to try to move in the direction that our subcontractor has suggested. Certainly if I were doing those cases I would want to do precisely as John has suggested, look at all of it at one time. And I can't imagine any way that we could streamline it any more obviously than that.

The other thing -- Dr. Wade suggested that perhaps the subcommittee could be choosing the next 20 cases that we would be looking at. That is not what our process has been in the past, but I -- I can't speak for the rest of the subcommittee, but I -- I assume that if that's what the Board wants us to do, we can do that. But in the past --

DR. ZIEMER: The subcommittee made the preliminary cut and brought it to the Board for final -- the Board has to make the selection.

DR. WADE: That's what I meant, I'm sorry.

DR. ZIEMER: The subcommittee did the initial

sort of screening of those.

MS. MUNN: We had more than 20 before the whole Board to choose from, though.

UNIDENTIFIED: Right, we did.

DR. ZIEMER: Yes, we did. We selected -- in fact, we selected the second 20 and found out two of them had -- had been removed from finalization and had them sent back for review or something, so ended up with 18. But -- but we had a longer list from which we chose.

MS. MUNN: Much longer.

DR. WADE: I'm sorry, Wanda, I misspoke. I would just suggest the same process be followed by the subcommittee and the Board to arrive at the next 20, with this consideration in mind.

DR. MELIUS: Can -- can I just speak to what I think is a competing concern the Board should have. And while I understand the efficiency of doing it the way John and Hans have suggested, I also worry that that gets our whole review process focused on a few sites. And I think we have some duty to all of the claimants from all -- many different sites that we continue to have some process that reviews other claims. And I -- I'm not convinced yet that -- that by

moving individual dose reconstruction reviews into task one that we don't sacrifice too much of our need to keep some breadth to that -- that process. So it -- it's probably an issue of finding the right balance and so forth --

DR. ZIEMER: Right.

DR. MELIUS: -- and the right approach, but I think we have to keep that other--

DR. ZIEMER: Right.

DR. MELIUS: -- issue in mind.

DR. ZIEMER: And at present, if we maintain the separate tasks, it would be up to the Board to select them appropriately so that if they indeed need some samples from that site that they are available for them to use.

Mark, you had another comment?

MR. GRIFFON: Yeah, I just wanted clarification. I -- I notice we don't even have enough --

DR. WADE: Right, I think we --

MR. GRIFFON: -- Board members now, but the last 22 that -- that Hans just mentioned that he's just begun to -- to work on, is there any sense that -- that we should continue with that? And I don't know that we have a quorum

here now that we could even consider halting that work --

MS. MUNN: No point in talking about it.

DR. WADE: Yeah --

DR. MELIUS: E-mail.

DR. WADE: -- I really don't think we could. I don't think we have a quorum. I think we need to -- to stop. I mean we can talk off-line and if you feel strongly we can try and get a phone meeting of the Board together, but I think we're past our quorum now so I think we need to be done.

GENERAL PUBLIC COMMENT

DR. ZIEMER: I want to move to the public comment period since it is that time to do so. Let me -- I'm going to introduce first a gentleman who's been here for our session all -- all week -- that is all during the meeting time. He is here as an observer. He's a board member for the newly-formed advisory board -- and I don't know their full correct title, but it's the parallel group that is going to be handling the veteran's cases. They are going to be -- it's going to be administered through the National Council on Radiation Protection

and Measurements. The President has now selected those board members and they are underway. We have -- one of their staff members has -- actually a couple of their staff members have been with us in the meeting, but one of the board members is Colonel Ed Taylor, and there he is at the mike. And Ed, welcome, just to -- he wanted to bring greetings to us.

COLONEL TAYLOR: Thank you. I only planned to use two minutes and you just used one of them, so we're (unintelligible). You told who I am and where I'm from and what I'm doing, and I wanted to thank this Board particularly. There are actually four or five staff members from DTRA here. I happen to be the only board member, and I can assure you that Admiral Zimble would like to have been here and sends his regards.

