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2 commercially-available software uses ICRP-30 models,  
3 which are a generation back.

4 I think it was easiest first to start with a little bit of  
5 history on the IMBA program, and up until the early  
6 90's, ICRP-30 was the current ICRP models for internal  
7 dosimetry. In 1994 ICRP published a new lung model for  
8 internal dosimetry, and that was the beginning of  
9 various new models, including biokinetic models. As --  
10 this particular lung model was considerably more  
11 complicated than the last, and as such, while they were  
12 producing this model, they also produced some computer  
13 programs to help evaluate that model. Once the model  
14 was published in 1994, the people that put that  
15 computer program together, NRPB, went ahead and  
16 packaged it as a software -- they connected --

17 **DR. ZIEMER:** Identify for everyone -- I -- I'm assuming, but  
18 it's probably not true, that ICRP is known, but maybe  
19 you should identify all the acronyms as you go.

20 **MR. ALLEN:** Okay, there's a lot of them.

21 **DR. ZIEMER:** If you remember them all.

22 **MR. ALLEN:** ICRP is the International Commission on

1 Radiological Protection. It's basically the worldwide  
2 expert on internal dosimetry, recognized expert on  
3 internal dosimetry, as well -- radiological protection  
4 in general.

5 NRPB is the National Radiological Protection Board, which is  
6 I think semi-private/semi-government agency of Great  
7 Britain. Some of the people in that organization were  
8 involved when the ICRP committee for developing that  
9 lung model, and they developed computer software to  
10 evaluate that while it was being produced.

11 Once the lung model was produced, they connected it to the  
12 ICRP-30 biokinetic models, which were all they had at  
13 the time, and packaged that software in a form known as  
14 LUDEP. LUDEP then is like a hybrid of two different --  
15 your current model/old model type of thing. It was a  
16 DOS-based program. It was kind of clunky to run, but  
17 it was something that you had.

18 Shortly after the lung model, ICRP then began producing new  
19 biokinetic models, and as part of that, these  
20 individuals at NRPB were also involved with that. And  
21 as new models came out, they produced new computational  
22 models or modules that would do those calculations.

1 And eventually all this was put together -- all these  
2 individual computational modules were put together into  
3 a -- one computer program, and that was known as IMBA,  
4 hence the Integrated part of the acronym -- Integrated  
5 Modules.

6 The first version of IMBA that I know of was IMBA-URAN, and  
7 after they -- NRPB copyrighted this -- these  
8 computational modules, they began putting IMBA together  
9 in an integrated fashion. IMBA-URAN, they were  
10 contracted to put together something a little more  
11 user-friendly for the CANDU reactors. That ended up  
12 doing only uranium, was all that would do. It was  
13 pretty limited in scope, but it did put everything  
14 together.

15 After that, near the same time, DOE contracted -- contracted  
16 them to put together an IMBA EXPERT version, which  
17 included more isotopes and a little more versatility --  
18 quite a bit more versatility. That took some time for  
19 them to complete, and then during that process, we  
20 contracted them to put together an IMBA-NIOSH version.

21 That allowed for annual doses for a limited number of  
22 isotopes, and gave us what we needed for this program

1 on a limited basis. Once the IMBA EXPERT was done for  
2 DOE, we then asked for a modification of the software  
3 which included all the functionality of the IMBA EXPERT  
4 version, all those isotopes plus some additional  
5 isotopes, and that was all put together into what is  
6 now known as the IMBA EXPERT OCAS-edition.

7 Some of the features of the IMBA EXPERT edition is -- we can  
8 do up to ten individual intake regimes. By intake  
9 regime, that's -- that's a term given in IMBA, but it  
10 essentially is specifying the dates; the route of  
11 entry, whether inhalation, injection, et cetera; and  
12 also whether it's a chronic versus acute. That all  
13 together is one intake regime. You can specify up to  
14 ten intake regimes, so you can give somebody an acute  
15 intake on one day, followed by a chronic intake during  
16 another period of time, followed by an acute ingestion  
17 some other time, put it all together in one shot. So  
18 it's good to have a number of those when you're talking  
19 about a career dose.

20 As I already mentioned, it can do inhalation, injection and  
21 ingestion. It can do -- whether -- it can do a chronic  
22 versus acute on any of those intake routes. The

1 solubility parameters can be specified as ICRP default  
2 solubility types, or you can specify individual  
3 parameters if you know more about the material the  
4 person inhaled or ingested.

5 Bioassay is -- we can use whole body counts, we can use lung  
6 counts, urinalysis or fecal sampling. There's also a  
7 few other bioassay types for specific isotopes, such as  
8 we can use thyroid counts for iodine exposures if -- if  
9 we have that data, we can use that then to determine  
10 intakes.

11 IMBA can be used to calculate the intake from that bioassay  
12 samples. It can be used to calculate dose from a given  
13 intake or the calculated intake. The dose can be  
14 effective dose, which is essentially a whole body dose,  
15 or it can calculate tissue dose -- tissue or organ.  
16 The dose that it calculates can be specified either 50-  
17 year committed or, more important for us, they can be  
18 specified as annual doses.

19 I'm going to take you through screen shots of the program.

20 This -- there's not a good way to do this presentation.

21 I'm going to take you through some screen shots just  
22 because I think it will be a little quicker than

1       letting you watch a computer program work while it's  
2       trying to work on the screen.

3 There's a number of pop-up screens and menus in IMBA. It's  
4       -- gets to be a fairly complicated program, but the  
5       three primary screens are the -- what I call the main  
6       screen. That's the screen you get when you first turn  
7       it on. The other two main screens are -- or primary  
8       screens are the dose calculation screen and the  
9       bioassay screen.

10 That's the main screen. When you first turn the program on,  
11       that's what you see. For the most part, this is  
12       somewhat administrative data for the intake. It will -  
13       - over in this side here -- it's divided into somewhat  
14       four sections. Starting over here, you're allowed to  
15       specify the particular radioisotopes you're interested  
16       in, and you can specify the exact intake if that's  
17       where you want to start. If you want to start from  
18       bioassay and calculate intake, obviously you leave that  
19       blank and that would come about later. The bottom  
20       section here is simply two buttons to take you to the  
21       other two primary screens.

22 And the top section right here, I have a little blow-up of -

1 - a little clearer -- and as I said, this is somewhat  
2 administrative detail for the intake, all the  
3 information you need to put in ahead of time to start  
4 off with. Off to this side, you have -- you can  
5 specify the units you want the dose in, whether you  
6 want to work in sieverts, rem, et cetera. You can  
7 specify the units you want the activity to be in,  
8 whether becquerels, dpm, that sort of thing.  
9 And up here is time. You can specify whether you want to  
10 deal with dates or whether you want to deal with time  
11 since the intake, such as ten days, 100 days, et  
12 cetera. In general, when you're dealing with an  
13 individual's individual case, the dates are usually the  
14 best thing to use. If you're dealing with a  
15 programmatic issue, like you want to come up with an  
16 excretion curve, then the days are probably better, the  
17 time.  
18 This date you see here is nothing more than a reference  
19 date. If you're going to use time and specify the time  
20 since a particular date, then that reference date'll be  
21 the main thing. In the case over here, you see a zero  
22 in that time box. That means in this case it's -- this

1 one represents 1/1/1980. If I were to put a ten in  
2 there, it would represent 1/11/1980, that sort of  
3 thing. And the reason for the reference date instead  
4 of just time since intake is 'cause you can do more  
5 than one intake. Some of these intakes could be years  
6 apart, so you -- the program needs one reference date  
7 to work with.

8 I mentioned on the other side you could do up to ten intake  
9 regimes. That's specified in this area. As you add  
10 more intake regimes to it, you get more tabs right  
11 here. Each of these tabs, once you click on them, you  
12 get an identical screen below here, and on this screen  
13 you can specify the route; you can specify the mode,  
14 whether it's acute or chronic; and you can specify the  
15 start date. If you click -- if you click on the  
16 chronic button, you also get another box to show up  
17 there to -- for the end date. As I said, somewhat  
18 administrative detail, but that's the -- the important  
19 detail, of course.

20 **DR. ZIEMER:** Where does the solubility -- does that show up  
21 later?

22 **MR. ALLEN:** Yes.

1 **DR. ZIEMER:** Okay.

2 **MR. ALLEN:** In fact, back to the main screen, the last  
3 section is down here where it says model parameters.  
4 There's a number of model parameters, and some of those  
5 will appear or disappear depending on the route of  
6 entry that you specified. Each of those allows you to  
7 change the parameters associated with that type of --  
8 those parameters.

9 I'm going to give you one screen shot -- that's the blow-up  
10 of the solubility. When you click on one of those  
11 buttons at the bottom of the main screen, you get a  
12 pop-up screen. In this case I clicked on absorption.  
13 I get this screen. It shows you a pictorial  
14 representation of the model, as far as the solubility  
15 part of it goes. It shows you the actual values that  
16 are going to be used, and it also has buttons to allow  
17 you to pick the default solubility types in this case -  
18 - you know, F, M or S. You could also click on user-  
19 defined and then put in your own values here.

20 **DR. ZIEMER:** What about particle sizes for inhalation, is  
21 that --

22 **MR. ALLEN:** That is one of those other many buttons on the

1 model parameters, and I don't have a screen shot of  
2 that. I didn't want to come up with all of them. And  
3 that again is either default -- all the other models  
4 have ICRP default or user-input, user-specified. You  
5 can see on this screen you also get an F1 value, which  
6 it could be specified on yet another screen, too.  
7 They're linked. And the help button will actually give  
8 you what the F1 values are for that particular isotope  
9 you've already selected to get to this point, and it'll  
10 tell you the chemical compounds associated with that --  
11 what that's -- the default solubility type are for that  
12 chemical compound, what the F1 value is for that  
13 default solubility type and the ICRP reference where  
14 that value came from. And you can simply click on that  
15 help menu, click OK and it'll put the value in there  
16 for you.

17 Okay. That was the main screen, and as I mentioned, there's  
18 two more primary screens associated with the program.  
19 It's somewhat backwards to do the dose one first, but  
20 it's the easiest one to deal with and then I'll get  
21 into the bioassay one.

22 When you click the dose button at the bottom of the main

1 screen, you'll come up with the dose calculation  
2 screen. From this screen, you can start off by seeing  
3 off to the side -- it'll tell you the quantity -- the  
4 intake of -- the individual intake regimes that you're  
5 about to calculate dose for. In this case I've got  
6 three in there, and I think two of them are zeroes, so  
7 it's probably a bad screen shot to put up there, but  
8 that's what I ended up putting up.

9 Over here you simply have a calculate button. Once you hit  
10 calculate, this will give you the effective dose from  
11 this -- these intakes that you have specified -- these  
12 ones that are listed over here. It'll also give you  
13 the organ dose for each intake regime, as well as the  
14 total of all three. And this screen you can see --  
15 there's a slide bar. There's a lot more organs than  
16 there's -- you can see from this screen, but...

17 These that you're seeing here, the effective dose and the  
18 organ doses, are all 50-year committed doses. For  
19 purposes of our program, that's not very useful. We  
20 don't use that much, but it is there and it's a great  
21 QA for the program itself to verify it against the ICRP  
22 values.

1 Up here in the corner you see a button that says calendar.  
2       What that button allows you to do then is get to where  
3       you can calculate the annual doses. You get another  
4       pop-up screen.  
5 This is the annual dose calculation screen, and what it  
6       allows you to do is input the start year. There's a  
7       pick list of 30-some organs that you can choose from.  
8       There is the end date, which would be the date of  
9       diagnosis for us. And once you have all that  
10      information entered in, you hit start calculate. It  
11      takes a little bit of time, but it'll run through the  
12      calculation and it'll give you the annual dose each  
13      year from the start year to the diagnosis date. And  
14      you can see from the screen, the last year it's going  
15      to be a partial year, from the beginning of that  
16      calendar year to the date of diagnosis.  
17 The last two buttons are down here. That allows this  
18      information to be copied to the clipboard or to be  
19      exported as an ASCII file, which makes it much easier  
20      to use. You can simply copy it to the clipboard, paste  
21      it into say Excel if you wanted to, and then you have  
22      all the values you want to...

1 Okay, the last primary screen is the bioassay primary  
2 screen, and right here are two tabs. These are keys to  
3 the screen. What you can see on there right now it  
4 says bioassay to intake, and that would allow you to  
5 calculate an intake from the bioassay. If you click  
6 the other button, the other tab here, it gives you a  
7 little different information here. It allows you to  
8 predict the bioassay measurements from a given intake.  
9 Sounds like a subtle difference, but it's an important  
10 difference.

11 In this case I have urine selected here. I'm on the  
12 bioassay to intake screen. When I hit calculate, it's  
13 going to take the data that I've put in there, the  
14 measurement data that I've put in there, try to fit the  
15 data the best it can to all the intake regimes that I  
16 put up there as far as the intake dates, routes of  
17 entry, all that. It'll try to fit that data the best  
18 it can to that and come up with the intakes, the actual  
19 quantity of -- that was the intake.

20 If I go this button here, I have to specify dates that I  
21 want it to calculate or predict what the bioassay would  
22 be. I click a calculate button on that screen. It

1 doesn't change the intakes at all. It simply  
2 calculates what a bioassay would be from those given  
3 intakes.

4 Over here on this side I have actually three identical  
5 areas, though they don't look identical right now.  
6 Each of these areas allows you to choose a bioassay  
7 from a pick list -- bioassay types, such as urine,  
8 fecal, et cetera. It allows you to have the table or  
9 the graph, and each one is identical, so in this case  
10 I've got the table data for urine and a graph for the  
11 urine samples. I can see them at the same time. It  
12 makes life a little easier when you're working around  
13 with the data. If I also had lung count data, I could  
14 put that up there, either the table or the graph. If I  
15 had a number of things I could put all three graphs up  
16 there, however I wanted to work it out.

17 Each of these screens have a little tool button. If you  
18 click that, you get a more detailed screen or a bigger  
19 -- full-page screen of those individual spots. That's  
20 just a little blow-up of the exact same thing I just  
21 showed you. I thought it might be a little easier to  
22 see.

1 There's the full-screen view of the table data, and you can  
2 see you have two different colors -- color codings.  
3 The green is for the prediction. That's if you want to  
4 go from the intake to the -- predict what the bioassay  
5 would be. The input in this case would be the dates  
6 that you're interested in. In the case of urine also,  
7 the collection period.

8 The blue area is actual measured data. It would be a date  
9 that somebody was sampled, the collection period and  
10 the actual measured quantity. The data type, there's  
11 actually three options here. You can specify whether  
12 that's a real quantity, an actually measured quantity,  
13 or if it's simply a less-than. The less-than LOD  
14 stands for less than limit of detection.

15 The third quantity I don't have on there is simply excluded.  
16 From time to time you might get an outlier that  
17 doesn't seem to make any sense, and that would allow  
18 the dosimetrist to select excluded for that dataset,  
19 and at that point the program will ignore it. It'll  
20 still plot it on the graph, but that's the only thing  
21 it'll do with it, so if you can ignore what looks like  
22 an outlier and then all of a sudden everything fits

1 real well with the models, then you've got a chance  
2 that it's -- it really was an outlier.

3 The other two are semi-self-explanatory. They show you the  
4 measurement error and the error distribution. Your  
5 options there are normal or lognormal.

6 It's a little better blow-up of the graph. When you click  
7 the tool button on a graph, then you get this blow-up.

8 I've cropped a little bit of it out so you can't  
9 really see what's going on down there, but that is  
10 essentially a lot of administrative type information --  
11 what scale you want, format for data, how many decimal  
12 places, that sort of thing. As far as the scale, what  
13 you see here are the days since that reference date  
14 back on the first page. Off to the side here is the  
15 actual measured -- or the quantity that you're trying  
16 to measure. In this case I think it was in picocuries  
17 per day for urine samples, I believe it was.

18 The blue dots are the measured values, complete with the  
19 error bars. The black line that you see here is the  
20 fit that IMBA did to that -- that data, based on the  
21 intake regimes that you gave it. The green -- I don't  
22 know how well you can see that -- actually follows all

1 the way along this black line, and the green is the  
2 predicted bioassay. The reason you see such a  
3 difference here is the graphing function itself is not  
4 that sophisticated, and it's simply connecting dot to  
5 dot that the program has calculated. When you see  
6 something like this with the black line and it's say  
7 several weeks after initial intake, someone might be  
8 thinking it should be higher and they could be coming  
9 down by then. What the predicted bioassay allows you  
10 to do is select some dates in between there. The black  
11 is relying on the dates that the sample was done. The  
12 green, you can select dates to see what the model  
13 predicts to see if it is realistic. In this case, in  
14 between there you can see where the urine should have  
15 jumped way up and then been coming down by the time  
16 that first sample was taken, after -- so you get the  
17 idea of what you're saying from this intake regime,  
18 what you're predicting.

19 The last thing I wanted to show you was I got a split screen  
20 here of -- back to that bioassay screen, and I wanted  
21 to show you the utility of graph and why a picture's  
22 worth 1,000 words. Off to the side here, this is a

1 graph of urinalysis for a particular individual uranium  
2 exposure over -- over time, various different intake  
3 regimes. A number of intake regimes were put in, IMBA  
4 calculated the values for the urinalysis and this is  
5 what he -- the black line versus the blue dots or how  
6 it fit together. It seems fairly reasonable on this.

7 Down below here the blue dots are lung counts that were done  
8 on the person. The intakes were not determined from  
9 lung counts. They were determined in this case from  
10 urinalysis, and then the lung count data was predicted,  
11 and that's the green line you see up here. And you can  
12 see the green line doesn't seem to match the blue lines  
13 very well at all. It seems to be considerably higher.

14 That pretty much tells the dosimetrist, you know, some  
15 of the assumptions are wrong somewhere. In this  
16 particular case, this was assumed to be a type S  
17 material, and IMBA then allows you to go back, change  
18 the solubility assumption to, in this case, type M,  
19 redo the same thing, and you can see there that you can  
20 not really tell any difference in the fit. You can fit  
21 urinalysis data very well with type S or type M,  
22 different quantities, but the intake regime was the

1 same.

2 The lung count data, on the other hand, when you compared,  
3 all of a sudden that green line fits right through all  
4 the blue dots. It seems to be most realistic in this  
5 case to be type M type material.

6 And that's pretty much it. I'm looking at a lot of stone  
7 faces and no questions. I know it's a dry topic --

8 **DR. ZIEMER:** I'm trying to see where the -- where are the  
9 data points in those two lower curves? Are they down  
10 near the axis? Is that what --

11 **MR. ALLEN:** Yeah, there's a row of data points right there -  
12 -

13 **DR. ZIEMER:** Okay, I see.

14 **MR. ALLEN:** I put the axis in that situation -- I mean I  
15 could have spread it out a little more, but I put the  
16 axis so I could get this green line on the screen. And  
17 then in this case, I just wanted to compare apples to  
18 apples. I left the axes the same.

19 **DR. ZIEMER:** Okay, thank you very much. Let's open the  
20 floor for questions. Tony.

21 **DR. ANDRADE:** Dave, you mentioned in one of your screens  
22 there that either the model predicted points below the

1 detection limit or data were entered that were below  
2 the detection limit. Which was which and can you  
3 explain that to me again? That one kind of took me by  
4 surprise.

5 **MR. ALLEN:** Went by a little fast?

6 **DR. ANDRADE:** Yeah.

7 **MR. ALLEN:** That was measured values below the detection  
8 limit, so --

9 **DR. ANDRADE:** Measured values?

10 **MR. ALLEN:** In other words -- example, somebody got a  
11 urinalysis and the results were less than one picocurie  
12 per day or some value --

13 **DR. ANDRADE:** Right.

14 **MR. ALLEN:** -- you can put in that value and say it was less  
15 than. That's what the program allows you to do.

16 **DR. ANDRADE:** But wouldn't a reasonable health physicist  
17 have a decision limit that's greater-than? I mean  
18 using classical statistics, okay, not Bayesian, but  
19 classical, wouldn't you have a detection limit that's  
20 certainly somewhere way above your -- I mean a decision  
21 limit way above your detection limit?

22 **MR. ALLEN:** Yes, you would. Unfortunately, a lot of cases

1 we have, there's going to be no detectable samples.  
2 We're stuck with a lot of less-thans. This at least  
3 allows us to plot them out and saying they're less-  
4 than. If -- if there's enough detectable sample that  
5 we want to ignore what was less-than, we can exclude  
6 those with the exclude type and see how everything fit  
7 with what was actually detectable and make sure that's  
8 reasonable for that situation. There's a number of  
9 options that are available there.

10 **DR. ANDRADE:** Okay. So you're artificially establishing a  
11 floor that's actually below your detection limit for  
12 your system.

13 **MR. ALLEN:** No, actually what it's doing is it is using a  
14 maximum likelihood method on the fit and by  
15 establishing it -- the value is less than detection  
16 limit, it says it has to be in that range between --  
17 somewhere in that range between zero and the detection  
18 limit. That way it tries not to fit it. If it's going  
19 to come out way above that, it's not going to try to  
20 predict that intake. It'll predict one that's going to  
21 put it down below there, but it doesn't give a lot of  
22 weight to it, just somewhere in that range.

1 **DR. ANDRADE:** Thank you.

2 **DR. ZIEMER:** Jim and Gen.

3 **DR. MELIUS:** Gen was first.

4 **DR. ROESSLER:** I have a question with regard to the IMBA  
5 history. You mentioned that NRPB developed these  
6 biokinetic models using the new ICRP models in about  
7 1994?

8 **MR. ALLEN:** Well, 1994 was the lung model published -- when  
9 the lung model was published. NRPB did play around  
10 with some computer models before that, and that  
11 accounts for some of the values in that publication.  
12 Those for the most part came from Allen Birchell\*, who  
13 works for NRPB.

14 **DR. ROESSLER:** And then you mentioned that the IMBA models  
15 or model was developed. Was that done by NRPB?

16 **MR. ALLEN:** Yeah. NRPB copyrighted the calculational model  
17 that they use for the LUDEP and the lung model.

18 **DR. ROESSLER:** And then -- and when -- when was that?

19 **MR. ALLEN:** The copyrights -- the individual models I  
20 believe were copyrighted at various times. It's  
21 actually several modules, one of which is a lung  
22 deposition\*, one is a --

1 **DR. ROESSLER:** It's more recently, though, I guess?

2 **MR. ALLEN:** Excuse me?

3 **DR. ROESSLER:** More recently?

4 **MR. ALLEN:** Probably post-'94 when it was copyrighted. And  
5 then as the biokinetic models were developed, they  
6 copyrighted new modules.

7 **DR. ROESSLER:** Up to this time, up to your presentation, I  
8 was thinking that NIOSH had developed IMBA. What  
9 you're really doing, you're using the program developed  
10 by NRPB.

11 **MR. ALLEN:** Right, what it amounts to is copyrighted  
12 software -- or copyrighted calculational engines, and  
13 we asked for the front end -- everything you see pretty  
14 much, we asked for that to be developed, a user  
15 interface.

16 **DR. ROESSLER:** My real question is who validated the model?  
17 Did NIOSH do anything -- I mean I want to know if it's  
18 working right, and I know NRPB probably did, but I'm  
19 wondering what you did to -- to validate it to make  
20 sure that that's the model you wanted to use and that  
21 you're getting the right answers.

22 **MR. ALLEN:** Right. NRPB did a lot of V&B\* on it, quality

1 control, every time they develop a new model on there,  
2 they do a lot of quality control. Also they were  
3 pretty much the only thing that had any sort of  
4 credibility or V&B out there at the time we were  
5 looking for something. And when we get in a new  
6 version, what we've done is used the committed dose  
7 section of that. We can put in -- at one becquerel  
8 intake, use the committed dose and see if we get the  
9 right effective and the right organ doses according to  
10 NRPB publications, and that's what we're claiming to  
11 use is NRC -- NCRP models -- I'll get it right -- ICRP  
12 models. We're claiming to use the ICRP models. The  
13 program with the particular input gives us the right  
14 output that we can tell from those publications, and  
15 that's -- that and maybe a little bit of more  
16 validations is about all we manage to do in-house, but  
17 we have the NRPB quality control documents, also.

18 **DR. ZIEMER:** Jim, then Mark.

19 **DR. MELIUS:** Well, actually Gen asked one of my questions,  
20 though I'm still a little bit concerned with just the -  
21 - the validation issue. So -- so how do we know that  
22 this is giving you the right -- the correct answers for

1 other situations? I mean it -- assume there's been  
2 more to the quality control that went into developing  
3 this than -- than what you described.

4 **MR. ALLEN:** NRPB has put a lot into it. What we've done in-  
5 house is -- first thing is to -- for each isotope, we  
6 put in one becquerel and see if the effective dose is  
7 what's -- matches what's in the publications. Also see  
8 that the committed dose to organs matches what's in the  
9 publications. After that, we've determined -- we  
10 calculated annual dose for 50 years, put them in Excel,  
11 added them up and made sure that matched. So it's --  
12 you know, annual doses at least match -- or add up to  
13 the 50-year committed dose.

14 We've also -- using ICRP-78 where we can with the dates that  
15 are in 78 for bioassay, we can predict bioassay -- put  
16 in, you know, standard input, like a one becquerel  
17 intake and predict what the bioassay should be at five-  
18 day, ten-day, 100-day, whatever's in the ICRP  
19 publication, and we can verify that that matches with  
20 the publication. And we've done a little bit of work  
21 matching up with -- Potter published a whole magazine  
22 of tables for bioassay analysis and we've done some

1 spot-checking against that.

2 **DR. MELIUS:** Secondly is the issue of how you use it, and I  
3 guess I'm a little -- well, I don't -- confused or  
4 concerned, but at one point you mentioned that you're  
5 going through and when you find an outlier, you exclude  
6 it.

7 **MR. ALLEN:** The option's there for the dosimetrist.

8 **DR. MELIUS:** Okay. But is that what you -- you're actually  
9 doing? 'Cause I mean I --

10 **MR. ALLEN:** It can be. I mean errant bioassay samples do  
11 happen. There's not unusual to even get a number of  
12 samples, you can watch urinalysis coming down from an  
13 acute intake and then one of them's zero.

14 **DR. MELIUS:** Yeah.

15 **MR. ALLEN:** The next one seems to be following the curve.  
16 That zero, if you assume it's real and the computer's  
17 looking at it, it's going to drive that intake down to  
18 try to fit the data, so the dosimetrist is allowed to  
19 exclude that and see if the data fits better without  
20 that anomaly.

21 **DR. MELIUS:** Yeah, but then what -- how do you take that  
22 into account when you're doing your actual dose

1 calculation? How do we know that your assumptions --  
2 your assum-- that you're excluding it 'cause it's a bad  
3 bioassay sample versus that you're making the wrong  
4 assumptions because of the -- you have poor  
5 information? And then how does that get into --  
6 eventually get into the IREP model as -- in terms of  
7 your certainty about that dose? I guess -- and I'm  
8 going for -- trying to get at how much, you know,  
9 individual, you know, (Inaudible), if ten different  
10 health physicists used the same data, would they all  
11 come up with the same, you know, calculation or --  
12 yeah, yeah, that's --

13 **MR. ALLEN:** For internal dosimetry, no. You will get ten  
14 different answers. Hopefully they'll get the -- our --  
15 our job is to make sure we get the same side of 50  
16 percent probability. The dose should be reasonably  
17 close, the intake.

18 For the most part, as far as the uncertainty, at this point  
19 we can -- I can answer that that we've avoided it. For  
20 the most part we have tried to overestimate or  
21 underestimate bioassay. When we have data on a curve  
22 or data showing on a curve that's considerably higher

1 or considerably lower than that data point's indicating  
2 that it's definitely an overestimate or definitely an  
3 underestimate, therefore we can bound the intake that  
4 way. And that's probably going to be a big portion of  
5 the cases. We can bound it that way and not deal with  
6 the -- you know, whether it's ten percent error or 50  
7 percent error or whatever.

8 **DR. MELIUS:** No, I -- I understand that part. I just get  
9 concerned about the ones that you can't do that on and  
10 where your assumptions are going to be sort of critical  
11 to the outcome of that case, and sort of how do we get  
12 consistency in doing it, I think is the -- is the  
13 issue. I think Tony has a...

14 **DR. ZIEMER:** Mark and then Tony.

15 **MR. GRIFFON:** I have a pretty straightforward one. What --  
16 in this newest version, what are the radionuclides  
17 available now? I know in -- I saw a recent version and  
18 it had just limited radionuclides built in and I wonder  
19 if -- if you've got all the radionuclides you need for  
20 this program available now.

21 **MR. ALLEN:** We have about -- I believe the number's 54 now  
22 in there. It's all the important ones you would want

1 with DOE complex and probably not every single one.  
2 There's always an odd case out there, especially at a  
3 national lab. For the most part, what's missing either  
4 has a short half-life or a short biological half-life,  
5 and we can use the 50-year committed published doses --  
6 the person got it all in the first year and we can  
7 simply use that without the computer program.

8 **DR. ZIEMER:** Tony?

9 **DR. ANDRADE:** Dave, certainly within the laboratories we  
10 have ways of ensuring that the spikes and the zeroes  
11 are true or not true. We run blanks and we also run  
12 spikes, along with the real bioassay samples. And that  
13 is true for both alpha spectroscopy as well as for mass  
14 spectrometry. And I guess my question to you is do we  
15 pass along or do you use all of the raw data that we  
16 collect? Or do you use our final values?

17 **MR. ALLEN:** We ask for the raw data and that's what we use.

18 **DR. ANDRADE:** Okay.

19 **MR. ALLEN:** If we can -- all the way down to counts per  
20 minute if that's what we can get, but that's pretty  
21 rare to get ahold of that. That's generally going to  
22 be a urinalysis result in say dpm per day or whatever

1 the appropriate unit is for that particular isotope,  
2 and that's what we start with.

3 **DR. ANDRADE:** Okay.

4 **DR. MELIUS:** Yeah, the issue's been brought up before here  
5 about the accessibility of this software for people  
6 that are not directly involved in the program, and I  
7 may be wrong, but I thought Larry or somebody was going  
8 to look into that issue. Am I remembering wrong? I  
9 don't want to put you on the spot, but -- or have we  
10 thought about that more or -- that whole issue?

11 **MR. ELLIOTT:** We've already answered that.

12 **MR. ALLEN:** I've encouraged the vendor to make a publicly-  
13 available version that he can sell. They are looking  
14 at that. They have not made one yet. There is a  
15 version they're putting together called IMBA  
16 Professional, and he's trying to put together a light  
17 version -- is what he calls it, IMBA Professional Light  
18 -- that has much fewer functions that might be --  
19 possibly be affordable is what he's shooting at. That  
20 is not available yet. He is -- they're -- haven't  
21 sorted that out, but individuals would have to buy or  
22 organization or whatever, 'cause there's licensing

1 issues with the copyrighted software.

2 **MR. GRIFFON:** And how -- just to follow-up on that, how  
3 about availability to the Board or to the  
4 subcontractor, can --

5 **MR. ELLIOTT:** You -- the Board and your contractor, as well  
6 as our contractor, all have access to the IMBA-NIOSH --  
7 or IMBA-OCAS as special government employees or as  
8 contractors to the government on the program. But Dave  
9 is actually right and accurate in his statement. The  
10 ICRP models and the calculation engine from NPRB (sic)  
11 are copyrighted and protected and we can't distribute  
12 those to the public without a user's license, and  
13 that's the issue. Somebody has to pay for that.

14 **MR. GRIFFON:** And you say they're available to the Board. I  
15 mean can we -- can we physically get a copy sent prob--  
16 before the next meeting or how can we move forward on  
17 this? It'd like to get a disk copy sooner than later.

18 **MR. ALLEN:** It can be done. We've got -- I don't know how  
19 we'll work out the details on -- the licensing  
20 agreement allows NIOSH to use it and any of its  
21 subcontractors for the purposes of the OCAS --

22 **MR. ELLIOTT:** Am I correct, it's not in a CD form, though,

1           it's in a -- it goes on a server. Right?

2 **MR. ALLEN:** No, it's in a CD.

3 **MR. ELLIOTT:** It is in a CD.

4 **MR. ALLEN:** Yeah.

5 **MR. ELLIOTT:** Okay. Well, we'll get that --

6 **DR. ZIEMER:** Okay, you can work with them then and --

7 **MR. GRIFFON:** Okay.

8 **DR. ZIEMER:** Yeah, Mike has a question here.

9 **MR. GIBSON:** Can you tell me -- do you know off-hand how  
10           much of the data you get from these DOE sites is  
11           assumptions, default factors, solubility class, the  
12           date of intake?

13 **MR. ALLEN:** For the most part, if it's bioassay -- that's  
14           why we want the raw data. If it's bioassay analysis,  
15           it's a mass spec or an alpha spec or even a gross  
16           alpha, that's -- counts or activity in that urine, for  
17           example. There's no assumptions that went into it.  
18           It's a laboratory analysis. And then from there we  
19           have to make the assumptions as far as solubility and  
20           all that. And the assumptions we use are the reason we  
21           have to put together these site profiles that was the  
22           last lecture. We have to have some idea of what

1 material they had so that we know what type of  
2 solubilities that would be associated with it, and then  
3 we make sure that the bioassay actually fits that data,  
4 if the assumptions are accurate or not.

5 **MR. GIBSON:** But your -- are you looking at the date of the  
6 bioassay -- was taken or --

7 **MR. ALLEN:** Yes. Yeah, we -- we get the date that a sample  
8 was taken; you know, what was taken, such as a urine  
9 sample; how much, was it a 24-hour sample or was it a -  
10 - you know, an allotment; the actual results, such as a  
11 gross alpha or it could be picocuries per liter of  
12 plutonium, for example; what isotope if they have that.  
13 Everything we can get, we get. We're not shy about  
14 asking for it.

15 **DR. ZIEMER:** Okay on that, Mike, or did you have a follow-  
16 up?

17 **MR. GIBSON:** I don't know if I understand it all, but I --  
18 that'll answer for now, yeah.

19 **DR. ZIEMER:** And you're saying basically you're not  
20 utilizing assumptions that may have been made on the  
21 site 'cause on the site they also presumably do some  
22 sort of dose calculation, in many cases the 50-year

1 committed dose --

2 **MR. ALLEN:** Using ICRP-30 models --

3 **DR. ZIEMER:** Right.

4 **MR. ALLEN:** -- so what they've used -- the doses they've  
5 calculated are not necessarily good for us, and very  
6 few sites have ever calculated an annual organ dose.

7 **DR. ZIEMER:** So you don't find there's any value in looking  
8 at what they may have ultimately calculated for tissue  
9 dose or organ dose?

10 **MR. ALLEN:** There could be some value in it, especially -- I  
11 mean information's always limiting, and if that's all I  
12 can get is a calculated dose, you can pretty much -- if  
13 you get enough details, you can back-calculate what the  
14 bioassay was that that came from. Also as far as the  
15 solubilities, same general -- you know, we hope that  
16 we're not complete ends of the spectrum on what they're  
17 -- have been assuming and what we're going to assume.  
18 There should be some reason if there's a -- if we're  
19 completely different.

20 **DR. ZIEMER:** He's got a follow-up.

21 **MR. GIBSON:** If you had like a super-Y class of plutonium,  
22 how would you be able to distinguish that or could that

1 mask your raw data out of the bioassay...

2 **MR. ALLEN:** It really couldn't mask the raw data, but it  
3 could mask the dose and the intake that you're  
4 calculating from the raw data. And the way that can be  
5 handled -- as I said, we have default classes that can  
6 be picked, but we can also input our own user input.  
7 For us to use a super class-Y plutonium, we would  
8 probably put together a Technical Information Bulletin  
9 evaluating a particular site, what they had, saying the  
10 solubility doesn't follow the defaults and we have more  
11 information, and in that case use these absorption  
12 parameters for this site, is how we would handle that,  
13 and we haven't done that yet. What's -- we haven't  
14 changed from any defaults yet, but we're still kind of  
15 young into that part.

16 **DR. MELIUS:** Just one -- I think it's a brief question, but  
17 back just to the validation. Have you documented the  
18 validation you've done?

19 **MR. ALLEN:** Part of our contract for the upgrade is a whole  
20 documentation on all the V&B that NRPB has done.

21 **DR. MELIUS:** Okay. And then your further --

22 **MR. ALLEN:** Our further evaluation, we have documented not

1 in a very formal manner, okay? That's one of those  
2 things you just never seem to get to. We've got all  
3 the numbers and it's a matter of writing down something  
4 and documenting it.

5 **DR. MELIUS:** I just think that would be helpful to do. I  
6 know it's hard to get to, but it's one of those things  
7 -- things that I think at some point, if questions are  
8 raised, it would be good to have.

9 **MR. ALLEN:** Yeah, I understand. It's just once you get --  
10 once you have run the numbers, you know it works, the  
11 actual --

12 **DR. MELIUS:** No, I -- I --

13 **MR. ALLEN:** It tends to get pushed to the back burner.

14 **MR. GRIFFON:** Yeah, just one final thing on the validation  
15 side of it, do you know if there are any plans to  
16 update the CINDY\* code to be ICRP-60/66 compatible? I  
17 know right now it runs in 30, and if that's going on,  
18 that may be another tool that you can validate against  
19 or whatever. I don't know if that's happening.

20 **MR. ALLEN:** I don't know if that's happening. I haven't  
21 heard of that. I know there is a number of -- a number  
22 of other codes out there. For the most part, they're

1 kind of home-brewed. Like Potter put one together, and  
2 there's someone else that put a math CAD-1 together, I  
3 think, and --

4 **MR. GRIFFON:** French or --

5 **MR. ALLEN:** Nothing that's very versatile for what we're  
6 doing.

7 **DR. ZIEMER:** Tony.

8 **DR. ANDRADE:** A quick answer to Mark's question. When we  
9 were asked by DOE to assist in the development of IMBA,  
10 we were all forced to shell out some big bucks, and so  
11 in doing so DOE elected for us to invest in this  
12 particular code. So if CINDY is being upgraded, then  
13 it's got to be getting done sort of at a -- at the  
14 grassroots level somewhere.

15 **UNIDENTIFIED:** Good answer.