We're having our first meeting down in August -- mid-August in Tampa, co-located with the National Association of Atomic Veterans, of which I'm also a member. But I just sat here for three days now and you have done a tremendous job of broadening the perspective of somebody that's going to have to do part of

what you do. Our restriction will be basically to veterans and to people with atomic. It will not be the industrial side of it that you've had, so our challenges will be a little bit different. Our reports will be -- but the system you are using is what we were really here to look at. And I wanted to thank you individually and collectively for that and say that you've had 31 meetings, we have yet to have our first one. So wish us well and we want to thank you for your help. Thank you.

DR. ZIEMER: Thank you, Ed, for being with us today and -- yes.

(Applause)

COLONEL TAYLOR: Incidentally, I'm limping because the day this thing was done was the day the Mayo Clinic people decided to take four sections of my lumbar region and completely clean them out and they said I could never get out to do this. Four of the five doctors said yeah, you can go. The other one said hell, I'm not going to tell you no; you'll go anyway. So the end result of it was, it was interesting and I wanted to leave one last message with Mike.

Fri-- Thursday night I got out of the hospital and spent Friday -- all day Friday on a similar thing with my board, and it was a fascinating experience, and now I get to see it from the other side. And I got a cauliflower ear out of mine, I don't know what Mike got out of his. Thank you.

MS. MUNN: Welcome, Colonel.

DR. ZIEMER: Thank you, Colonel Taylor, for being with us today.

Dan McKeel has asked to have the floor. Dan, welcome back to the mike.

DR. MCKEEL: Okay. Thank you. It's been a long meeting. I'll try to be rather brief. I'd really like to address the Board this afternoon on several issues related to the past three days, and I want you to excuse me for being blunt, but I really have to take this position which I feel pretty strongly about, both as a medical scientist and as a concerned citizen and a taxpayer.

First point is concerning scientific rigor. As I understood the Advisory Board's charge from you, Dr. Ziemer, Tuesday night, one of the three main responsibilities under the EEOICPA

is to oversee NIOSH and their performance as the prime contractor to perform radiation dose reconstructions.

I was rather dismayed yesterday at the Board's and SC&A's ready acceptance of data that Jim Neton presented on four of his slides, on pages 7, 8 and 9. The slides all showed data he construed as validating CER data on the MCW dust study, air intakes and the urinary -- uranium median levels of Plant 6 workers. The striking point to me was the very small end values of only four ether house workers, three cloth operators, five pot room workers and three packagers, and that's out of a total work force at that total uranium division of about 3,600 people.

No member of SC&A or the Board commented on this fact, nor did they ask whether NIOSH had performed any power analyses to detect differences, which is a fundamental statistical practice.

If NIOSH has air and dust urine data on 78 percent of the Mallinckrodt Destrehan workers, as NIOSH states they have, why weren't the ends much higher? And I ask, was this data in any

way representative of the total number of workers in these crucial job categories? No clear reason was stated as to why these particular workers were used in the analyses to demonstrate data integrity in the CER database. The representative sampling nature of the data went unquestioned by any Board member.

As a scientist, seeing this data raised more questions for me than it answered. It certainly did not convince me about the extent, the scalability (sic) or the quality of the CER MCW data. It really showed me there was a large -- huge unexplained individual variability and that good data might be extremely limited.

Point number two, I was stunned by the Board's tabling of Wanda Munn's motion to deny the MCW SEC 0012-2 petition. This action effectively delayed a final decision, probably until November. In my opinion, this action was not consistent with the Board's Congressional mandate to decide about dose reconstruction feasibility in a timely manner. In fact, the tabling motion guaranteed another long delay. In doing so the Board ignored the position of

SC&A, its own auditors, which found that accurate dose reconstruction based on the Rev. 1 Mallinckrodt TBD was not possible, and that's a quote, and may never be possible, even when changes are made to correct multiple deficiencies. The Board decided once more to simply trust NIOSH's claim that they would perform in three months dose reconstructions on 107 workers. Yet NIOSH, by their own admission, had accomplished no -- that is zero -- full dose reconstructions on MCW workers thus far in almost five years of the program. This is not a reasonable assumption to trust. Why is this unconditional level of trust in NIOSH merited by the President's oversight board? I say it is not. The facts presented should have had the opposite effect. That is, they should make the Advisory Board increasingly skeptical of NIOSH claims regarding the agency's ability to do timely dose reconstructions.