16 **MR. GRIFFON:** Just -- just one final question, Paul. I'm  
17 curious if you've -- just in individual cases, you  
18 mentioned bioassay data a lot. Have you had the  
19 occasion to use air sampling data to validate your dose  
20 calculations from your bioassay, and I don't know how  
21 often you're able to get the air sampling data that  
22 might be appropriate for certain individuals, but have

1       you had the -- have you done that frequently or --

2 **MR. ALLEN:** No. I would love to, but getting the air sample  
3 data, especially from like a major DOE facility and  
4 correlating that to an individual throughout a 20-year  
5 career is virtually impossible. We can get some ball  
6 park estimates if we could get the data, but because it  
7 wouldn't be that useful in that situation, we haven't  
8 gone -- trying to get it. It's also fairly difficult  
9 to get ahold of, as far as 20 years, 30 years back.  
10 You can get some general ideas, but the details is hard  
11 to --

12 **MR. GRIFFON:** I'm not sure I agree with the it wouldn't be  
13 very useful part of that statement, but otherwise I  
14 agree with you. I mean -- I mean I think there might  
15 be some usefulness for certain priority operations or  
16 areas within certain sites to have that as a backdrop,  
17 and if you knew a person worked in that facility over a  
18 certain period of time, you could do some cross-checks  
19 or -- and I certainly have noticed also that that's  
20 lacking in the site profile documentation, too, so I  
21 would encour-- I think that's a useful tool to -- if  
22 nothing el-- I mean I know it's probably going to

1 increase your uncertainty in your overall estimate in  
2 many cases, but it's another piece of information, as  
3 you said earlier, which I -- you know, it may be  
4 valuable in certain circumstances.

5 **DR. ZIEMER:** Thank you. We're at the lunch hour. I think  
6 it's appropriate now for us to recess for lunch and  
7 we'll come back together at 1:30.

8 (Whereupon, a luncheon recess was taken.)

9 **WORKGROUP ON OPTIONS FOR EVALUATING INTERVIEWS**

10 **DR. ZIEMER:** Thank you. We're ready to call the  
11 meeting back to order. I trust you all had a good  
12 lunch and are ready for another working session.  
13 We're going to begin our afternoon session with a working  
14 report from our workgroup on options for evaluating  
15 interviews. Dr. Melius has been the Chairperson of  
16 that workgroup and he's going to report to us and  
17 perhaps make a recommendation.

18 (Pause)

19 Okay, Dr. Melius.

20 **DR. MELIUS:** Okay. Since our last meeting in St. Louis, the  
21 workgroup has had one additional conference call -- was  
22 it last week? Yeah, last week, Wednesday. We met by

1 conference call and discussed -- and had received some  
2 additional information from NIOSH, which were the --  
3 basically the ORAU procedures for doing the interviews  
4 and scheduling the interviews and so forth. Based on  
5 the information that we had received and I think  
6 recognizing that -- that NIOSH's and ORAU's program to  
7 sort of review the interviews and some of the quality  
8 assurance/quality control measures were a work in  
9 progress -- they were developing these really as -- as  
10 we were meeting, and as the program was getting --  
11 getting implemented -- we've -- came up with a set of  
12 recommendations which I think everyone has in front of  
13 them here about things that might -- these covered two  
14 areas. One is things that NIOSH might do as part of --  
15 and actually it may currently be -- already be doing as  
16 part of its quality assurance/quality control program  
17 for the interviews -- that would be helpful for the  
18 Advisory Board if some of this -- these steps were --  
19 or procedures or events were captured in some way as  
20 part of a -- the database so that we would be able to -  
21 - the Board would be able to go back at some point in  
22 time and evaluate these or our contractor might as a

1 way of evaluating the interview process in the context  
2 of the dose reconstructions that are going on. And so  
3 we've made a basic recommendation there to -- to NIOSH.

4 It's not meant to be overly prescriptive for NIOSH,  
5 but to -- that basically the program be further  
6 developed and that -- and we've given some examples of  
7 things that might be captured. Almost all of these  
8 examples are things that NIOSH -- in fact all of them  
9 may be very well things that NIOSH or ORAU is already  
10 doing. And the question is just to make sure that  
11 there is some record that keeps track of these, and in  
12 some sense a tracking system is -- that would allow  
13 review.

14 The second part of our recommendation is that -- then --  
15 that as part of the dose reconstruction -- dose  
16 construction review process that would undertake that  
17 then as currently cons-- currently described, this --  
18 our dose reconstruction will be -- program review will  
19 also be evaluating the outputs from the interview, the  
20 way the interviews are recorded, and also some of the  
21 other information that's kept in the individual record  
22 to that. And so that's what's captured in this second

1 recommendation there.

2 Now I've circulated this to the members of the working  
3 group, also to Paul. Paul's listened in and  
4 participated in our last conference call. I really  
5 didn't receive any comments or corrections from the  
6 workgroup, but they're free to correct or whatever as  
7 we go along, but -- but I think it's more important  
8 sort of the concept -- again, to go back, what we're  
9 trying to deal with is the issue of should there be --  
10 should the Board be either repeating or taking some  
11 steps that would be more intrusive in terms of  
12 evaluating the interview process, be that a second  
13 interview, independent interview, a review of a  
14 transcript of an interview or recording of -- of  
15 interview and that the Board is probably split on that  
16 issue as to whether or not that should be done or  
17 whether that's too much of a intrusion or imposition on  
18 the people that -- on the claimants and so that these  
19 steps in place and based on the results of -- of this  
20 review, then the Board at a later point in time could  
21 make an assessment as to whether or not a more  
22 intrusive form of review of the interviews might --

1 would or would not be necessary.

2 I don't know if any other members of the working group have  
3 any comments you want to add to that.

4 **DR. ZIEMER:** Okay, before we take comments, the Chair is  
5 going to interpret this as a recommendation -- it is a  
6 recommendation from a working group and as such  
7 constitutes a formal motion before the Board, doesn't  
8 require a second. And so with that as background, we  
9 can have comments, which could include modification.

10 Let me also add, and as Jim indicated, I did listen in on  
11 this and I want to make sure -- particularly that the  
12 NIOSH staff understands that this Board is not  
13 mandating specific things that NIOSH do. We do not  
14 want to micro-manage NIOSH. The -- as I understand the  
15 intention of item one and the list of (a) through (f)  
16 is that in fact these are the kinds of records we would  
17 like to be able to sample as a Board, and if they  
18 existed, we would then in turn be able to evaluate the  
19 -- the process, the interview process more readily.

20 Whether -- I think we believe that probably most of  
21 these exist in some form -- either formally or  
22 informally -- but the whole idea there was to identify

1 the kinds of things we -- that probably the Board would  
2 want to sample that would make it much -- make the  
3 audit more readily conductible. Is that a fair --

4 **UNIDENTIFIED:** And informative.

5 **DR. ZIEMER:** And informative. Is that a fair statement,  
6 Jim?

7 **DR. MELIUS:** Yeah, and -- and --

8 **DR. ZIEMER:** And let's begin with Wanda, and then we'll jump  
9 down to Tony. And you can speak for or against the  
10 motion or modify or just comment.

11 **MS. MUNN:** My apologies for not having gotten back to our --  
12 our working group chair with a couple of comments that  
13 I had. I think they were both captured by comments  
14 that we made during our actual discussion, but I felt  
15 perhaps were not fully gathered here. I had thought we  
16 might meet once more before we actually presented  
17 anything in writing to the group and -- but most of --  
18 most of what I had -- had -- most of the changes I had  
19 made were purely editorial. They didn't change the  
20 sense of what was going on here.

21 The one thing that I did not feel was captured that -- was  
22 the suggestion that I made, which remains important in

1 my mind, that it would be most helpful from an auditing  
2 point of view to have a single document where a record  
3 had at least been signed off on by individuals who had  
4 done these specific actions that were listed here. I  
5 don't think that such a document would be an undue  
6 burden if it went along with the case file, wherever it  
7 went. But that's something that certainly would be  
8 simply a suggestion as a potential tool that might be  
9 considered. And I can see no reason why it would have  
10 to be written, necessarily. It's --

11 **DR. ZIEMER:** Wanda, are you suggesting a specific change? I  
12 seem to recall you characterized that as a tracking  
13 system in the phone call. Was that --

14 **MS. MUNN:** Yes.

15 **DR. ZIEMER:** Am I thinking about the right thing?

16 **MS. MUNN:** Yes, you are. Yeah, I was thinking about a  
17 specific document that would serve as a tracking  
18 document.

19 **DR. ZIEMER:** Well, is that item (f) or is that different  
20 than item (f)?

21 **MS. MUNN:** Well, I think -- I interpreted item (f) to  
22 incorporate that, but perhaps -- if one had not heard

1 the discussion, I thought just reading (f) as it was  
2 perhaps would not make it as clear as what I had in  
3 mind. I had a simple sheet of paper in mind which  
4 would be a check-off or a sign-off document for various  
5 steps that needed to be gone through, which were over  
6 and above the mechanical processes that are done  
7 electronically. But no, I'm not asking for any  
8 changes. I just wanted a clarification statement.

9 **DR. ZIEMER:** Thank you. Tony?

10 **DR. ANDRADE:** With respect to Wanda's comment, I would just  
11 like to say that if -- if an electronic system is put  
12 into place, such as we suggest here, then a paper which  
13 would essentially be a traveler, as we call it, could  
14 be generated from that electronic system's -- at any  
15 particular point in time, at -- with any particular  
16 case, such that the audit function would be very, very  
17 easy to accomplish. So I think that if we can  
18 accomplish what's written down in item (f), then the  
19 paper document would be a natural. It'd be -- it would  
20 follow on naturally.

21 Again, in keeping with what Paul said, I, too, do not want  
22 to be overly prescriptive or to try to dictate the work

1 that -- that NIOSH should do. However, I did want to  
2 point out that a QAQ (sic) system is -- is really meant  
3 for those people that are implementing these -- these  
4 processes. It's meant for their own quality  
5 development and improvement. And therefore we should  
6 not lose sight of the fact that NIOSH should own the  
7 program, should evaluate the program. ORAU should be -  
8 - should use the procedures that are developed, and  
9 that the Board should also keep track of what's going  
10 on. And I believe this is also an item for our  
11 subcontractor to look at. Am I wrong?

12 **DR. ZIEMER:** There is part of the task which is --

13 **DR. ANDRADE:** There is part of a task there might --

14 **DR. ZIEMER:** -- this, and in fact when we're talking about  
15 doing this in terms of "us", that includes our  
16 contractor.

17 **DR. ANDRADE:** Right. Okay. I, too, wanted to hand over a  
18 couple of -- both editorial and maybe one or two  
19 substantive comments, and I don't know if this is the  
20 appropriate time to delve into those.

21 **DR. ZIEMER:** That's fine.

22 **DR. ANDRADE:** Okay. I try to skip over the editorial piece.

1       Let me just get back to the very last paragraph in  
2       this draft document, and it refers to the fact that --  
3       I think next to the last -- sorry, the last sentence.  
4       However -- it reads:  However, the need for this should  
5       be re-evaluated at a later time -- and we're talking  
6       about re-interviewing claimants -- based on the results  
7       of the dose reconstruction review and the  
8       implementation of the QA/QC program described above.  
9       Well, QA/QC is meant for quality improvement, meaning  
10       improving processes into the future.  They should not  
11       be looked at as an avenue to go back and look at things  
12       retrospectively.  Which brings us to the heart of the  
13       matter.  
14       I think that we as a Board should vote and should decide  
15       once and for all whether re-interviewing is actually  
16       even on the table.  I believe it shouldn't be.  I  
17       believe it's onerous.  I believe that the only people  
18       that are going to be called are those people who have  
19       had their claims rejected and that it's going to be  
20       just a heart-wrenching experience for those people.  
21       And I really don't see any tremendous incremental value  
22       added in even thinking about that.

1 So with that, you know, I would -- I would essentially vote  
2 for taking out most of that sentence, starting with the  
3 word "based". But of course that really can't be done  
4 until this Board comes to -- comes to grip with that  
5 issue, and I really do believe that we should do that.

6 **DR. ZIEMER:** Tony, I'm not sure whether you're making a  
7 motion to amend or simply at this time reflecting that  
8 viewpoint...

9 **DR. ANDRADE:** Well, I --

10 **DR. ZIEMER:** Could you clarify for me?

11 **DR. ANDRADE:** Okay, Paul. I guess there'd be a two -- two-  
12 phased approach to this. One is, I think that the  
13 Board should discuss whether or not retrospective or  
14 re-interviewing is even on the table for us to  
15 consider. That's one.

16 And if it is not, then I would move to amend the draft as it  
17 -- as it -- as it stands, at least for the --

18 **DR. ZIEMER:** Yeah, I might point out that it -- it may turn  
19 out to be a moot point whether or not we include it in  
20 this document. The Board could always -- even if this  
21 were deleted, the Board could at a later date decide,  
22 for whatever reason it wished, that something different

1 should be done. We're not binding ourselves in one  
2 direction or the other. I suspect that the statement  
3 as it stands simply points out that the door could  
4 still be open for that possibility in the future.

5 You're suggesting let's not even open it --

6 **DR. ANDRADE:** I don't think we --

7 **DR. ZIEMER:** -- and I'm saying that even if we did that,  
8 there would be nothing to prevent the Board in the  
9 future from changing its mind in any event. And I say  
10 that in the context where I myself have been basically  
11 opposed to the idea of re-interviewing, if only for the  
12 fact that a re-interview is not in fact the same as the  
13 original interview. It is different in time and in  
14 pla-- space. The interviewer would be a different  
15 person than the original one, presumably. You could  
16 not reproduce the conditions of the original interview.

17 You might in fact elicit different responses from  
18 interviewees. You might elicit things that the  
19 interviewee did not even think of the first time  
20 around, so it's very difficult for me to imagine a re-  
21 interview as a quality check on the original interview  
22 so much as these items, which are a way of getting at

1 the issue of whether or not the information from the  
2 interview was properly captured and used in the record  
3 and in the determination of the eligibility of the  
4 person for compensation.

5 But be that as it may, I think we need to hear from others.

6 I guess you're not making the motion at this time, or  
7 are you?

8 **DR. ANDRADE:** No.

9 **DR. ZIEMER:** Okay. Thank you. Okay, let's start with  
10 Henry, and then Mark and then Jim.

11 **DR. ANDERSON:** Yeah, I'm -- I think the recommendations are  
12 good ones. I think the decision as to whether one  
13 would re-interview -- I think this basically sets that  
14 aside, because it'll depend on what the QA/QC program  
15 is that we need to know is where -- is a second set of  
16 ears sitting in and listening interacting then to  
17 improve the interviews as they go forward, if the set  
18 of ears is saying we're going to listen on every  
19 interview, but each interview only has 20 seconds worth  
20 of listening in, then you know, we sort of need to know  
21 is the person going to listen to the whole interview  
22 and then, you know, comment back to the interviewers

1 'cause they're all learning as they go anyway. I think  
2 part of the QA/QC how -- how it's designed would  
3 relieve a great deal of concern about the interview.  
4 And I think that's kind of why I support this language  
5 that I think what we're basically saying here is that's  
6 an option, but we aren't -- we don't need to really  
7 think about that till we see, gee, if you look at all  
8 these interviews, if there doesn't -- if they don't  
9 seem to be generating anything or everybody's in  
10 agreement, then I don't think we'd move forward. So I  
11 really think we need to have this for a kind of an  
12 audit trail so that when our people come in they can  
13 look at this and say yes, this one was -- somebody did  
14 listen in and so when we look at it, there was  
15 agreement between the person who listened in with the  
16 interviewer as to how the information was recorded and  
17 what was heard. So you know, our earlier discussion  
18 about should our person sit in and listen and take  
19 notes, here their internal auditor is doing that and  
20 it's a question of then seeing how is that used or how  
21 extensive is that -- that listening in and what is the  
22 feedback loop for it. So I -- I think what's here is -

1 - is a good first step and it'll help us down the line  
2 when we look at inter-- an interview and say gee, you  
3 know, there doesn't seem to be much here. I wonder --  
4 or something like that. We would have that answer in  
5 whatever the audit program was, so that's why I think  
6 it's very helpful and I -- I don't -- you know, I'm --  
7 I'm assuming or I'm hoping that whatever is designed  
8 and shared with us, we would view that, after the fact,  
9 as being sufficient for us not to be concerned about  
10 the interview process. But that -- that's a -- yet to  
11 be determined till we get into actually looking at the  
12 individual cases or our contractor starts generating  
13 that to say gee, here's some improvements we might want  
14 to recommend.

15 **DR. ZIEMER:** Thank you. Mark?

16 **MR. GRIFFON:** Yeah, I guess the first thing that strikes me  
17 in this -- in these recommendations is that it -- it's  
18 really recommending internal audit as opposed to a  
19 Board audit. And Tony is right that the tasks as we  
20 laid them out for the subcontractor right now do  
21 include a review of the procedures and the interview  
22 form. And I think that'll be telling -- once we

1 initiate that, we may have some good input and sense of  
2 that.

3 I guess I expected that these audit recommendations and the  
4 listening in, as Henry described it, might be a Board  
5 function. I'm sorry -- and -- and then the other --  
6 you know, I would also -- I think that last language,  
7 the re-interviewing, I don't know if the notion of  
8 requiring taping -- I know we had some early  
9 discussions about that and there are some complications  
10 about that. I don't know if the working group  
11 discussed that any further. You know, pending the  
12 outcome of the initial review of the procedures and the  
13 interview form and maybe of this internal audit, you  
14 know, we may -- we may want to go to -- and I know  
15 there -- there's hurdles to get over for that, but we  
16 may want to go to a function where we tape some of  
17 these interviews and then we can audit them in that  
18 fashion instead of re-interviewing, necessarily --  
19 'cause I know there's certainly pitfalls with the re-  
20 interviewing process, but -- but - but I guess -- one  
21 think I would ask the working group is, you know, this  
22 being an internal audit by NIOSH, did -- did you have

1 discussions about the Board doing this -- these steps  
2 (a) through (f) or whatever?

3 **DR. MELIUS:** Yeah, let me -- 'cause --

4 **MR. GRIFFON:** Or maybe I just need clarification, I don't  
5 know.

6 **DR. MELIUS:** Yeah.

7 **MR. GRIFFON:** Yeah.

8 **DR. MELIUS:** I think if you look at this -- I may have  
9 mischaracterized it. One and two is the NIOSH program.

10 If you go to the last -- is what NIOSH will do is a  
11 QA/QC program to improve -- be improving the interview.

12 If you go to the last paragraph, it's what the -- what  
13 we're doing, the Board is doing and doing that, and  
14 that was really another working group and the Board  
15 that is laid out the parameters for that and I think  
16 we've talked about it at other -- other meetings.

17 And then I think we're making -- maybe the wording isn't as  
18 complete as it could be, but we're making a statement  
19 that, you know, based on this imple-- implementation of  
20 these two things, the NIOSH QA/QC program -- it's  
21 called that -- our individual dose reconstruction  
22 reviews that involve evaluating the interview record,

1 therefore at this time we're not recommending that  
2 there be any further -- more intrusive way of --  
3 potentially more intrusive way of reviewing the  
4 interviews, whether it be listening in or re-  
5 interviewing or reviewing a recording of the interview  
6 or -- or how -- whatever that may be 'cause they all  
7 raised a number of -- number of issues, you know,  
8 beyond what we've talked about here, so -- a big  
9 headache for Larry to deal with and some of these could  
10 be, anyway. So I think that therefore we're -- you  
11 know, this is our recommendation at this point in time,  
12 and I think we have to leave it open and see what  
13 happens down the road and see what the results of these  
14 are.

15 **DR. ZIEMER:** Larry, you had a comment?