Also, is this unwarranted trust imparted to NIOSH a responsible implementation of the Board's primary responsibility? With all due respect to Wanda Munn and those on the Board

who side with her, I do not believe it was. Contracts are canceled in other arenas when prime contractors fail to perform this way. Ms. Munn's basic argument that we should trust the Federal agency to be able to do what they say they will do, and to discount past performance or lack thereof, is not historically appropriate. That is not what this Board is charged to do.

Third point. There has been the repeated implication that doing dose reconstructions on MCW Destrehan Street workers was somehow a uniquely difficult challenge. I believe NIOSH stated that they had already performed 8,000 dose reconstructions, and I see from Larry Elliott's figures the number's actually 8,230. How are these MCW workers unique? The job categories at many atomic weapons sites overlap. Workers at other covered facilities worked with pitchblende ore, were exposed to radium and thorium, and handled K-65 type raffinate waste. Yet zero MCW workers have been fully dose reconstructed by NIOSH. Why is this?

My opinion is that a Federal agency such as the

Government Accounting Office, the GAO, should look anew at the EEOICPA claimants who have been denied compensation and those whose dose reconstructions are now in limbo. The root causes of this failure by NIOSH to perform dose reconstructions in a timely manner need to be exposed and corrected, by legislation if necessary. EEOICPA can and should be amended further.

My fourth and last point is to remind the Board that I brought FOIA evidence to them on Tuesday night which showed that, at a minimum, several hundred Mallinckrodt records from the 1949-'57 time period remain in the DOE CER classified vaults at Oak Ridge. This remained -- this retained classified status of MCW-related records is possibly in violation of a 1999 internal DOE-wide directive. Many of those classified records have titles which indicate that they're MCW production process data. This data, if known, could facilitate the Board making a more informed decision on the MCW special cohort -- Special Exposure Cohort 12-2. Why is this information on MCW production processes still classified 48 years after the

downtown site uranium operations ceased? I asked three Federal agencies and ORAU for this information in my March 10th, 2005 Freedom of Information Act request, but an answer was not forthcoming. I didn't mention this situation merely as a curiosity. These classified records need to be examined and captured by the Board, SC&A and NIOSH, if that has not already been done. If the data has already been captured in Rev. 0 and 1 of the MCD TBD, then NIOSH should document this fact for the Board and SCA. I urge the Board to examine this new information.

In closing, I'd say although I strongly endorse the basic mandates of the Board, I cannot adequately express my profound sense of the magnitude of a disservice that has been done once again to deserving Mallinckrodt claimants and survivors in St. Louis during these past three days. The least the Board needs to do is schedule the August meeting here in St. Louis. The needs of the Board for making direct flights must be a secondary consideration. To me, and I have to add, sadly, the net effect of this meeting has been to significantly

undermine the scientific credibility and objectivity of this Advisory Board on Radiation and Worker Health. Thank you.

DR. ZIEMER: Okay. Thank you very much, Dan. And I must admit, I'm a little dismayed about the FOIA request, also. I'm wondering what is there and why there has not been some response. The request went to which agencies? I know you mentioned it yesterday, but just remind me, what agencies?

DR. MCKEEL: (Unintelligible) so I -- because the -- one of the issues was the content of the six boxes and getting more understanding of that.

DR. ZIEMER: Right.