16 **MR. ELLIOTT:** Yes, if I might. You've heard me speak about  
17 this before, and in the spirit of being helpful and not  
18 in the spirit of belligerency or -- or unhelpfulness,  
19 these set of recommendations are appropriate, we feel,  
20 for an understanding of what it is the Board would like  
21 to audit on this piece of the process. Many of these  
22 are already in place or being developed. Yes, we want

1 to be very clear that we don't have all of these fully  
2 developed and fully functional, but that's the  
3 direction that we are going. You've heard me say from  
4 the very start that we think the Board's audit should  
5 evaluate the interview process and how they contribute  
6 to dose reconstructions.

7 Now, just for your benefit, you've also heard me say that  
8 re-interviewing claimants is off the table. And it's  
9 not this Board's decision at the end that's going to  
10 make that -- that'll carry that day. The Department  
11 will weigh in on whether or not this actually happens.

12 If you so choose to leave the door open, that's one  
13 thing. But if you choose to ask for a re-evaluation  
14 and re-interview of claimants, the Department will have  
15 to weigh in on that. So I just offer that as helpful  
16 perspective, not as a belligerent perspective. I want  
17 you to understand, at the end of the day the Department  
18 will have to decide the value of that particular  
19 component if you choose to re-interview claimants.

20 **DR. ZIEMER:** Thank you. Okay. Let's go right down the  
21 line. Leon?

22 **MR. OWENS:** I'd just like to say that I agree with the

1 recommendations by the working group. I think they've  
2 done a very good job.

3 In regard to the re-interview process, I appreciate Larry's  
4 comments, but I do think that we need to at all times  
5 consider the credibility of the program and by making  
6 that consideration with the claimants, particularly the  
7 elderly, that are not as well-versed in this process as  
8 we might be, I think there would be value-added in a  
9 re-interview from the standpoint of quality assurance.

10 **DR. ZIEMER:** Thank you. Roy?

11 **DR. DEHART:** We have a proposal here, and I assume that the  
12 rationale for that is that we're not sure that the  
13 current interview system is working effectively. I  
14 would ask the question, having done 20,000 interviews  
15 as was presented today, are we aware of any significant  
16 problems with the interview process?

17 **MR. ELLIOTT:** I would answer that question this way, that  
18 no, we are not aware of any problems in our interview  
19 process. ORAU does have the manager of that particular  
20 task and other delegated folks in that part of the  
21 program listen in -- and it's not just for 20 seconds;  
22 it's for the whole interview that -- they listen to the

1 whole interview and feedback is provided.

2 I will also say this, that there have been a number of cases  
3 that I have approved to go over to DOL where I have  
4 seen how the interview has been captured and utilized  
5 in the dose reconstruction, and how it's reflected in  
6 the dose reconstruction report. So I'm fairly  
7 comfortable and confident in saying to you today that  
8 this interview process is a contributing factor to dose  
9 reconstruction, and we have not identified any major  
10 problems with it. But we're watching it very closely.

11 **DR. DEHART:** I gather from what you had said previously that  
12 you're in the process of developing just what is being  
13 suggested here, basically -- a way of going through and  
14 documenting that the -- basically (a) through (f) --  
15 some modifications will be occurring.

16 **MR. ELLIOTT:** Several of these are in place. They're  
17 perhaps not at a state of readiness that we are happy  
18 with. Some -- a couple of these are not in place, but  
19 they're -- we've had similar ideas and we intend to put  
20 them into place -- (f) for instance is one -- you know,  
21 we don't have in place right now, I don't believe,  
22 necessarily, but we do agree it needs to be put to --

1 put in place. And the traveling document, hard copy,  
2 would go along with that, so -- appreciate those  
3 thoughts and those comments.

4 **DR. ZIEMER:** And if I might add, again, I just observed the  
5 work of the subcommittee (sic), I don't think there was  
6 an assumption that there was something wrong currently  
7 with the interview process. The real issue is how do  
8 we carry out our responsibility of evaluating it. And  
9 I certainly became aware as we got the materials from  
10 Dr. Toohey on -- on what they do and how they do that -  
11 - for example, they do have a management tool where  
12 they listen in to the interviews. Great, how do we  
13 critique that? If the -- is that available for us to  
14 look at so we can say what -- what was the evaluation  
15 of the listener of that interview. So these things  
16 simply reflect the kinds of records that could be  
17 audited where we could make a judgment. Yeah, the  
18 interview was properly reflected -- and all the things  
19 that Larry just described. We want to be able to -- to  
20 confirm those kinds of things, how the interviews are  
21 used in the dose reconstruction, if indeed they are;  
22 how they've contributed to it. So it's a matter of

1           simply being able to document what has been talked  
2           about here.

3 We'll go on to Tony, and then we'll circle back again.

4 **DR. ANDRADE:** Okay. Perhaps -- perhaps my comments have  
5           been overblown a little bit, or perhaps I overblew them  
6           a little bit. If the process that we're suggesting  
7           remains internal and a re-interview is -- is -- let's  
8           say it's decided by one of the reviewers here in the  
9           list that runs from (a) to (d), determines that more  
10          information is necessary -- like an internal decision  
11          to re-interview is appropriate before the case is  
12          closed.

13 However, that's just -- I'd just make sure that everybody  
14          knows where I'm coming from. Once the Board has  
15          decided to take a look at these things, I understood  
16          that we were going to be looking at cases that were  
17          closed. Those are the cases that I'm concerned about.

18          If they are closed, if there has been a decision that  
19          was not positive, then I don't want to see our  
20          recommendations used to try to provide an avenue to  
21          redress the decision. That's where I'm coming from.

22 If we're talking about the internal processes that have been

1 described, then I'm fine, and this language is  
2 perfectly fine.

3 **DR. ZIEMER:** They can re-interview now.

4 **DR. ANDRADE:** Go ahead?

5 **DR. ZIEMER:** They can re-interview currently if they need  
6 more information. That's not --

7 **DR. ANDRADE:** As many times as they need.

8 **DR. ZIEMER:** -- the issue that's being -- that's not the  
9 issue, I don't think. I think the issue was exactly  
10 what you described; you want to re-interview a closed  
11 case.

12 **DR. ANDRADE:** Right.

13 **DR. ZIEMER:** That was the -- all right, let's go back here -  
14 - is it Mark next? Then Jim.

15 **MR. GRIFFON:** Yeah, just a couple of things. I mean I -- I  
16 think -- you know, one thing that I've heard in  
17 previous meetings from public comment is that there is  
18 a concern with the interview and the information that's  
19 being collected, so I don't know that we don't have any  
20 concerns over it. We've heard that expressed at  
21 several meetings. Maybe those things have been  
22 corrected. I don't -- you know, that was a while --

1 some of these were a while ago, but you know, to say  
2 that we haven't had any concerns over this, I think is  
3 not -- is not true. I think we do have some concerns  
4 over that.

5 The second thing I was going to ask is if the Department's  
6 policy is that re-interviewing is off the table, what -  
7 - what's the policy on this -- we -- we did bring up  
8 the idea of taping and creating a transcript of the  
9 interviews upon the consent of the claimant, obviously.

10 Is that off the table? Can that be -- is that  
11 something that the -- the Department would consider? I  
12 know it -- there's hurdles involved, but --

13 **MR. ELLIOTT:** We have considered that, and we have  
14 articulated the problems associated with that numerous  
15 times. And at this juncture, it's -- it's not a viable  
16 recourse.

17 **DR. ZIEMER:** Jim?

18 **DR. MELIUS:** Yeah, a few comments -- address some of -- some  
19 of these points. First, as Mark said, I mean the  
20 interview is a very public part of the program, and we  
21 are much more likely to have people concerned about  
22 their interview than to ask questions about IMBUS (sic)

1 or how IMBUS is calculated or -- or whatever, what  
2 assumptions were used or these other technical  
3 information. So it's always going to be very visible,  
4 and so I think in -- and people may sort of attribute  
5 more importance to it than is appropriate in their  
6 individual case or something, and particularly given  
7 the time frame involved, the survivor issue and so  
8 forth. And so I think we have to have a credible  
9 process in place. NIOSH has to have a credible program  
10 to review it and then continue to -- continue  
11 improvement issue, and then the Board has to have a  
12 credible process for -- for reviewing it, so -- read  
13 there -- and again, in going through it, we didn't see  
14 any particular problems. However, what we did notice  
15 was that there were a number of places that NIOSH had -  
16 - steps NIOSH had in place that reviewed the interview.  
17 They were listening in, there was an initial review,  
18 there's a later review. I think the question of are we  
19 going to find problem-- potentially find problems with  
20 the interview -- probably going to come up -- the issue  
21 with -- at the point of the individual dose  
22 reconstruction where someone's looking in a lot of

1 detail at all the information on the case and would  
2 notice discrepancies, potential problems. Those may  
3 very well be dealt with by, you know, a quick check of  
4 the record or a quick call back to the person for  
5 clarification or something, and that's fine. And all  
6 we're asking for here is really that that be reported  
7 in some way so we -- so we have a record of it and so  
8 forth. So I think that's -- go forward.

9 I think -- yeah, we understand the Department's going to be  
10 resistant to re-interviewing and so forth. At the same  
11 time, we have an obligation, you know, that Congress  
12 gave us to review the dose construction --  
13 reconstruction program, and we have to be able to say  
14 that we're -- that we as a Board are doing that  
15 properly. And if -- and that means we have to be able  
16 to say something about the interview program. And we  
17 don't want to be put in the position where we're having  
18 to say that we could not carry out our assigned mission  
19 because we weren't given the capability or the access  
20 or tools necessary to -- to review a major part of this  
21 program. I think what we've laid out here may get us  
22 there, so I think that's --

1 **DR. ZIEMER:** I think that's a good point, Jim. I think the  
2 subcommittee (sic), at least from what I heard, felt  
3 like if there was in place a good quality assurance  
4 program and that that could be audited, in fact we  
5 would be able to reach the level of confidence that  
6 we're talking about -- a good possibility of reaching  
7 that without having to do a re-interview. But these  
8 would be key items that would help us get there, and  
9 that was the thrust of it, I believe.

10 Okay. Roy again?

11 **DR. DEHART:** No.

12 **DR. ZIEMER:** No. Okay. Gen, Gen Roessler.

13 **DR. ROESSLER:** I'm totally in support of the proposal here  
14 and the motion down through number two, but I'm not  
15 comfortable with even bringing in the wording about re-  
16 interviewing, for the same reasons that Tony has  
17 stated. Even though it says we're not going to do it  
18 at this time, by bringing in the wording, it leaves it  
19 open. And I just think that's inappropriate. I think  
20 I would totally support this if we went with Tony's  
21 friendly motion or whatever it was, but it --

22 **DR. ZIEMER:** I don't know if Tony actually made the motion.

1           You're certainly free to make the motion if you wish -

2           -

3 **DR. ROESSLER:** I guess what I'm saying is I'm totally for  
4           this if we can take out those sentences that include  
5           re-interviewing, even though it says we don't recommend  
6           it at this time. Just bringing the wording in leaves  
7           it open. It leaves it sounding like this is a  
8           consideration, and I -- well, maybe if it is later on,  
9           it could be brought up later on, but I -- I don't think  
10          the wording needs to be in it at this time.

11 **DR. ZIEMER:** And again I'll point out, I don't know if  
12          you're making the motion yet or not, whether it's there  
13          or not doesn't preclude the Board taking some other  
14          action at a later date in any event, whether or not you  
15          wanted to.

16 **DR. ROESSLER:** But then I --

17 **DR. ZIEMER:** Are you making a motion to amend by deleting  
18          the last two sentences?

19 **DR. ROESSLER:** I could do that. Yeah, I -- I think the  
20          point is, whether it's there or not, if we can do it  
21          later on, let's just leave it for later on. Let's not  
22          even bring in the thoughts at this time. I don't see

1           that it adds anything, and I think it detracts from --

2 **DR. ZIEMER:** So are you speaking in favor of the motion that

3           you haven't yet made, or...

4 **DR. ROESSLER:** I guess I was hoping Tony would make the

5           amendment to the motion. I think he had the wording.

6 **DR. ANDRADE:** I'll let Mike --

7 **DR. ZIEMER:** Okay, we have a comment first from Mike.

8 **MR. GIBSON:** Just on the issue of the re-interview, you

9           know, I don't think we're trying to say that, you know,

10          NIOSH isn't doing the right thing, asking the right

11          questions as they know them. But there could be some

12          things that come up during a site profile that would --

13          could possibly reflect back on the claimant and they

14          would need to re-interview them, too, that wasn't

15          necessarily known to NIOSH at the time.

16 **DR. ZIEMER:** Any further comments? Are there -- does anyone

17          wish to amend this document before we vote on it? If

18          there are no... There appears that -- okay, Tony. I'm

19          not trying to urge you to do it. You can either...

20 **DR. ANDRADE:** I really don't want to have another meeting to

21          discuss all of the intricacies here. Mike brings up a

22          very good point, and there are other concerns on the

1 table. But I think we've had our Federal official  
2 advise us about the likelihood of us ever doing  
3 retrospective interview after a final decision has been  
4 made, and I -- based on that, I think -- not I think, I  
5 will make the motion that the only change really --  
6 this is a -- this is a very well-done draft here, Jim,  
7 that the only change that I would submit for the  
8 Board's consideration in a motion to move on this is  
9 that we delete the last two sentences of the document  
10 and go forth with the rest as a recommendation to  
11 NIOSH.

12 **DR. ZIEMER:** Okay. This is a motion to amend the document  
13 by deleting the last two sentences. Is it --

14 **DR. ROESSLER:** I second it.

15 **DR. ZIEMER:** Seconded. Now is there discussion on the  
16 motion to amend?

17 **DR. MELIUS:** Yeah.

18 **DR. ZIEMER:** Okay, here and then there.

19 **DR. MELIUS:** (Off microphone) Yeah, a couple of points.

20 **MR. ELLIOTT:** Use your mike, please, Jim.

21 **DR. MELIUS:** Sorry, I didn't realize that Gen had borrowed  
22 it here.

1 Two things. With all due respect to our Federal official,  
2 we are -- our charge is in some ways separate from them  
3 and I -- I hate to have us be doing an amendment in  
4 reference to having Larry tell us we shouldn't be --  
5 what we can and cannot do to review the program we're  
6 supposed to be reviewing. I think that raises some  
7 issues about our -- our charge. I think -- appreciate  
8 what he's telling us factually and -- and so forth and  
9 I don't think that's his motive, but I think --  
10 (Inaudible) by that.

11 Number two, my understanding of the charge to our working  
12 group was to deal with this issue, and in some sense  
13 the reference to re-interviewing is because of the way  
14 Paul gave us the charge and the discussions we had in  
15 order to carry this out. And it was specifically not  
16 to design how the program could be reviewed or develop  
17 what's the best review of the interview process, but  
18 rather were there things that we could do that would be  
19 sufficient, short of re-interviewing or some other,  
20 more intrusive process that -- to do. And I think -- I  
21 think we need to have that reference in there. I don't  
22 think it commits us one way or the other and if there's

1           wording that would, you know, add -- you know, re-  
2           interviewing or other methods of evaluation, that's  
3           fine.  But I think we need that reference -- reference  
4           in there.  You know, I -- quite frankly, I think the  
5           committee's split on this issue and -- and it's a hard  
6           one to deal with conceptually.  I think the way we're  
7           taking -- again, aside from those two sentences, the  
8           way we're taking is a way of trying to develop a  
9           compromise that everybody can live with and -- and then  
10          when we get, you know, down the road, whatever it will  
11          be a year or two years when we have this information,  
12          we'll be able to make a more informed recommendation  
13          one way or the other.  And maybe our differences will  
14          be less at that point in time, but I certainly feel  
15          that that's -- this should be -- reference should be  
16          kept in there.

17 **DR. ZIEMER:**  Okay.  So you're speaking against the motion.

18           Okay.

19 **MR. ELLIOTT:**  Point of clarification.

20 **DR. ZIEMER:**  Point of clarification.

21 **MR. ELLIOTT:**  Point of clarification, the charge to the  
22          working group was specific in evaluating options or

1 identifying options to evaluate the interview process.

2 **DR. MELIUS:** That's not the way that Paul gave me the  
3 charge.

4 **DR. ZIEMER:** Well, I don't recall the exact wording. I can  
5 tell you that the Chair's objective is to try to find a  
6 way to audit this without doing interviews, but -- but  
7 --

8 **MR. ELLIOTT:** I can assure you, that's the exact charge from  
9 the transcript. I sent it to the working group the  
10 other day.

11 **DR. ZIEMER:** But I -- but I don't -- again, let me point  
12 out, it doesn't -- I'm not speaking for or against the  
13 motion. I would point out if the sentences are struck,  
14 this does not preclude anything. It simply doesn't  
15 address it right now.

16 Henry?

17 **DR. ANDERSON:** I guess one -- one argument I would see for  
18 leaving it in is it provides some institutional memory  
19 that in four years every Board member here could rotate  
20 off. In a year we may have --

21 **DR. ZIEMER:** Where did you get the four?

22 **DR. ANDERSON:** Well, the assignments is -- the assignments

1 are one to four years. I rotate off in four months,  
2 and there's two others -- we haven't -- it hasn't been  
3 discussed here -- are slated to potentially rotate off  
4 or at least would have to be renominated, others would  
5 be -- potentially could come on, so one of the benefits  
6 I see of having this here is we've -- we've spent, I  
7 would say, almost an inordinate amount of time  
8 discussing it, but it isn't reflected anywhere in any  
9 of -- a recommendation or things we've made, so yes,  
10 it's there kind of lost and forever of the transcripts.

11 Somebody would have to go back if, when the review  
12 comes up four years from now, and somebody says well,  
13 let's go back and see what our recommendations -- were  
14 they met, this would just remind you well, here's an  
15 option that was discussed. So that -- I think it's  
16 helpful to have this. It doesn't make a commitment,  
17 but as you say, you could go back, but somebody may not  
18 even remember about --

19 **DR. ZIEMER:** Let me point out, Henry, where this is going to  
20 appear and that is in the transcripts.

21 **DR. ANDERSON:** Well, but -- but if you --

22 **DR. ZIEMER:** The transcripts are there already. That's the

1 institutional memory. This is -- this is no better  
2 than the transcripts in which it will appear anyway,  
3 one way or the other. The issue has appeared over and  
4 over in the transcripts. That's all I'm saying.

5 **DR. ANDERSON:** Yeah, well, I -- I -- I --

6 **DR. ZIEMER:** But -- no, I do point --

7 **DR. ANDERSON:** I'm just saying --

8 **DR. ZIEMER:** I understand --

9 **DR. ANDERSON:** -- on every other board I've been on, what  
10 the agency pays attention to and subsequent board  
11 members is what are your action items and -- and we've  
12 tended not to maintain a list of action items. What we  
13 have is resolutions and recommendations that we've  
14 made, and one could go back and say --

15 **DR. ZIEMER:** Gotcha.

16 **DR. ANDERSON:** -- as a new member, you'd want to -- you'd --

17 **DR. ZIEMER:** A specific action item.

18 **DR. ANDERSON:** You'd want to know what are the specific  
19 issues. That -- you know, I just raise that as one  
20 reason for having it here.

21 **DR. ZIEMER:** Okay.

22 **DR. ANDERSON:** It doesn't make a commitment to do it, but to

1 have no mention of it --

2 **DR. ZIEMER:** Okay.

3 **DR. ANDERSON:** -- means somebody has to think of it later  
4 down the --

5 **DR. ZIEMER:** You speak for the motion then. Anyone speaking  
6 against the motion? Okay.

7 **MR. ESPINOSA:** Against the motion?

8 **DR. ZIEMER:** Well, I'm going to alternate. Against the  
9 motion?

10 **MR. ESPINOSA:** Yeah, I'm against the motion. I agree with  
11 Henry. I believe that it should be in there. It  
12 doesn't matter whether it's left out or put in, either  
13 way it does give us something to reference back on, as  
14 Henry's saying. So therefore I speak against the  
15 motion.

16 **DR. ZIEMER:** Okay. Anyone for the motion?

17 **DR. DEHART:** For the motion?

18 **DR. ZIEMER:** For the motion.

19 **DR. DEHART:** I speak on behalf of the motion, and I'll  
20 explain very quickly why. The title is the  
21 recommendations of, and the next to the last sentence  
22 begins (reading) At this time, the working group is not

1 recommending...

2 We're countering what we're saying in the document. I speak  
3 for the motion to delete.

4 **DR. ZIEMER:** Okay. Mark?

5 **MR. GRIFFON:** Yeah, I'm speaking against the motion. I -- I  
6 -- and one of the reason-- I mean I've already spoke to  
7 some of my concerns about it, I reflect back on a  
8 veteran's program review that John Till did and one of  
9 the findings that they had was how important the --  
10 they weren't even interviews, really, they were -- they  
11 were I guess written documents provided by some of the  
12 claimants in those cases, and the fact that the dose  
13 reconstructors may have underestimated doses in many  
14 cases because they didn't incorporate adequately the  
15 information that was identified in some of those  
16 interviews. So I think -- you know, this is such an  
17 important -- I think it's an important component. I  
18 think how it's designed is critical to how much  
19 information you're going to elicit from these people  
20 and how -- how useful it can be. I think it can be  
21 very important, though, and I -- I don't want to close  
22 the door. In fact, I was hoping that the working group

1 would come out with a recommendation on how to -- to  
2 re-interview or tape or -- or to actually have the  
3 Board do an audit. I think it's a little soft in that  
4 regard, but at least I want the last clause in that  
5 allows us -- reminds us that the door is open to re-  
6 examine this issue upon findings of the other steps in  
7 -- in section one of this document.

8 **DR. ZIEMER:** Just for clarification, Mark, wasn't Till's  
9 concern that material elicited in the interviews wasn't  
10 in fact utilized, as opposed to the issue of not having  
11 adequate interviews? See, I --

12 **MR. GRIFFON:** Well, yeah -- yeah, they didn't have  
13 interviews, but the -- yeah. I mean but the -- they  
14 said that they weren't -- that they weren't really used  
15 by the dose reconstructors adequately and they didn't  
16 pay attention to them or --

17 **DR. ZIEMER:** But the issue that we have is sort of a  
18 separate issue.

19 **MR. GRIFFON:** It is sort of a separate issue, but it just  
20 demonstrates the importance of the tool, is what I'm  
21 saying.

22 **DR. ZIEMER:** The interview is definitely important. That's

1           why we're talking about reviewing it. Okay. Wanda has  
2           a comment.

3 **MS. MUNN:** I need one point of clarification. We are  
4           talking about closed claims. Correct?

5 **DR. ZIEMER:** Closed claims. That's correct.

6 **MS. MUNN:** If we are talking about closed claims, then the  
7           consideration of re-interviews puts this Board in the  
8           position of being viewed by the public as a quasi-  
9           appellate group.

10 **MR. PRESLEY:** That's exactly right.

11 **DR. ANDRADE:** Exactly.

12 **MS. MUNN:** I am not prepared to serve as an appellate. I  
13           don't believe that was the charter of this group and I  
14           won't go there.

15 **DR. ZIEMER:** Thank you. Further comments? Roy, you have  
16           another comment? Robert?

17 **MR. PRESLEY:** Well, early on we were in Cincinnati and some  
18           of us witnessed some of the interviews. And I'm going  
19           to be honest with you. I'm -- I'm accepting to what  
20           they're doing. I think if we go to this, we're getting  
21           ourselves in trouble.

22 **DR. ZIEMER:** So you speak for the motion?

1 **MR. PRESLEY:** For the motion.

2 **DR. ZIEMER:** Any other comments, for or against the motion?

3 Are you ready to vote?

4 Okay, those in favor of the motion, raise your right hand.

5 (Affirmative responses)

6 **DR. ZIEMER:** One, two, three, four, five for the motion.

7 Those opposed?

8 (Negative responses)

9 **DR. ZIEMER:** One, two, three, four, five, six opposed. The  
10 Chair votes for the motion. We're six and six. The  
11 Chair rules that the motion does not pass. It requires  
12 a majority to pass. That's not the same as failing,  
13 but it doesn't pass. Which means we return to the  
14 original document, as written. Okay?

15 Now incidentally, under Robert's Rules, anyone can challenge  
16 the Chair's ruling, and the challenge has to be upheld  
17 by two-thirds vote, so -- so the ruling is that the  
18 motion fails for lack of a majority. It seems like the  
19 Chair ought to get two votes in these cases.

20 **DR. ANDERSON:** Actually I thought the Chair didn't vote  
21 unless it was a tie, but that's okay.

22 **DR. ZIEMER:** Actually under Robert's Rules, that's generally

1 the case. But I think we agreed in our own rules that  
2 the Chair would always vote so that people knew where  
3 the Chair stood or didn't stand.

4 So the motion fails and we have before us the original  
5 document, as written. Is there any further discussion  
6 on the document as written?

7 Are you ready to vote on the document which -- the  
8 recommendations and the not recommendations of the --  
9 usurping Roy's characterization.

10 A comment, Tony?

11 **DR. ANDRADE:** Just a quick question for you, Paul. As I  
12 mentioned, I didn't have a chance to provide my  
13 editorial and lesser comments to Jim.

14 **DR. ZIEMER:** Can we do these as friendly amendments? Are  
15 they -- are they strictly editorial?

16 **DR. ANDRADE:** They really are.

17 **DR. ZIEMER:** Do you want to --

18 **DR. ANDRADE:** Would it be possible to do that, even if we  
19 adopt --

20 **DR. ZIEMER:** Yeah, let's do it real quick.

21 **DR. ANDRADE:** -- the document as written?

22 **DR. ZIEMER:** Just tell us what they are.

1 **DR. ANDRADE:** Okay.

2 **DR. ZIEMER:** We'll see how friendly they are.

3 **DR. ANDRADE:** Okay, on point number 1(a), records of the  
4 current -- like I said, this is editorial -- management  
5 monitoring instead of supervisory monitoring.

6 **DR. ZIEMER:** Any problem with that, management monitoring?

7 (No responses)

8 **DR. ZIEMER:** So ordered.

9 **DR. ANDRADE:** Okay. On point (b), the second step in the  
10 review is not necessarily done by management, but it is  
11 done by another group of people that look for accuracy  
12 in -- both technical and editorial. And so I'd like to  
13 strike the word "management", and also call it the  
14 proper -- give it the proper title, and it's review of  
15 the -- and it's not completed interview, it's the  
16 summary report to...

17 **DR. ZIEMER:** Is this the review that -- where somebody's  
18 looking at it for everything from grammar to --

19 **DR. ANDRADE:** Yes.

20 **DR. ZIEMER:** What is the proper terminology we want here?

21 Can on staff help --

22 **MR. ELLIOTT:** He's got it.

1 **DR. ANDRADE:** It is the summary report.

2 **DR. ZIEMER:** It's the summary review, okay.

3 **MR. ELLIOTT:** Summary report.

4 **DR. ANDRADE:** To, and then "include" instead of "including"

5 --

6 **DR. ZIEMER:** The summary review of the completed interviews?

7 **DR. ANDRADE:** Of the summary report --

8 **DR. ZIEMER:** Summary report.

9 **DR. ANDRADE:** Instead of completed interviews, to include --

10 and then here's an insertion, "items that are found to

11 need further clarification" and strike everything up to

12 "and corrective actions".

13 **DR. ZIEMER:** Okay. Let me ask the working group, are you

14 comfortable with this rewording as far as --

15 **DR. MELIUS:** That's fine, yeah.

16 **DR. ZIEMER:** -- it covers the intent still? Thank you.

17 So is it -- let me read what I have and see if it agrees.

18 Records of the summary report of the completed

19 interviews, to include --

20 **DR. ANDRADE:** No, no, no, no.

21 **DR. ZIEMER:** No?

22 **DR. ANDRADE:** These are not completed interviews.

- 1 **DR. ZIEMER:** I'm sorry.
- 2 **DR. ANDRADE:** These are still in review process.
- 3 **DR. ZIEMER:** Read it again. Read it again, I --
- 4 **DR. ANDRADE:** Okay. Records of the review of the summary  
5 report, to include items that are found to need further  
6 clarification, including corrective actions. So by the  
7 word "items" I'm including anything small or large,  
8 including significant problems. Okay?
- 9 **DR. ZIEMER:** Okay.
- 10 **DR. ANDRADE:** Item (c), second line there, "dose  
11 reconstruction is being done to include any items --  
12 instead of "significant problems" -- found --
- 13 **DR. ZIEMER:** That is a slight -- that is probably slightly  
14 more than an editorial. It changes the level of  
15 findings, but let me ask if the working group considers  
16 that a friendly amendment or do you have prob-- it  
17 actually requires more reporting than you would have  
18 suggested here, I believe. It lowers the bar a bit on  
19 what's reported. Working group okay? Chair of the  
20 working group?
- 21 **DR. MELIUS:** Yeah, that's fine. That's not...
- 22 **DR. ZIEMER:** Without objection, we'll consider that a

1 friendly amendment.

2 **DR. ANDRADE:** Okay. To continue on with that, "to include  
3 any items found" -- and then again an insertion -- "to  
4 need further clarification" -- and then we continue  
5 with the phrase, "and corrective actions".

6 **DR. ZIEMER:** Ray, did you get all that, as well, for the  
7 record? Thank you.

8 **DR. ANDRADE:** The very last editorial comment is in the  
9 phrase that falls right underneath -- right underneath  
10 (f). And frankly I didn't have a chance to construct  
11 it, but I wanted to include the fact that we are having  
12 a subcontractor perform part of this review, and I just  
13 didn't know exactly where to fit that in there, Paul.

14 **DR. ZIEMER:** Notice that (a) through (f) are things that  
15 it's suggested be part of NIOSH's system so that we can  
16 review it, so I'm not sure we'd bring our subcontractor  
17 into the picture at this point, if I understand what  
18 you're saying.

19 **DR. ANDRADE:** Okay. Well, maybe that's appropriate to just  
20 leave it off.

21 **DR. ZIEMER:** This is just identifying sort of a body of  
22 kinds of records that could be reviewed, I believe.

1 **DR. ANDRADE:** Okay. I'll agree to that.

2 **DR. ZIEMER:** Let me ask again, is the Board comfortable with  
3 these friendly amendments to the document?

4 **MR. OWENS:** (Off microphone) On (c) --

5 **MR. ELLIOTT:** Can you speak into the microphone?

6 **MR. OWENS:** Oh, I'm sorry. Tony, on point (c), in the  
7 previous (b) we changed completed interviews --

8 **DR. ANDRADE:** Right.

9 **MR. OWENS:** -- to summary report.

10 **DR. ANDRADE:** Right.

11 **MR. OWENS:** And so in (c) are we going to leave completed  
12 interviews or are we in essence going to change that to  
13 summary report, also, to make it consistent?

14 **DR. ANDRADE:** Good catch, Leon. It should be summary  
15 report.

16 **DR. ZIEMER:** Well, let me follow up. What is it that the  
17 health physicist is using, the summary or the  
18 interview? Is it -- do you know -- can -- who can  
19 answer that? One of the staff. Is -- this is saying  
20 records of the health physicist's review of the  
21 completed interviews at the time dose reconstruction's  
22 being done, so what is it the health physicist is using

1 at that point, is the question.

2 **MR. ALLEN:** Paul --

3 **DR. ZIEMER:** Yeah.

4 **MR. ALLEN:** Well, the completed interview we call the  
5 summary report of the interview. It's a summary  
6 because it's not a transcript. The --

7 **DR. ZIEMER:** So the health physicist is using --

8 **MR. ALLEN:** It's the completed --

9 **DR. ZIEMER:** -- the summary -- the completed summary report.

10 **MR. ALLEN:** Yes, it's the completed one. In item (b) I  
11 think it's -- I think the difference is it's kind of a  
12 draft at that point. It hasn't been reviewed. It  
13 could possibly change for grammar, et cetera. Does  
14 that make any sense?

15 **MS. MUNN:** Uh-huh, yeah.

16 **DR. ANDRADE:** Yeah, it's a little confusing, but --

17 **MR. ALLEN:** Yes, it is.

18 **DR. ANDRADE:** -- recall that the health physicist himself  
19 can review this first report that comes down to him,  
20 which is still basically a summary report, and still  
21 ask for more information and really actually ask for a  
22 re-interview if necessary.

1 **MR. ALLEN:** Right, but the difference at this point is (b)  
2 is before the claimant ever sees it. After that  
3 review, then it goes to the claimant, the claimant can  
4 make any changes he wants to. In (c) the claimant's  
5 already seen it, has made any changes they want to, and  
6 the dose reconstructionist is the one looking at it.

7 **DR. ANDRADE:** So if the health physicist -- if the health  
8 physicist has a question and say brings up a small  
9 technical point that needs to be clarified, and that  
10 may require an interview again or may need some  
11 clarification from other people that have listened in,  
12 then what is it called?

13 **MR. ALLEN:** At that point, if we were to call the claimant  
14 back again or get a letter or whatever from the  
15 claimant to change anything, we change it and it's an  
16 updated summary report, is what we call it.

17 **DR. ZIEMER:** But for practical purposes, it's the completed  
18 summary report --

19 **MR. ALLEN:** Completed summary --

20 **DR. ZIEMER:** -- or completed interview report. Is that the  
21 same as --

22 **MR. ALLEN:** Yeah, there's very little -- the semantics

1 aren't too --

2 **DR. ZIEMER:** I think we understand it then.

3 **MR. OWENS:** And I didn't intend to do anything --

4 **MR. ALLEN:** In any case we'll get the right seman-- the  
5 right titles --

6 **DR. ZIEMER:** We'd better vote before... Are you now ready  
7 to vote? And because of the previous vote, you  
8 recognize -- and I'm recommending that those who voted  
9 for the prior motion not vote against the document  
10 because of the presence of the last two sentences,  
11 recognizing that the record will indicate that there  
12 was a sort of split on the issue of the last two  
13 sentences, but the rest of the document perhaps could -  
14 - not that the Chair's trying to influence anybody, but  
15 we -- we don't want to throw everything out, if  
16 possible. We need the rest of the document, so --

17 **MR. PRESLEY:** Clarification?

18 **DR. ZIEMER:** Yeah.

19 **MR. PRESLEY:** Last paragraph, third line, "At this time the  
20 working group", should we not change the working group  
21 to Board?

22 **DR. ZIEMER:** That's a good point. I think a friendly

1 amendment here needs to be made. Does the subcommittee  
2 (sic) agree? It now is a recommendation of the Board,  
3 not the subcommittee.

4 **MR. ELLIOTT:** And also up in the first sentence.

5 **DR. MELIUS:** And the first sentence should read the same,  
6 too.

7 **MR. PRESLEY:** Yes.

8 **DR. ZIEMER:** Thank you.

9 **MR. PRESLEY:** Yes, I...

10 **DR. ZIEMER:** Ray, that's the first sentence in the document  
11 will read -- instead of working group, Advisory Board  
12 on Radiation and Worker Health, and then the third line  
13 of the last paragraph, instead of working group will  
14 read Advisory Board on Radiation and Worker Health.

15 Now are we ready to vote? All those who support the  
16 document, please say aye.

17 (Affirmative responses)

18 **DR. ZIEMER:** Those opposed, no?

19 (No responses)

20 **DR. ZIEMER:** Any abstentions?

21 (No responses)

22 **DR. ZIEMER:** The motion carries. Thank you very much.

- 1 **MR. ELLIOTT:** I'd like to thank the working group for their  
2 efforts on this.
- 3 **DR. ZIEMER:** Appreciate it. Okay, we're a little over time  
4 for the break. Let's go ahead and take the break.  
5 Break till about 3:00, if that's agreeable.
- 6 Let me also ask -- is Cori here? Do we have anyone signed  
7 up for public comment for this afternoon and how many  
8 individuals? Two individuals? If the individuals -- I  
9 want to ask if the individuals -- the public comment  
10 period is scheduled for 2:45. We can -- we can go  
11 ahead with that now or we can take the break. It  
12 depends on whether those individuals need to leave or  
13 would just as soon have the break themselves right now.
- 14 **DR. MELIUS:** Let's break and...
- 15 **DR. ZIEMER:** Patricia Ehlmann and Knute Ringin -- is it  
16 Ringin? Patricia, are you all right if we go at 3:00  
17 instead of 2:45?
- 18 **MS. EHLMANN:** (Off microphone) That's fine.
- 19 **DR. ZIEMER:** All right. And Knute -- is it Knute?
- 20 **MR. RINGIN:** (Off microphone) It's Knute.
- 21 **DR. ZIEMER:** Is that -- is that okay?
- 22 **MR. RINGIN:** (Off microphone) Sure.

1 **DR. ZIEMER:** Okay. Then we'll take a 15-minute break.

2 Thank you.

3 (Whereupon, a recess was taken.)

4 **PUBLIC COMMENT PERIOD**

5 **DR. ZIEMER:** We're going to reconvene and proceed with the  
6 public comment period.

7 We're going to begin with Patricia Erlmann -- do I pronounce  
8 that correctly?

9 **MS. EHLMANN:** Ehlmann.

10 **DR. ZIEMER:** Ehlmann.

11 **MS. EHLMANN:** It's German.

12 **DR. ZIEMER:** It's a Deutsche name. She's from Wright City,  
13 Missouri, which is in the St. Louis area, was not able  
14 to be with the Board when we were in St. Louis, but  
15 we're pleased that she's able to be here today.  
16 Patricia, we'll -- if you will use the podium here --  
17 or okay, the mike there is on, that's fine. Thank you.

18 (Pause)

19 **DR. ZIEMER:** Okay, thank you for your patience. Patricia,  
20 please proceed.

21 **MS. EHLMANN:** I just want to say that my name's Patricia  
22 Ehlmann, and my brother and I are survivor claimants

1 for Everett Powers, tracking number 10141, case number  
2 21496, file number 488092991. My dad was employed at  
3 Mallinckrodt from the 4th month of 1943 to the 10th  
4 month of 1966. He started at the St. Louis plant and  
5 was transferred to Weldon Springs around 1957 when the  
6 plant opened. He was diagnosed with multiple myeloma  
7 in 1983. His cancer was chemo-resistant, although he  
8 did have to go through a lot of chemo treatments.

9 This type of cancer attacks the bone marrow, so his bones  
10 disintegrated to the point of vertebrae fractures,  
11 which were extremely painful. During all of this  
12 treatment he also had at least two chemical peels of  
13 his head. As you can see from his picture, he was very  
14 bald, so he had a lot of skin to come off the top of  
15 his head.