DR. MCKEEL: I sent it to DOE Oak Ridge, to ORAU, to CDC/NIOSH and to the OCAS office, just to make sure that everybody got a copy, and I asked that the folks at ORAU coordinated that, not knowing -- as I learned from the -- the general counsel and Pam Bonet*, who's actually helped me in the past, that they don't answer FOIA requests, that they're answered by DOE Oak Ridge. So -- so I did get a -- finally got an answer from DOE Oak Ridge on -- it -- it was

dated on the 30 -- on June the 28th and I got it on June the 30th. I'd gotten a three-line answer from CDC, interestingly. It's just marked CDA ATSDR FOIA Officer in Atlanta, three lines. I showed it to Larry Elliott. Didn't mention NIOSH, didn't mention that it -- they had corresponded with NIOSH. They said we got your FOIA request of March 10th. Here's some information that's partly responsive. We're waiving the fees because, you know, your bill isn't high enough. And what they included -- what CDC included was some information that you all had already been -- handed out at one of the -- I think at the Cedar Rapids meeting, maybe even the St. Louis meeting, that supplement to SEC 001-12 that had the list of contents of the six boxes. So I already had that actually about the time we sent in the FOIA request. So that was -- that was all that was in the CDC response.

Then from Oak Ridge what I got was this 205 pages of information, and the -- the most interesting -- I mean a bunch of the pages, 70 pages were last names, first names, with basically no information except that Amy

Rothrock's* letter -- cover letter said that they were records that still resided in the classified CER vaults at Oak Ridge. Now that's not exactly the same as saying what we asked about, were these records still classified. But presumably if they're in the classified vaults, then they have to be declassified for anybody to read them.

But the most interesting thing was this 35 pages of additional listing of documents, and what was nice about that was that the dates of all those documents were provided so you could see that at least -- I think the number was 230 or so -- directly pertained to 1949-'57 Mallinckrodt.

Now, I don't have any way to know -- and -- and -- oh, items two and three of our request were specifically to find out which documents had had to be declassified to get into those six boxes that NIOSH came to have and that SC&A has now examined, but also to find out a question that I have never heard anybody address here or been asked by anybody, and that is how many documents that pertain to MCW remain still classified. And I tried to draw the difference

with Amy Rothrock on the telephone in an hour's conversation I had with her at the end of May that I didn't consider that records that were kept under the Privacy Act as classified. I said I was after -- she called me to clarify exactly what I wanted from them. I said I don't -- that that's a different thing. I want to know what records are classified, withheld from a FOIA request by that exemption at your place. And so, you know, it looked to me like 28 pages of those records were still classified. And -- and then I simply took those 28 pages and -- so the classified ones -- and -- and there were eight pages of unclassified data, saw how many of them pertained to that period of time that we were all interested in, and again it was -- you know, it was over 200 documents. And what interested me is that the -- all that was listed about them besides date was a title, but a bunch of them had to do with uranium process operations.

Now I thought that might be very interesting. I don't know exactly what they have. All I asked for was an index, hoping that it would

save some time to get that material. Well, it actually took three and a half months to get it, but in any case, I didn't ask for the records themselves, so I don't know what's in those bo-- I can't really see those. But we do have people on your Board, we have people obviously at NIOSH and we have people at SC&A who have Q clearances who could get in to see those records.

Now if they've all been captured, well, then you know, that's not really relevant. If they have not been captured into the Technical Basis Documents, that might be highly relevant. And it -- it's really late in the course, so I don't know how it could happen. I can't do it, but somebody should go and look at those records, and -- you know, so -- so in any case, that's kind of the way I feel about it. I -- I do not think that FOIA request response was completely responsive to what I asked about. It didn't say specifically that they were classified. There was no information about why they were still classified. So I -- I'm going to pursue that farther, but I'm really trying to do something that will help get this SEC

petition moved along and -- and brought to closure.

DR. ZIEMER: Yeah.

DR. MCKEEL: And that's really the spirit. I -- I appreciate everybody's work.

DR. ZIEMER: Yeah.

DR. MCKEEL: But I -- I really am very upset about what's happened about Mallinckrodt and I just want to help move it along.

DR. ZIEMER: Thank you very much. I -- I don't know if this -- if this is something NIOSH is in a position to pursue or if we think we have captured the essence of those, but perhaps that's something I'd ask Lew if maybe he can follow up on that. I think if there's records out there that need to be captured, certainly NIOSH would have an interest and certainly this Board would, so appreciate that -- or maybe we'll know something more by --

MR. HINNEFELD: I really don't know any specifics 'cause, you know, I haven't seen the list. I know that for most of the period of this work that Oak Ridge ORAU team has had people working in the classified vault --

DR. ZIEMER: Uh-huh.

MR. HINNEFELD: -- reviewing information that may be helpful and then having it -- selecting what would be helpful and then having it reviewed for classification to be removed. I know that's been sort of an ongoing process down there for months and months, maybe longer, so I don't know, though, whether those specific things have been seen or not. I -- I don't know that, and Dr. Toohey's no longer here, so -- I doubt he would know specifically, either.

DR. ZIEMER: Right. Thank you, Stu. Let's continue with comment. Hershell Gilley -- Gilleylen, is it?

UNIDENTIFIED: (Unintelligible)

DR. ZIEMER: Oh, okay. Larry Gassei -- Larry? Did I pronounce that correctly?

MR. GASSEI: It's Gassei.

DR. ZIEMER: Gassei?

MR. GASSEI: Uh-huh. Denise asked me to bring up my little situation that I have. My father worked for Mallinckrodt from 1936 to 1969. That's 33 years. And he passed away on September 1, '69. He died of pancreatic cancer. So I had filed a claim and haven't received anything yet, so when notice was

brought out about the SEC, approval for that period of '42 to '48, I seen that in the paper and I contacted Denise and she told me -- she says things look very favorable. You should receive some notification and a payment process should start. She said there'll be some other forms that you have to fill out.

Well, that's been a while. So earlier this week I decided to try to find out myself what the status was and I called NIOSH and they told me it was -- my claim was now transferred to the Department of Labor in Denver and I should call this number, speak to this individual. I did, and he informed me yeah, you meet all the particulars except we're waiting for a call that (unintelligible) -- a verification of employment as to where my father worked and if he was on Destrehan or the uranium division or what product line. And I said well, you know, I'm -- have already given everything. And he said well, we have -- waiting for notification. And I said well, where does that leave me? I said, you know, I got some records here and I went through it -- he said well, does it state that he worked on Destrehan? I said as far as

I know he -- that's the same Mallinckrodt that we've been talking about all along. I said I know there's different buildings in that, but whether it's -- I didn't know exactly what he was getting at. And maybe I misunderstood. So I -- I looked through my papers and -- see if I could have something specific, and I didn't. And I asked -- and I told him what I had. I called him back and told him what I had and -- and I said well, don't you have all this? And he said well, we're in the process of -- of inquiring and trying to get this resolved so we can process your claim. I said well, what happens if -- if you don't hear anything or get this clari-- he said well, it'll go back to NIOSH for dose reconstruction. With that I got a little bit ticked off because I thought everything was in order and I contacted Denise. And she said no, that's entirely wrong because everything has been appr-- if it got past NI-- NIOSH and they went to the Department of Labor, everything should be in order. And I'm here to say it's a little bit frustrating. When you get misled, you get going down the road and you're expecting

something favorable to happen. I've been waiting for this for quite some time and -- and everything that's being told to me is that everything is in order for me to receive compensation on that claim, and that's all I -- I wanted to point out and I don't know...

DR. ZIEMER: Thank you very much. I -- I don't know if any of the folks that were here earlier assisting with claims are here now that could assist on this, but is there some way to -- it sounds like a -- that Labor is trying to confirm work location. Is -- is that --

MS. BROCK: I -- I took care of it, but that's just an example of what goes on.