16 This is a terrible ordeal to go through for skin cancers.  
17 Squamous cell cancer took part of his nose, most of one  
18 nostril and approximately one-half of his lips. Due to  
19 the weakness of bone disintegration, he fell one  
20 morning getting out of bed -- and this was on a  
21 carpeted floor -- causing a brain hemorrhage for which  
22 he had brain surgery. So now he had three holes bored

1 in his head. And since this is basically a stroke, he  
2 had to completely go through therapy to regain speech,  
3 movement of his arm and his hand.

4 My dad smiled all the time, and right up to the time the  
5 morphine completely knocked him out, he was smiling.  
6 He died in September of 1987. My mother filed the  
7 first claim in 2001 and at her passing in September of  
8 2002, my brother and I sent in claims.

9 We're just normal people who know very little about  
10 government paperwork, and boy, were we in for a shock.

11 After finally finding everything we could, with a lot  
12 of help from Paducah, we were in for another problem.  
13 The paperwork showed -- proved to the DOL all of the  
14 cancers that I listed above, but it only showed that he  
15 worked at the Weldon Spring plant. After many phone  
16 calls, with the help of Denise Brock, I finally had a  
17 conference call between myself, Ms. Brock and Jeremy  
18 Stanton of the DOL. He stated that their paperwork  
19 showed that he only worked at Destin (sic) in St.  
20 Louis. Now I mean this is getting crazy. I've got the  
21 same Department telling me he worked in two different  
22 places. We need help to resolve this. We're not the



1 have to do your request over.

2 **MR. RINGIN:** Well, I'll try to keep it a little bit shorter.

3 As I said, my name is Knute Ringin and I'm glad to be  
4 here. I've not bothered you at previous meetings, but  
5 I think I have enough to talk about now that it's  
6 worthwhile to take a little bit of your time.

7 I am the science advisor to the Center to Protect Workers  
8 Rights. CPWR is a non-profit research and development  
9 arm of the National Building Trades department of the  
10 AFL/CIO. Since I'm going to talk about ethics a little  
11 later, I would like to make a couple of disclosures to  
12 begin with.

13 First of all, CPWR has a very large, significant and  
14 longstanding partnership with NIOSH in the area of  
15 construction safety and health. We also have a  
16 contract with OCAS to try to develop better dose and  
17 radiation monitoring estimates for construction  
18 workers. We're responsible for -- involved in medical  
19 screening programs for construction workers at Hanford,  
20 Savannah River, Oak Ridge, Portsmouth, Paducah and  
21 Amchitka. And in the course of the last six years,  
22 we've probably interviewed more than 10,000 workers in

1       those sites.

2 We also have a contract that DOL just asked us to take on to  
3       help them establish employment verification where DOE  
4       cannot verify that a worker has been employed at a DOE  
5       site. For construction workers, that's close to 20  
6       percent. That's 20 percent where DOE does not have  
7       employment history, let alone radiation dose monitoring  
8       history.

9 Now I'm not an expert on radiation, and I don't come here to  
10      talk to you really about radiation, radiation  
11      monitoring or radiation biology. My comments are  
12      specifically limited to construction workers, which we  
13      represent and which I know something about, and to the  
14      claimants who are construction workers. My comments  
15      may or may not be relevant for other types of  
16      claimants, but they're relevant for those workers who  
17      come as construction workers and who have some unique  
18      characteristics.

19 The first is, they're all employed intermittently at DOE  
20      facilities. The second is that they're working largely  
21      in uncharacterized or inadequately-characterized  
22      environments. And the third is that they work under

1 uncontrolled working conditions with little or no  
2 supervision most of the time.

3 Now these workers happen to have a large stake in your  
4 program that you're reviewing. There've been many more  
5 construction workers at DOE facilities than production  
6 workers, which most people don't realize. For  
7 instance, at Hanford we estimate there are 59,000  
8 construction workers at risk for radiation exposure;  
9 37,000 at Savannah River; more than 30,000 at Oak  
10 Ridge. And roughly half of the current claimants in  
11 your program are construction workers or their  
12 survivors, so it's not going to be an incidental issue  
13 to your deliberations.

14 We're grateful that NIOSH is finally starting to process  
15 cases. It's obviously long overdue. We're deeply  
16 concerned about that because we hear it from our  
17 members all the time. But the 1,000 cases processed so  
18 far cannot be used to est-- make any kind of  
19 determination or estimate about what this program is,  
20 should or will do in the future. So far what you've  
21 seen are the easy, the straightforward cases mostly;  
22 the ones who are obviously yes or obviously no and that

1 have been processed pretty fast. What I'm concerned  
2 about is the 30 or 40 percent of our members where  
3 there are no valid dose data and where claimants have  
4 difficulty recalling their work history for you, and  
5 that's a large number of them.

6 Let me also say from the start that we did not agree with  
7 NIOSH's interpretation of the law and its plans for  
8 dose reconstructions, and we've had many discussions  
9 with the NIOSH management about that, with Larry and so  
10 on. We didn't think that this approach was going to  
11 work for our members, and so far we don't see much  
12 evidence that it is. The problems that we look at here  
13 can be traced to two fundamental flaws in the way that  
14 I think the program has been set up.

15 For claimants like ours who have problems with dose  
16 information, the original dose reconstruction rule  
17 under which the program operates is extremely lacking  
18 in specification. It's fairly specific when it comes  
19 to dealing with workers who have dose, and then it has  
20 two very general paragraphs dealing with workers who  
21 don't have dose, where they say we may either  
22 extrapolate from workers similarly situated, or we may

1 use some other kinds of environmental data. That's  
2 essentially all the dose reconstruction rule says. And  
3 it doesn't give us enough specificity to determine with  
4 accuracy two major effects.

5 Because we don't have defined benchmarks, it's difficult --  
6 maybe even impossible -- to make an objective  
7 determination about the completeness of the dose  
8 reconstruction once it's done. I don't know what we  
9 would compare it against for these workers. And  
10 secondly, it ends up placing what I think is an  
11 unreasonable burden on the claimants to document their  
12 exposures and to verify the completeness of the dose  
13 reconstruction once it's done. These workers need  
14 help, and I'll get back to that.

15 And the second very big flaw in the program that you all are  
16 very aware of is that the administrative structure now  
17 is so rife with potential for conflict of interest that  
18 it's at this point eroded to a great extent the  
19 confidence in NIOSH's objectivity, particularly  
20 confidence among our claimants, our members who are  
21 claimants. And we hear it every day.

22 And it comes largely from two -- there are two effects that

1 arise from this structure. Even though policies and  
2 procedures to prevent conflicts of interest have been  
3 developed, we're already seeing evidence that they're  
4 not adequate -- at least I think we're seeing that.  
5 And as a result of this, as I said, NIOSH has a low  
6 level of credibility among claimants that it definitely  
7 has to overcome. And I think the role of this Board is  
8 incredibly important to establish credibility for this  
9 program. That's why we have this review. And not just  
10 to review what is being done, but to review it in such  
11 a way that you re-establish credibility in the program  
12 as it goes forward.

13 I want to put this in context by using the Savannah River  
14 Site history profile as an example. My comments will  
15 reflect a meeting that we had in August on November 11  
16 where Jim Neton and four contractors came to review the  
17 site profile document with local unions, and we  
18 appreciate that he came there on a Federal holiday,  
19 which was the only time when we could get everybody  
20 together. And everybody that was -- there were 18  
21 local union leaders, the leaders of every union that  
22 represents workers at Savannah River. We also had a

1 dozen or so workers who spanned the entire history of  
2 the Savannah River Site, who had spent considerable  
3 time there, to talk about their experience. And we had  
4 three technical experts. In addition to myself we had  
5 Jim Platner\* who is a Ph.D. radiation biologist and Don  
6 Ellisberg who's a lawyer with great knowledge about  
7 workers comp and who was in charge of all of the  
8 Workers Compensation programs at the Department of  
9 Labor in the past. So we provided this kind of  
10 expertise and we had a very good meeting with Jim Neton  
11 and his staff.

12 In fact, I would say that's by far the best meeting that  
13 we've had with NIOSH on this program because it was a  
14 very open give or take where they said this is what  
15 we've done; do you think it's adequate, is it going to  
16 work for your members and what can we do better, and we  
17 talked about some of those things. And I'm going to  
18 talk to you -- show you a little bit about what we told  
19 them so that you understand why it's important to look  
20 more carefully at these documents.

21 I appreciate the complexity of trying to characterize 50  
22 years of production at Savannah River in a short

1 document. Anybody who's been at the Savannah River  
2 Site or Hanford or Oak Ridge or INEEL will know that  
3 these are incredibly complicated sites, and here we  
4 have a document where the text is basically 100 or so  
5 pages and a bunch of appendices attached to that that's  
6 supposed to somehow explain everything that's happened  
7 in terms of radiation to those workers who were there.

8 That's a monumental task and a very difficult one and  
9 a very important one.

10 Yet in the end of this, we still have to ask this very basic  
11 question. The document that comes out, which ends up  
12 being a summary, a distillation of all kinds of stuff,  
13 does it end up being fair to the claimants. Is this a  
14 document fair to all of the claimants, given that there  
15 all kinds of different classes of claimants who have  
16 been workers who it's supposed to cover.

17 I don't know if it's fair to ask you all, but how many of  
18 you have read the Savannah River site profile document?

19 Yes, I don't blame you if you haven't. It's not easy  
20 reading. It's a very dense and complicated document  
21 that at least it's taken me a long time to get through.

22 And now we have many more of these things to go

1 through, and I'll get back to why that's also at issue.  
2 The Savannah River Site history was issued in the summer of  
3 -- during summer of 2003, but we didn't know it until  
4 actually your meeting in August, I believe, when it was  
5 announced. We were not aware that it was being  
6 developed or that it had been issued. And although we  
7 can't be completely sure of this since we don't have  
8 quite an accurate or at least consistent description of  
9 what it's going to be used for, we think this is  
10 probably a very important document, that all of these  
11 site profile documents are probably very important.  
12 Our impression is that it's been developed pursuant to  
13 the dose reconstruction rule with a purpose of, to  
14 quote the document itself, "to evaluate both internal  
15 and external dosimetry data for unmonitored and  
16 monitored workers" -- sounds like pretty much  
17 everybody, I guess -- "and to serve as a supplement to  
18 or substitute for individual monitoring data". That's  
19 a very large charge to this document, not very  
20 specific, and we'll only learn how it'll be used as it  
21 gets implemented.  
22 When we reviewed this document we became very concerned for

1 five basic reasons. There really isn't a methodology  
2 in this document. If we were to try to reconstruct  
3 this document, we would not be able to do so  
4 accurately, I don't think. I don't think we'd come up  
5 with the same result. And if there's any basic issue  
6 in science, it has to be replicability. In order to  
7 get to replicability, you've got to have a method and  
8 you've got to have documentation that you can follow,  
9 and that documentation and method is not sufficient to  
10 do that.

11 The report doesn't describe the methods or documentation  
12 adequately. And as I said, as a result of this, it's  
13 not possible -- I don't think -- to replicate it. But  
14 we know it was done by an ORAU contractor team that  
15 talked and spent lots of hours with site personnel at  
16 Savannah River and used largely internal documents from  
17 the Savannah River Site, without specifying necessarily  
18 why, whom or when they talked to these people. So we  
19 don't have the documentation about exactly what was  
20 done. And that doesn't give us a lot of comfort in the  
21 process.

22 For instance, the contractor has developed a methodology for

1 extrapolating maximum dose from source terms, and  
2 that's used to estimate exposure from the airborne and  
3 resuspended I guess exposures. This methodology is  
4 listed in the bibliography, but it's only listed as an  
5 unpublished document that was prepared by the  
6 contractor for the purpose of doing this project. So  
7 until one has that document and reviews it, you can't  
8 understand what's been done in the report itself. It  
9 becomes a little bit of a house of cards.

10 There seems to be some significant omissions, as near as we  
11 can tell. Now we based our review on this on a very  
12 large site history inventory that we've developed at  
13 the University of Cincinnati, and Dr. Eula Bingham has  
14 that, as well as approximately 2,000 interviews with  
15 workers -- construction workers who have been at  
16 Savannah River, and here is what we found that's  
17 significant.

18 We found that we have 83 significant site history documents  
19 that are not in -- referenced in this document and I  
20 don't think have been used. Secondly, we looked at one  
21 specific area, which is the area that's common to all  
22 of the reactors used at Savannah River and there NIOSH

1 lists that there are 32 core radionuclides, yet we have  
2 identified at least ten additional radionuclides. And  
3 if you're looking for source terms to extrapolate from,  
4 then I think it's important to include all of those.  
5 Maybe we missed something, I don't know, but that's  
6 what we think is there.

7 There's virtually no description of deficiencies in  
8 radiation monitoring programs. If you read this  
9 document, you would think that radiation monitoring at  
10 Savannah River had been just about perfect from the  
11 start. That's not what our workers, our members, tell  
12 us in the interviews that we have done and that we can  
13 document. There was extensive testimony also on  
14 problems in monitoring practices when DOE held town  
15 meetings in Aiken in 1999 in development of this  
16 program, and that's not at all referenced, or I don't  
17 think has been reviewed in the process of developing  
18 this document. Also the tiger teams that did their  
19 investigations of Savannah River in 1990 documented  
20 very extensive deficiencies in monitoring practices,  
21 and they're not listed.

22 There is no consideration of radiation incidents or

1 accidents, as near as I could tell. We've identified  
2 approximately 76 accidents over the history of the site  
3 that we do not see referenced in this report, and that  
4 I believe are important if you're going to look at  
5 exposures.

6 Throughout the document there is no apparent awareness that  
7 construction workers may have very different exposure  
8 patterns from production workers. For instance, in  
9 applying the model for extrapolation from source term  
10 to resuspended radiation, there is no consideration of  
11 something as simple as digging in the dirt. Somehow  
12 it's assumed that that dirt's not going to be disturbed  
13 very much. I don't know where -- how these resuspended  
14 -- this resuspended radiation is going to become  
15 airborne again, but there certainly isn't taken into  
16 account that it might be a source of exposure for  
17 people who dig in it, which just about all construction  
18 workers do from time to time on these sites.

19 The third concern that we have is one that we take very  
20 seriously, and I'm sure you do, and I don't like it.  
21 There is a guy named Dr. Eugene Rollins who's listed on  
22 the ORAU web site as the key -- as a key person working

1 on this report. He apparently also developed the model  
2 to estimate maximum dose from source terms, an  
3 important internal report that is referenced  
4 extensively in the document itself. According to his  
5 conflict of interest statement that's also listed on  
6 the ORAU site, it says that he previously worked at  
7 Savannah River, including six years in human health  
8 risk assessment and one year as a shift supervisor in  
9 health physics and radiation monitoring. Now I'm not  
10 saying that that leads to a conflict of interest by  
11 itself, but I believe according to the policies on  
12 conflict of interest, people who have worked on sites  
13 should not be working in these documents, and that's at  
14 least what the folks who came down to Savannah River  
15 told us, that was their intent. So that's something  
16 that has to be looked at very carefully because it gets  
17 at the heart of this credibility problem.

18 The fourth concern we have is a minor one, but it's  
19 technically important, and that is that we think  
20 there's a conflict with the dose reconstruction rule in  
21 this document. There's a small throw-away thing in  
22 there somewhere about a curious minor adjustment to

1 dose for claimants who eat wild game taken in the  
2 Savannah River area. Now I don't know what the  
3 implications are of this adjustment, but I do know  
4 this: According to the dose reconstruction rule, it  
5 allows for only one adjustment to dose -- we've talked  
6 about this many times -- and that's for smoking in lung  
7 cancer. NIOSH agreed from the start that it would not  
8 make any of the adjustments, for instance, that NCI  
9 suggested for diet and that has been used in some of  
10 the other radiation reconstruction programs. And I  
11 believe that's included -- at least it's an intent of  
12 the dose reconstruction rule that that should not be  
13 included, yet there is a conflict here that I think is  
14 a technicality, but that could be important. That is  
15 that if a document is to be developed pursuant to the  
16 dose reconstruction rule, then it should follow the  
17 rule itself.

18 Finally, there is no independent review of these documents,  
19 as far as I know. Before this document was put on the  
20 web and issued for use, there was no review of the  
21 underlying methodology, and in this case the  
22 unpublished source terms extrapolation method, and

1           there was no independent review of the document itself.  
2 Now follow our meeting with the folks in August with NIOSH,  
3           we agreed to make available to NIOSH all the  
4           documentation that we have, and we would have done that  
5           a long time ago had they asked us. I don't know why  
6           they didn't come to us when they were developing the  
7           report, and it seems that this is particularly serious  
8           given that they obviously didn't hesitate to meet with  
9           the DOE site personnel. The one-sidedness of this kind  
10          of contact does nothing to dispel the sense held  
11          broadly that NIOSH is not particularly aboveboard in  
12          its work.

13 Now we have good reason at Savannah River to be concerned  
14          when you just deal with stuff that the site  
15          administration gives you. When we started our medical  
16          monitoring program at Savannah River, the site strongly  
17          objected to us testing people for beryllium exposure.  
18          They said there had absolutely never been any beryllium  
19          used at that site, and they said the same thing to  
20          NIOSH. After having tested some 2,000 people or so  
21          down there, we have about one and a half percent of the  
22          workers who have been there testing positive on DOE's

1 recommended beryllium test. And upon those initial  
2 findings, the site administration finally 'fessed up  
3 and said yeah, there may have been a little beryllium  
4 here after all. So it's not comforting to say that  
5 it's enough to go to the site administration and ask  
6 what kind of documentation do you have; just give us  
7 your stuff or tell us what you've been doing and we'll  
8 make use of that. I'm not very comfortable with it.  
9 Finally, let me also make a point about our claimants that  
10 I've made many times before. After the site -- NIOSH  
11 placed the site profile document on its web site, it  
12 invited comment on it, which one can discover by  
13 reading the web site. Apart from this being after the  
14 horse left the barn, so to speak -- the document had  
15 already been issued -- it clearly places the burden on  
16 the claimants to show that there are deficiencies in  
17 this document. And that points to me to what seems to  
18 be a very unfair balancing act. On the one hand we  
19 have the site profile reports. These are very complex  
20 documents, presumably with far-reaching significance,  
21 presented very much or pretty much as final by NIOSH  
22 when it puts it on the web site. NIOSH has major in-

1 house expertise, vast resources through its  
2 subcontracts and so on, to put into the preparation of  
3 this thing. On the other side are the claimants. Now  
4 these are, by definition, either workers with cancer or  
5 their survivors. They're mostly old and frail, and  
6 they have no support. And they're expected to  
7 challenge these documents and to say hey, we don't  
8 think there's -- there are problems with this dose  
9 recon-- or with this site profile that you've done.  
10 That's an unreasonable burden to place on them, because  
11 if they don't challenge it right now, NIOSH will do  
12 nothing to change these documents.

13 This is not the only burden (sic) where NIOSH places an  
14 undue burden on claimants. You talked about the  
15 interviews earlier today, and I can safely say that our  
16 members tell us that they have trouble following the  
17 interviews that are done by phone, and many of the  
18 NIOSH interviewers have said the same thing. It's  
19 unreasonable to expect these old construction workers  
20 to recall a lifetime of information about radiation  
21 exposure. But much more difficult are the interviews  
22 with survivors, and they're close to half of the

1 claimants here. I believe that the NIOSH interviewers  
2 agree that they get very little or nothing out of most  
3 of the interviews that they do with survivors.

4 Based on this, I would ask this Board to do three things, or  
5 consider doing three things. One is to recommend NIOSH  
6 that it issues a replicable method for the preparation  
7 of the site profiles, and that this includes validation  
8 of the information that it receives from the sites,  
9 validation both in terms of the accuracy of what it  
10 receives and whether it's complete.

11 Secondly, recommend or require that independent review of  
12 these site profiles be conducted before they're issued  
13 -- and I was going to call this peer review, but I'm  
14 not comfortable with that term in this context because  
15 peer review might simply mean a health physics review,  
16 and I think there's something much more important.  
17 It's not just understanding health physics, but it's  
18 also understanding how it applies to workers as they do  
19 their work on these sites.

20 And thirdly, I would encourage NIOSH to provide claimants  
21 who want it or need it with much more independent  
22 assistance with their interactions with NIOSH. NIOSH

1 wants to be claimant-friendly. The site profile  
2 document uses this word extensively. But it fails to  
3 provide the weakest of claimants what they most need,  
4 which is an independent, knowledgeable and forceful  
5 advocate in the process of doing all of this work, and  
6 it's certainly something that we would like to work on.  
7 And in addition, if I may be so bold, once you hold these  
8 meetings in the future, I suggest that you make two  
9 minor changes, particularly when you're planning to  
10 hold your meetings in the tri-cities and in Augusta.  
11 First send out a notice to all the claimants who live  
12 in that general vicinity, say within a radius of 50 or  
13 80 miles or something like that, informing them that  
14 you're going to hold this meeting. We will certainly  
15 be glad to notify everybody in our programs about it.  
16 And in addition, hold an evening session for public  
17 comment, maybe on the first day of the meeting, because  
18 most people will not come to a day meeting for two very  
19 significant reasons. Either they're very old or frail  
20 claimants -- whether they're the workers or their  
21 survivors -- and they usually need help to come to  
22 meetings and they rely on their kids or something like

1 that, and those kids are working. Or they're  
2 survivors, who usually are also working, they're the  
3 children and is the one who have jobs themselves and  
4 can't get away during the day, so maybe a two-hour  
5 evening session would be, I think, very enlightening to  
6 you. At least if you come to Hanford. I'm sure you'll  
7 get an earful.

8 And with that, I thank you for your time and your attention.

9 **DR. ZIEMER:** Thank you, Knute. Let me ask if any of the  
10 Board members have questions they may wish to address  
11 to you before you leave the podium. Any points of  
12 clarification? Henry?

13 **DR. ANDERSON:** Yeah, what -- what kind of follow-up have you  
14 had from NIOSH after your meeting in Augusta --

15 **MR. RINGIN:** Well --

16 **DR. ANDERSON:** -- (Inaudible) made your other  
17 recommendations as --

18 **DR. ANDERSON:** -- Larry called us about a week afterwards  
19 and we had a conversation where he asked us to submit  
20 all of our information and documentation, which we were  
21 planning to do anyway, and which we've started doing  
22 earlier than we had planned to do it so that we're

1 providing them information initially on Hanford,  
2 Savannah River, Amchitka in Alaska and the Nevada Test  
3 Site and Oak Ridge, and that includes all of the  
4 information that we have in our site history  
5 repository, as well as all of the results that we have  
6 from the -- from the interviews with workers.

7 I can also say to you that doing interviews with workers,  
8 particularly construction workers, is very difficult.  
9 It took us a long time to learn how to do it, even  
10 though we're kind of specialists on construction  
11 workers, that unless you put it in terms that they're  
12 used to, occupational terms -- you know, the kind of  
13 tasks that they do and that kind of stuff -- we don't  
14 typically get very far with it. If you put it in terms  
15 that they understand -- we use retired construction  
16 workers to do those interviews for that reason -- then  
17 we get a lot of information.

18 **DR. ZIEMER:** Thank you. Other -- here's another question,  
19 Rich Espinosa.

20 **MR. ESPINOSA:** You had mentioned 20 percent of the  
21 construction workers that are claimants haven't been  
22 able to verify employment. How is...

1 **MR. RINGIN:** When the Labor Department gets a claim, it  
2 sends it -- along with a form called the EE-5 form --  
3 to the local Department of Energy site where the worker  
4 has been working. Our in our -- for our workers, you  
5 know, there are many different sites. The DOE facility  
6 is then supposed to establish whether or not they have  
7 records indicating that this person was an employee on  
8 their site. For construction workers, in about 20  
9 percent of the claims that DOE site that they send that  
10 record to is unable to verify in its documentation --  
11 one of the problems is that a lot of our members have  
12 been employed by subcontractors and sub-sub tiers of  
13 contractors, and it becomes -- having records. Now  
14 there should be records somewhere. It's -- you know,  
15 you're required to submit certified payroll records  
16 every week or month on all of these workers, so  
17 somewhere it should be, but they are unable to come up  
18 with it in a timely fashion.

19 **DR. ZIEMER:** Thank you. Other questions?

20 **MR. ESPINOSA:** I got...

21 **DR. ZIEMER:** Oh, a follow-up. Okay.

22 **MR. ESPINOSA:** One of the things that concerns me,

1 especially when it comes to the SEC, is the co-worker  
2 data, such as if they didn't have enough data for me,  
3 they're going to use a co-worker. You mentioned some  
4 stuff on service workers and construction workers where  
5 they're coming out with two different -- quite -- quite  
6 a bit difference in their dose reconstructions. Can  
7 you go a little bit further on that, please?

8 **MR. RINGIN:** I'm glad you bring up -- actually didn't think  
9 I'd prompted you to ask these questions, but I had --  
10 the question about extrapolating from co-workers to co-  
11 worker is very, very difficult for construction  
12 workers. We've been spending years trying to come up  
13 with predictable models for exposures for workers doing  
14 similar kinds of tasks. Bob Herrick\* -- who many of  
15 you know at Harvard -- has worked with us in a working  
16 group, and we spent I think two years doing -- just  
17 reviewing workers who were doing turnkey maintenance  
18 construction on cold-fired utility boilers, thinking  
19 that that is a very similar kind of exposure. And we  
20 went in there, he did measurements on a lot of these  
21 different sites, and all we got was a variance that was  
22 so great that we couldn't draw conclusions from it. So

1 we couldn't come up with a statistically predictable  
2 model for -- for exposures. And my guess is that  
3 that's going to be somewhat similar for radiation.

4 I can also comment a little bit -- unless I'm over-extending  
5 my time here -- one of the problems of the way that DOE  
6 had characterized its work sites, and I think that the  
7 beryllium example is a good one, both for Hanford and  
8 for Savannah River. The belief was that construction  
9 workers wouldn't have been exposed to beryllium because  
10 construction workers don't work with beryllium. And  
11 DOE had characterized the environments where beryllium  
12 may have been. They'd done wipe samples and that kind  
13 of stuff. But after we got all these results on -- at  
14 Hanford, for instance, three to four percent of the  
15 workers testing positive on the beryllium lymphocyte  
16 proliferation test, we started to go back and look at  
17 how they had been sampling and estimating environment.

18 And in those buildings they did the wipe sampling up  
19 to eight feet on the -- on the walls. They'd not done  
20 sampling in the rafters, not above ceiling tiles, not  
21 behind wall panels or in subflooring or crawl spaces.  
22 Well, that's where most construction workers do their

1 work. Most construction workers don't do new  
2 construction. Just about all the construction work  
3 that's done now is either repair, maintenance,  
4 renovation, demolition or decontamination, and that's  
5 where they probably get most of these exposures. And  
6 they're exposures that are very hard to predict because  
7 the environment isn't anticipated and the work that  
8 they're doing isn't anticipated. I don't know if that  
9 answered your question --

10 **MR. ESPINOSA:** Yeah, that answered my question.

11 **DR. ZIEMER:** Thank you. Other questions or comments? Thank  
12 you, Knute, for your input to the Board.

13 We've come to the completion of today's agenda. We begin  
14 tomorrow morning again at 8:00 o'clock in terms of the  
15 informal time together, and then the official business  
16 beginning at 8:30.

17 Let me pause and see if we have any housekeeping items,  
18 Cori, tonight to address? No.

19 **MS. HOMER:** The only thing I would suggest is that if you  
20 have anything in the room, take it with you.

21 **DR. ZIEMER:** Okay. Don't leave things in this room over --  
22 overnight. They're -- they will become part of David

1 Brenner's comedy act.

2 With that, we'll recess till tomorrow morning. Thank you  
3 very much.

4 (Whereupon, an adjournment was taken to Wednesday, December  
5 10, 2003 at 8:00 a.m.)  
6  
7

8 **DECEMBER 10, 2003**  
9

10 **P R O C E E D I N G S**

11 **REGISTRATION AND WELCOME**

12 **DR. ZIEMER:** Good morning, everyone. Again I'll call the  
13 meeting back to order, the second session of the  
14 nineteenth meeting of the Advisory Board on Radiation  
15 and Worker Health. Again I remind you if you have not  
16 registered your attendance at this meeting, please do  
17 so at the -- the books are out on the table at the  
18 entryway. Also, members of the public who wish to  
19 address the Board, please sign up in the sign-up book  
20 that also is at the entryway.

21 Again remind everyone that there are other documents and  
22 handouts on the table here to my left. Please avail

1 yourselves of those, as you might find it helpful.  
2 Many of you are aware -- perhaps all of you are aware --  
3 that the Board has been seeking contract support for  
4 assistance in auditing the dose reconstruction process  
5 and related matters. The firm that was the successful  
6 bidder was Sanford Cohen & Associates, and from that  
7 company we have this morning with us Dr. John Mauro,  
8 who's going to give us a general briefing about their  
9 company.

10 I want to point out both to those here on the -- at the  
11 podium or -- in other words, the Board members as well  
12 as those in the audience, that this presentation and  
13 discussion this morning is very general. The Board has  
14 yet to review in closed session the document which is  
15 proprietary which will be addressed this afternoon, the  
16 task orders and the independent government cost  
17 estimate for that support, so the Board will be looking  
18 at that in detail this afternoon. But basically this  
19 morning we're introducing John and the company to the  
20 Board and to the public. So John, we're pleased to  
21 have you here this morning, and if you would give us an  
22 overview of your organization and related matters.

1 Question?

2 **MR. GRIFFON:** Just a question before we start. Is -- can we  
3 discuss or ask John questions regarding the technical  
4 skill proposal or --

5 **DR. ZIEMER:** I'm going to ask Martha to address that. My  
6 understanding now is that in fact that is still  
7 restricted information until the Board has discussed  
8 the proposal, so that that may be off-bounds. But  
9 we'll ask Martha -- if you would, Martha -- to address  
10 that for us and give us a legal opinion here.

11 **MS. DIMUZIO:** We did speak with contracts about this, and  
12 basically what we have is we have a document that's  
13 before the government for its consideration, so it's  
14 not really a public document until a final award has  
15 been made. So when Dr. Mauro is giving his  
16 presentation, you can ask general questions about  
17 anything, but we cannot have any specific discussions  
18 about the proposal that he's submitted or the  
19 approaches that SC&A may be taking in -- in their  
20 approach to completing those tasks. That's really  
21 discussion for this afternoon in the closed session.  
22 It's a -- the document is not a public document at this

1 point. It's a document before the government for  
2 consideration, so --

3 **MR. GRIFFON:** And SCA can't be in the closed session. Is  
4 that correct?

5 **MS. DIMUZIO:** That's correct.

6 **MR. GRIFFON:** So we -- I mean I'm not sure how we'd  
7 negotiate or discuss technical scope with the  
8 contractor if --

9 **MS. DIMUZIO:** Basically what we would be developing is we  
10 would be developing questions that would be referred to  
11 SC&A for them to respond to. I mean that's how it  
12 would work.

13 **DR. ZIEMER:** And understand that this has a practical effect  
14 of perhaps stretching things out a little bit because -  
15 - but SCA then has a right, as I understand it, to have  
16 a certain amount of time to respond to questions that  
17 are raised. They are not -- we don't sit there in the  
18 room and ask them to respond right at that moment. We  
19 have to develop --

20 **MS. DIMUZIO:** Right, within the --

21 **DR. ZIEMER:** -- both the technical and the cost-related  
22 questions and then go back to them then, is my

1 understanding.

2 **MS. DIMUZIO:** Right, within the scope of the contract, SC&A  
3 has seven days to respond to those questions, so...

4 **MR. ELLIOTT:** It's also a redirection, too. If the Board  
5 finds in the technical proposal that the contractor is  
6 proposing something beyond or -- or outside of what the  
7 scope of the task called for, you can redirect, by  
8 comment. And so that -- that, you know, of itself is -  
9 - as well as the questions that you formulate, are --  
10 are confidential --

11 **MS. DIMUZIO:** Right.

12 **MR. ELLIOTT:** -- in nature.

13 **MS. DIMUZIO:** We can't appear to be leading -- we cannot  
14 appear to be leading the contractor to arrive at a  
15 certain point. It's more of a direct -- you know, we  
16 have these questions and it's -- you know, it is  
17 basically that negotiation back and forth, so that's  
18 done in closed session.

19 **DR. ZIEMER:** So those are kind of the ground rules on which  
20 we need to operate this morning. Let me ask, any --  
21 everybody on the Board understand that?

22 **MR. MILLER:** Excuse me, Dr. Ziemer.

1 **DR. ZIEMER:** Yes, sir?

2 **MR. MILLER:** Could I just raise a question on this? Is  
3 there a practical way to solve this? Because the  
4 technical scope of what the audit is going to be is of  
5 significant public interest. We're not interested in  
6 the money side, you know, the independent government  
7 cost estimate part. But it seems to me if there's a  
8 practical way to solve this would be if the -- if NIOSH  
9 would make available the accepted bid proposal that was  
10 submitted with Sanford Cohen & Associates' original bid  
11 that was made to the government that was accepted, I  
12 presume, by the -- whatever source evaluation board you  
13 had, so that there's some sense about what the  
14 structure, the organization, the methods that are going  
15 to be used, the approaches, what the -- what the items  
16 are that they're even going to do. I mean to --

17 **DR. ZIEMER:** Well --

18 **MR. MILLER:** -- to -- to go into secret --

19 **DR. ZIEMER:** Let me --

20 **MR. MILLER:** -- and to have discussion about what those  
21 items are --

22 **DR. ZIEMER:** I understand your point, Richard --

1 **MR. MILLER:** -- without any public --

2 **DR. ZIEMER:** -- but let me -- let me point out to you that  
3 the scope of the work has been defined by the Board.  
4 That is a public document. Our determination is  
5 whether or not this company is responsive to our scope  
6 and what the costs will be to carry that work out. So  
7 the scope is public. We have several tasks. They have  
8 been defined. We have to determine whether or not this  
9 company is in fact capable of responding to those  
10 tasks. You will hear about the organization of the  
11 company and their personnel.

12 The question on the original proposal, I don't know the  
13 legal answer to that. I -- it's a procurement issue.  
14 Perhaps Martha can speak to that.

15 **MS. DIMUZIO:** We did pose this specific question to our  
16 procurement office about is there any way that the  
17 proposal as it's been submitted can be supplied to the  
18 public, and basically at this point it's through a  
19 Freedom of Information request that would be considered  
20 by the procurement office as to whether or not the  
21 document is releasable, working with Sanford Cohen to  
22 make that determination whether or not anything within

1           that proposal was proprietary or so forth.  
2 But I think it's important to point out that while SC&A may  
3           have developed an approach and everything, not that  
4           there's anything wrong with that approach, but it may  
5           not be the approach that the Board wants. And so I  
6           think we need to, you know, have that discussion --  
7           that's a discussion that needs to be held in private,  
8           whether or not the way Sanford Cohen has determined to  
9           approach the work that needs to be done is the way that  
10          the Board intended it to be. I mean that's one of the  
11          issues for the session, the closed session, is to  
12          evaluate how their approach has --

13 **DR. ZIEMER:** Is the issue of the original document, is that  
14          being pursued or does that require a specific FOIA  
15          request?

16 **MS. DIMUZIO:** That would require a specific FOIA request for  
17          the original document, as it stands now.

18 **DR. ZIEMER:** I think we were referring to the proposal that  
19          --

20 **MS. DIMUZIO:** Oh --

21 **DR. ZIEMER:** -- Cohen originally submitted, which I believe  
22          does contain some proprietary information.

1 **MS. DIMUZIO:** As a part of the contract submittal?

2 **MR. ELLIOTT:** Yes.

3 **DR. ZIEMER:** Originally.

4 **MR. ELLIOTT:** I think that's what we're -- they're referring  
5 to.

6 **MS. DIMUZIO:** That would be -- yeah -- I need to go back and  
7 -- and speak with the procurement office, but I believe  
8 if Sanford Cohen is willing to release that  
9 information, that that information could be released,  
10 yes.

11 **DR. ZIEMER:** We will follow-up on that. You know, I don't  
12 want to get into that debate right now, but we -- note  
13 is taken of that, Richard. We'll see if it can be  
14 released --

15 **MR. MILLER:** Just to be --

16 **DR. ZIEMER:** -- at some point.

17 **MR. MILLER:** -- clear, though, that proposal that Martha was  
18 referring to, the original proposal, was incorporated  
19 by reference, I believe, in the final contract award  
20 that NIOSH posted.

21 **SANFORD COHEN & ASSOCIATES BRIEFING**

22 **DR. ZIEMER:** Thank you. Okay. With that introduction,

1 here's John.

2 **DR. MAURO:** Good morning. I'd like to thank you for  
3 inviting me.

4 **DR. ZIEMER:** Wait, John, you need to put it --

5 **DR. MAURO:** A little higher? Okay, is that a little better?  
6 Again, thank you for inviting me. I'm glad to be here  
7 today. As was mentioned, SC&A was selected -- I guess  
8 it was back in October -- to provide technical support  
9 to the Advisory Board in fulfilling its mandate under  
10 the Act.

11 In November basically we were awarded what's called a task  
12 order proposal, which means that from time to time the  
13 Board would request SC&A to perform certain tasks. We  
14 received our first task order request for proposal in  
15 November and we recently -- last week -- submitted our  
16 technical proposals to the Board. As they mentioned,  
17 they're reviewing that.

18 I'm here today primarily to introduce SC&A, who we are --  
19 we're a small company -- and to identi-- let you know  
20 our scope of work, what we've been asked to -- to do.  
21 And also give you the brief overview of some of the  
22 people that are on our team and their backgrounds.