DR. ZIEMER: Oh, yeah, the frustration of --

MS. BROCK: Well, exactly. I mean it made it -- it qualified the first time to even make it to NIOSH for dose reconstruction, and there's some confusion -- for whatever reason -- sometimes between the Destrehan Street plant and Second and Broadway and the ether house or certain terminology that's in these claims. And so, again, it's very frustrating, but the people that were here were very helpful and then I called Labor, but just for the record,

we'd like to have it noted because it does raise complications when situations arise such as that and -- and people are asked to give things that they've already sent. And if they qualify for the 250 days, they're in the cohort years and they've got one of the 22 cancers, this should not be a big thing, made it past the hump.

DR. ZIEMER: You're exactly right, and I think to the extent that the folks here can help with whatever verification --

MS. BROCK: And they were --

DR. ZIEMER: -- is needed --

MS. BROCK: -- wonderful. They made calls, they did a wonderful job.

DR. ZIEMER: Okay.

DR. WADE: Thank you.

DR. ZIEMER: Denise, while you're at the microphone, I think you did ask for comment time. You want to proceed?

MS. BROCK: Certainly, sure.

DR. ZIEMER: We have one other person, Roni Steiger -- Steger that was going to speak, but --

MS. BROCK: Oh, there you are.

DR. ZIEMER: -- we'll take it in either order.

MS. BROCK: Did you want -- do you want to go first?

MR. STEGER: Go right ahead.

MS. BROCK: Okay. And I'll try to be brief. I think the first thing I wanted to state that -- was that I would appreciate maybe next time we do a meeting like this that we try to do -- or whoever does the agenda, try to make the public comment period where all the Board members are available. And the reason for that is because thank goodness we do not have a lot of people here, but many times the claimants feel like this is falling on deaf ears anyway, and so actually people's feelings get hurt. You feel like you're talking to a wall. What they have to say is very important and it is very relevant and they need to say that. And I think that's the reason for public comment and it would be greatly appreciated if whoever does the agenda could make sure to squeeze that in when all the Board members are here to actually hear that.

DR. ZIEMER: Right. Good point, and in fact that's one of the reasons we have the -- the

evening one so that we have some early -- earlier in the week that we had when we have assurance of both opportunities for more members of the public, as well as the full Board. I don't think we anticipated this situation --

MS. BROCK: Oh, I'm --

DR. ZIEMER: -- but -- but --

MS. BROCK: -- sure it's nobody's fault. I mean --

DR. ZIEMER: Yes, well --

MS. BROCK: -- people have flights to make, but I --

DR. ZIEMER: -- but we appreciate --

MS. BROCK: -- think it will be easier if you do it always --

DR. ZIEMER: -- appreciate and understand --

MS. BROCK: -- to where Board members are here.

DR. ZIEMER: -- the comment. Yeah.

MS. BROCK: And the other thing I wanted to state for the record was I appreciate everybody's hard work. It is not easy decisions that you have to make. I don't agree with everybody's opinions or statements, but I respect everybody, and everybody's entitled to

their opinion. But what I would like to state for the record was I -- beyond anything I could imagine happened yesterday. I thought we had a -- a good case. SC&A to me did a wonderful job and they stated, in my understanding, that at this point NIOSH cannot dose reconstruct these claims. And to me, that was the intent. We needed to see what the auditors felt, not could NIOSH fix it or can we go through all this time and all this extra process to dig through all this stuff that could take years and then at the end of it never even know if they're still going to be able to do a dose reconstruction. And I would like that on the record that I am very disappointed and just completely flabbergasted because maybe I don't understand the law. Maybe I didn't understand feasibility meant just scientific technical things. And even at that, at this point NIOSH cannot dose reconstruct. They haven't been done yet. So I just want that on the record and thank you very much --

DR. ZIEMER: Thank you.

MS. BROCK: -- and I will see you in August.

DR. ZIEMER: And that will certainly be on the

record. And Roni Steger.

MS. STEGER: I had to work all week so I really didn't get to come down here to catch any of the meetings, but I understood from my dad and obviously from the comments tonight that the special cohort exemption was tabled, I understand. And my mom worked at Destrehan. My name is Roni Steger and my mom was Norma Duvall Steger and she worked at the Mallinckrodt Destrehan facility in a uranium lab. My dad and I attended together one of the days at the meetings at the Adams Mark a couple of months ago. I sat in awe of the people that stood up and related their stories to you. Those stories moved me beyond words, and it drove home to me the importance of this and how it's affected some people, because I can't tell you a story like that.

My mom died. I was a teenager and I lost her. But my dad's great, and he married a great woman and we were all taken care of very well. So there's no horror story there. We didn't lose our income, but I lost my mom. And it really hasn't even been determined yet because obviously the dose reconstruction can't be

done, so we don't know if it actually -- the cancer she had came from that or not. We're just sitting here for years wondering. And for me and my brother and sister, it really never occurred to us that maybe this was a result of this employment. And it came as a shock to us that possibly, you know, the government and the company let these people work in this lab and these diseases and these deaths and these sicknesses came as a result of that.

And so now for five or six years we've been sitting and waiting, and filling out paperwork, talking to people and going to meetings. And I understand there's been like 30-some-odd of these meetings and still nothing's happened for any of these people here. And I can't imagine that we're alone, with all the people that are affected by this. I just know that it's personal here.

I would like to mention that I noticed that both of these meetings that we attended were at very premium hotels in the city. I can't help but notice all the handouts and the paperwork, and I've listened to all these committees and subcontractors, and I can't help but think the

cost involved with just determining whether or not any of these people are going to receive $150,000. And I know for a lot of people that worked there and are older and are sick and are dying, this $150,000 might make a lot of difference in their lives. For us personally, it probably wouldn't. It's just going to be the satisfaction of knowing one way or another what actually happened. And it's a revisiting that we really didn't want to do. And I wonder if the government, in their -- I don't know what you want to call it, but if they would have just said obviously they had some culpability, there was some wrongdoing, maybe a little deceit or whatever you want to call it, if they would have just decided all these people were due this money and paid it, if it would have cost less than to determine who was actually going to get it. And that frustrates me 'cause I -- you know, I look around and I think well, what's it costing to do all this? And if everybody would have just got this money, it could have helped so many people at a time where maybe they needed it 'cause they're not young anymore, you know. I think about the

people that worked there that are still suffering or still sick, and are still coping with these diseases and what you could do to help them. And why it's taking so long is just beyond me. Hell, give them a loan, you know. I don't know. It's just -- I find it very difficult that the government makes it necessary for each one of us to discover, maybe by chance, that the existence of this compensation act even existed. And then we have to prove to the government that we even deserve it, that it wasn't enough that we worked there, blindly trusting the employer that we were safe. I just think it's -- what about these people, you know. I'm just frustrated. I'm sorry that I had to say all that.

DR. ZIEMER: Okay. Thank you, Roni, for sharing with us today. And we're quite aware of the levels of frustration. I recognize that.

That completes our public comment period. I want to ask -- Board members, do you want to hear from Larry or can you just view the -- you have his update materials.

DR. WADE: You have to view his materials.

DR. ZIEMER: Okay.

DR. WADE: We're well below a quorum now. We --

DR. ZIEMER: Right.

DR. WADE: -- (unintelligible) stop.

DR. ZIEMER: I just want to point out a couple of pieces of information. The list of science issues -- that was distributed, was it not?

DR. WADE: Yes.

DR. ZIEMER: So you have that before you.

DR. WADE: I'll -- I'll be providing e-mail on times and dates of meetings to all of you and --

DR. ZIEMER: Okay. Is there any other item that needs to come before us today?

(No responses)

There appears to be none. If not, I declare this meeting adjourned. Thank you very much.

(Whereupon, the meeting was adjourned at 5:00 p.m.)

C E R T I F I C A T E 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 July 7, 2005; 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 7th day of August, 2005.

_____

STEVEN RAY GREEN, CCR

CERTIFIED MERIT COURT REPORTER

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