1 Okay, SC&A. We're a small company, do about \$5 million a  
2 year in work, and we primarily -- we were incorporated  
3 in 1982. Sandy Cohen is a personal friend of mine.  
4 I've been working with him now for -- since 1986, and  
5 we specialize in doing dose calculations. We're  
6 nuclear engineers and health physicists, primarily.  
7 We have currently 30 employees and we have 50 associates.  
8 We have a way of doing business whereby we have a core  
9 group of people that are more senior, like myself, and  
10 then we have associates that work with us who are  
11 specialists in a wide variety of areas that we bring in  
12 to work on particular problems as they arise. So in  
13 effect, we -- and this is a -- this is a very effective  
14 approach in providing technical consultant services in  
15 that we can bring the best people in the world to -- to  
16 the table to -- to answer very specific questions. And  
17 also it allows us not to carry a large overhead, so we  
18 -- what this -- it puts us in the position that we can  
19 bring the best people at the lowest price.  
20 And we work -- we have our headquarters office in McLean,  
21 Virginia, but our -- a lot of our people work out of a  
22 virtual office. For example, I work out of my home in

1 Red Bank, New Jersey.

2 Our clients currently are government clients, primarily. We  
3 do a lot of work for the Nuclear Regulatory Commission,  
4 the Environmental Protection Agency, Centers for  
5 Disease Control, FEMA and DARPA. We -- we write  
6 reports. We write new reg documents. We write -- for  
7 EPA we write baseline risk assessments, technical  
8 support documents. Dose reconstructions, we've done a  
9 lot of work for CDC for off-site dose reconstruction.  
10 We've done -- so we do dose assessment, risk --  
11 radiological risk assessment primarily for the  
12 government and primarily for agencies that regulate DOE  
13 -- so it's, you know -- so we -- I guess one of the  
14 reasons for our selection is that as a corporation we  
15 really are not tied very closely at all to DOE. We're  
16 more closely tied to EPA, NRC, Defense Nuclear  
17 Facilities Safety Board, folks that regulate Department  
18 of Energy.

19 However, we do have a -- we have a laboratory, and our  
20 laboratory does radiological analysis of samples from  
21 anyone that sends us -- that wants us to do, and we are  
22 doing some work from samples that come from the State

1 of New Jersey, but also from Savannah River, from -- I  
2 guess it's CH (Inaudible) out at Rocky Flats, so that -  
3 - that really is the place where we're -- we're doing  
4 some work for DOE through our laboratory analysis.  
5 By and large, we're a consulting company to government  
6 agencies, and I'm proud to say now we are working for  
7 NIOSH, also.  
8 Our organization -- we have a simple organization. The  
9 president and owner of the company is Dr. Sanford  
10 Cohen. He's a Ph.D. nuclear engineer. He started the  
11 company in 1982, and he is a personal friend of mine.  
12 And he in fact will be the back-up. If for any reason  
13 -- I got eaten by an alligator or whatever -- Sandy is  
14 my back-up on this project. I'm the project manager.  
15 The person -- our chief operating officer, Greg Beronja,  
16 he's there to make sure we make money. He -- he runs  
17 the operations. He has a -- he's a chemical engineer  
18 with an MBA.  
19 But then the -- really the heart, the operation where -- the  
20 people in the trenches are these four boxes. We have  
21 four divisions in the company. The original company  
22 that was doing lots of work for NRC and EPA is now

1 called the consulting division. I head the consulting  
2 division. That division, as I said earlier, consists  
3 of anywhere -- at any point in time, between 10 to 20  
4 people doing -- writing new reg documents and other  
5 types of paper (Inaudible) newspaper.

6 We have -- the other division is the laboratory, and they do  
7 radiological analysis. Their specialty is  
8 transuranics.

9 We have a field division, folks that go out -- and this is a  
10 relatively new division. They go out and perform  
11 measurements. If you folks are familiar with  
12 characterization and close-out surveys, Bill Ulicny is  
13 -- leads up that division and it's a -- it's just a  
14 start-up operation. We have a few -- a few private  
15 clients.

16 And finally we have what's called the quality assurance  
17 division, another smaller division within the company,  
18 and Patrick Kelly heads that up and he does audits.  
19 Right now he's doing some audits related to I guess  
20 (inaudible) whereby these waste packages are being  
21 produced and -- for -- for disposal and there's very  
22 formal auditing process to make sure those packages

1 meet certain criteria. We drafted Patrick to help out  
2 a bit 'cause that's what he does, audits, and -- but --  
3 but all of the work that will be done in this project  
4 is going to be done out of my division, consulting  
5 division.

6 I put up the organization chart -- we'll talk about the  
7 individuals, and it's probably hard for you to read  
8 anyway. I should have made it a little larger. But  
9 the concept of operations, the way we organize  
10 ourselves, is that I -- I'm the project manager and I  
11 will be available to this project full time, if  
12 necessary. I'm here at -- to serve the -- the Board.  
13 I have been -- I'm a key individual on the project. I  
14 cannot be replaced unless written authorized approval  
15 by the Board. I re-- and I report to the Board.  
16 Probably there's also an administrative relationship  
17 between the Board and NIOSH, but my understanding is  
18 that I will be reporting to you folks and to get all my  
19 direction from you folks.

20 I have a deputy project manager, Joe Fitzgerald. Some of  
21 you folks may know him. He has a lot of background at  
22 the Department of Energy. He has an indep-- he has his

1 own company. We brought Joe's company, Salient, in as  
2 a subcontractor to SC&A.

3 You'll see, as we go over the backgrounds of these folks  
4 here, we -- we have -- we've done a lot of off-site  
5 dose reconstruction for CDC. We've done a lot of risk  
6 assessment and dose assessment for EPA and the NRC, but  
7 we don't know, as a company, the DOE complex and the  
8 issues that you folks are dealing with. Joe brings to  
9 the table this know-how, which we consider to be very  
10 important.

11 We've broken up -- what I have -- the way I've arranged the  
12 organization is a staff that crosses -- that will be  
13 supporting me. One I call quality assurance. A lot of  
14 folks are not familiar with the concept of quality  
15 assurance versus quality control. We all come out of  
16 the nuclear industry where that's our life's blood. If  
17 it is -- we have to follow very rigorous protocols to  
18 ensure quality. We have Dr. Steven\* Ostrow, who is  
19 going to basically provide audits of our work to make  
20 sure that we do everything in accordance with the  
21 procedures that we have written up in our plan to you  
22 folks, and he will be auditing that to make sure we do

1 that.

2 And to the right of me on this org. chart is our records  
3 management specialist. We'll be tal-- I'll be talking  
4 about these people a little bit more when we get into  
5 each individual, but we -- our vision of the project is  
6 that it's going to be ve-- it's critical that we  
7 maintain a complete record that will be accessible to  
8 the Board. All of the information we use should be  
9 completely transparent. And I realize there's going to  
10 be a lot of hard copy and electronic versions. Some  
11 documents might need to be controlled, so we have a  
12 records management specialist. I'll tell you a little  
13 bit more about Kathy Behling when we get into the  
14 individuals.

15 Then we've broken up the project functionally according to  
16 the scope of work that we would be covering. We have a  
17 -- our -- a large staff to do the reviews of the  
18 individual dose reconstructions. We have a -- the  
19 center box there is to do worker and site profile  
20 reviews. And then we have a third box which is SEC  
21 petition reviews and supporting that aspect. So we've  
22 broken up ourselves functionally into those areas.

1 Reality is, on projects like this, it has to have a certain  
2 fluidity to it. All of the people that we were talking  
3 about are -- are available to work basically on  
4 whatever is needed.

5 The bottom half -- bottom half box, what we did is we went  
6 out and tried to find the best people we could -- this  
7 is where this associate relationship becomes very  
8 valuable -- in all of the areas that we felt were  
9 important to have access, ready access to powerful  
10 expertise to be brought in as needed to -- to get the  
11 job done. So we have a total of about 31 people that's  
12 available to the project.

13 And we -- one more point that I'd like to make is we also  
14 put in place a very powerful conflict of interest  
15 control process. We understand the importance of  
16 conflict of interest. And everyone that comes aboard  
17 and is part of our team has to go through a vetting  
18 process before they can be part of the team to make  
19 sure that we meet all conflict of interest issues. So  
20 no one comes aboard unless you say it's okay, and we  
21 have a process to do that.

22 Let me just introduce -- what I've done in the org. chart is

1 I've identified what I call lead individuals. These  
2 are -- this is the heart of the operation. I'm going  
3 to just give you a brief biosketch on each person so  
4 you get to know who we are.

5 I'm the project manager. I have a Ph.D. in health physics  
6 from New York University Medical Center. I studied  
7 under Dr. Merrill Eisenbud, and many of you folks may  
8 remember Merrill. I have also been certified as a  
9 health physicist since -- continually since 1976, and  
10 my whole life has been doing dose calculations.

11 Kathleen Behling, she is our records management specialist.

12 She has an associate's degree and 30 years experience  
13 in records management. She spent a large part of her  
14 career responsible for records management at GP Nuclear  
15 and maintaining all the occupational exposure records  
16 electronically and at -- in our -- at our company, and  
17 she's been with us now for about ten years, maybe  
18 longer. She does all our records management work  
19 related to our dose reconstruction work for CDC.

20 As you can imagine, when you do an off-site dose  
21 reconstruction -- in fact I -- work we did a while back  
22 for CDC involved 65,000 boxes that we had to go through

1 and -- and create electronic files, vet them out and  
2 collect electronic files, and she was responsible --  
3 together with our database management people -- to  
4 create this bibliographic database, so she's -- she's  
5 the records management specialist.

6 Hans Behling. Hans Behling has a Ph.D. in health physics  
7 and a master's in public health, 35 years experience.  
8 He spent many years at the (inaudible) after TMI to get  
9 -- straighten out the situation. He is -- as far as  
10 I'm concerned, I've been working with him now for ten  
11 years -- one of the best health physicists I've ever  
12 met, and he's a pit bull. He will dig and he will dig,  
13 and he has a great deal of experience in dose  
14 reconstruction.

15 Our company was hired by the Republic of the Marshall  
16 Islands on behalf of the claimants who were concerned  
17 that they were not getting treated right in their  
18 compensation for their claims, and we were asked to  
19 reconstruct the doses to the people of Marshall Islands  
20 from the Bravo test. The Bravo test is an infamous  
21 test that resulted in very large exposures to a large  
22 number of Marshall Islanders and we were asked to come

1 in an independently dig through ancient records to  
2 reconstruct the doses that were experienced by the  
3 people of Marshall Islands. We came and -- our  
4 findings were very interesting. We believe the  
5 government underestimated the thyroid doses by about a  
6 factor of ten, and the whole body doses by about a  
7 factor of two, and that's very controversial -- getting  
8 a lot of heat on that, but we've got the evidence.

9 Victor Evdokimoff, Victor is a certified health physicist.

10 His entire career was dedicated to hospital health  
11 physics. He was the -- he is recently retired as the  
12 RSO for Boston University Medical Center. And Victor  
13 is recently retired from that position and he's with  
14 SC&A now.

15 Joyce Lipsztein, Joyce is a -- has a Ph.D. in health  
16 physics. She also went through the same program that I  
17 went through at New York University Medical Center  
18 under Dr. Eisenbud, and she's I guess perhaps one of  
19 the lead-- world's leading experts on internal  
20 dosimetry. She knows IMBA like her own name. She  
21 could -- she could talk the talk, so we are so pleased  
22 because she also recently retired as a professor and

1 has joined SC&A and she's available to us full time, so  
2 we have access to what I consider to be one of the  
3 world's experts on internal dosimetry and all of the  
4 software, including IMBA, that's used to reconstruct  
5 doses.

6 Arjun Makhijani, you folks know Arjun. Arjun is an advocate  
7 for worker rights and we feel that -- and -- but also  
8 he is a superb scientist. And so he brings to the  
9 table what I believe is -- how do I best say this?  
10 When you're in -- when you work in the nuclear  
11 industry, you know, sometimes your bills are being paid  
12 by the Nuclear Regulatory Commission or the Department  
13 of Energy, and what we have here is a mix of people  
14 that come from many diverse backgrounds. Arjun is a  
15 strong advocate for -- for worker rights. He will --  
16 he will lead up the SEC petition reviews, and -- and  
17 he's available to us -- he's one of the individuals  
18 that's only available to us about half-time. Everyone  
19 else here is available to us just about full time.

20 Steve Ostrow I mentioned earlier. He's in charge of quality  
21 assurance. He's going to be the watchdog to make sure  
22 we're following our procedures and fulfilling our

1 obligations under our standard operating procedures.  
2 Bill Ulicny, we drafted him from our field program. He's a  
3 great health physicist. He's one of the younger  
4 members of the team and he will be a case manager.  
5 Oh, one of the points I'd like to make regarding the way we  
6 think about this project is we are -- we believe in the  
7 concept of a case manager. That is, every case that we  
8 review, there will be a person who we -- who will be  
9 held accountable for making sure that case is processed  
10 properly. And so we have identified a number of people  
11 who will serve as case managers, and they have the  
12 freedom to draw upon all the resources of the -- of our  
13 project team and more, if necessary. We'll go outside  
14 and get whatever is necessary. So Bill will be one of  
15 our case managers.  
16 And finally is Joe Fitzgerald. He's the president of  
17 Salient, a recently-formed corporation. They're a  
18 subcontract to us, and as you know, Joe is a -- very  
19 knowledgeable on the DOE complex.  
20 Okay. With that, you have a pretty good idea of who SC&A is  
21 and the people that will be working on this project. I  
22 now will just briefly go over the scope of work that we

1 were asked to -- to write a proposal for. This came in  
2 back in November, and as I mentioned, on December 2nd  
3 we filed our proposal.

4 Task one is -- is the big task. It involves us doing  
5 reviews of 70 basic dose reconstructions, 70 advanced  
6 dose reconstructions and ten blind dose  
7 reconstructions. And we haven't yet received any of  
8 the -- I guess you would call it the administrative  
9 records, so how we're actually going to staff to get  
10 that work done will depend very much on what -- what  
11 the issues are and we'll staff it accordingly. And we  
12 will certainly keep you apprised of how we're doing  
13 that once -- once we get the ball rolling.

14 We've also been asked to support each of the Advisory Board  
15 meetings, so every one of these meetings, we'll --  
16 we'll be here and we will be giving briefings on what  
17 we found out so far.

18 We've also been asked to take a look at -- apparently there  
19 are procedures that have been prepared by -- by NIOSH  
20 to review the SEC petitions, and we've been asked to do  
21 a critical review of that.

22 And then of course in number six there, these are -- there's

1 a lot of deliverables, there are lots of reports that  
2 we will be delivering. And all of this work -- this  
3 will be performed over a one-year period, once we get  
4 the green light to proceed.

5 Task two focuses in on site profiles. Basically -- and this  
6 would be -- the site profile work on this project, as I  
7 mentioned, is -- is -- would be headed up by Joe  
8 Fitzgerald, and he will be drawing upon all the  
9 resources of -- of our organization. Not only the  
10 organization chart we showed here, but whatever it  
11 takes to get the job done.

12 Basically the TORP, the task order request for proposal that  
13 we received from the Board and from NIOSH, identified a  
14 possibility that this coming year we may be asked to do  
15 a critical review of -- of 16, up to 16 site -- site  
16 profiles, and part of that work will include not only  
17 reviewing it for completeness, but also performing what  
18 we call worst-case analysis. That is, given the data,  
19 use that data to evaluate what we think the upper bound  
20 doses might have been associate with particular  
21 operations for each one of these. And that's where we  
22 bring in again our team of health physicists. So you

1 always think about you have the -- the radiological  
2 engineers and the health physicists looking at the site  
3 profiles, and then we have a team of specialists like  
4 Joyce who will help in evaluating what they call worst-  
5 case scenarios. A part of that work will include  
6 making visits to the sites and -- and digging and  
7 digging and digging to make sure that we turned over  
8 every stone to make sure the site profiles are as  
9 complete, that -- that -- as they can be.

10 Task three, you're probably familiar with the OCAS -- I  
11 guess it's IG-1 and IG-2. These are the procedures  
12 that are currently being used by NIOSH and their  
13 contractor to perform external dose reconstruction and  
14 internal dose reconstruction. But in addition to that,  
15 there are also -- we became aware of a large number of  
16 additional procedures that have been prepared by NIOSH  
17 contractors, and these basically are the procedures  
18 that they're following -- they're technical procedures.

19 So this task basically involves us performing a  
20 independent technical review of those procedures.

21 We believe that the same people that are reviewing the dose  
22 reconstructions should also be the people reviewing the

1 procedures, so they will be responsible for doing --  
2 the same people will be working on task three as are  
3 working on task one.

4 Finally our fourth and last task is called the dose  
5 reconstruction review tracking. What -- what this is  
6 is that we're -- we're going to generate a great deal  
7 of information. I mean beside the records, electronic  
8 or hard copy, we receive regarding the cases or  
9 regarding the site profiles, we will be receiving -- we  
10 will be filling out -- the way we are approaching the  
11 project is a very, very formal documentation process of  
12 audits where each review follows an audit procedure,  
13 check list, sign-offs, and so we're going to be  
14 generating a lot of data and information. Our plan is  
15 to build a database management system that is  
16 compatible or integrated with your Sequel\* 2000 that  
17 will allow the Board to -- to basically do sorts on --  
18 on the records, that data that's in there, that will  
19 help serve your purposes in tracking performance, doing  
20 statistical workups of the data. So -- and so -- we  
21 have Don Loomis who specializes in database management  
22 system. I know -- Sequel is his -- he knows Sequel the

1 way Joyce knows IMBA, so we -- we feel very comfortable  
2 that we can design and build for you whatever you need.

3 And it's easy to do. He says don't worry about this  
4 one. The others are going to be some tough ones.

5 Don't worry about this. We'll -- we'll build whatever  
6 you want.

7 And that -- that really concludes my overview. I'd like to  
8 just make one statement. I've been in -- I've been  
9 doing dose calculations for 30 years. This is the most  
10 important project I've ever been on and I'm very, very  
11 pleased that you selected us. Thank you. Any  
12 questions?

13 **DR. ZIEMER:** Thank you very much, John, for that overview of  
14 your company and capabilities. We'll now open the  
15 floor for questions from the Board. Again, I'll remind  
16 the Board members that you pretty much need to confine  
17 your questions to the material that John has presented  
18 here. That restricts your questioning right away,  
19 doesn't it?

20 John, you indicated that in addition to the roughly 30  
21 folks, you have the capability of bringing others in on  
22 rather short notice. Is that correct?

1 **DR. MAURO:** Yeah, we've -- we've built up -- right now we  
2 have 50 active associates. We have 30 full-time  
3 employees and 50 active associates. However, we've --  
4 we develop associate -- we actually at one time had  
5 perhaps 200 associates, so we have a relationship with  
6 a -- a network that -- that -- throughout the United  
7 States of -- for example, you'll notice Art Upton is on  
8 our org. chart.

9 **DR. ZIEMER:** Uh-huh.

10 **DR. MAURO:** Well -- or Doug Boreham -- I don't know if you  
11 know Doug, he was up at (inaudible) University. He  
12 specializes in biomarkers. These -- these are folks  
13 that are -- that I consider to be the best people there  
14 are out there to address particular questions. We have  
15 a list right now of hundreds of specialists in all the  
16 radiological sciences and the nuclear sciences that --  
17 that we have an ongoing relationship with. I mean all  
18 of the -- the key people -- you'll notice by the list  
19 of names here, we -- we all have 30 years experience  
20 under our belt. Collectively we have a network of  
21 relationships, of people that we can draw upon. So  
22 when special problems arise -- in fact, for example,

1 before the Board -- I don't know this individual, but  
2 is a Dr. Hunt who's -- I believe Great Britain, that  
3 Joyce said listen, you -- we've got to get Dr. Hunt  
4 abo-- available because there's no one who understands  
5 film badge dosimetry and converting film badge readings  
6 to organ doses better than he does, so we brought him  
7 aboard. We envision that there are going to be  
8 problems that are going to come up that are going to be  
9 very specialized. And so what I'm saying is that what  
10 we're in a position to do is very quickly bring aboard  
11 associates within a day -- for some reason, if we have  
12 a need -- so we -- there's no boundaries. We can  
13 either do that, or we can bring aboard a subcontractor.  
14 That's more of a difficult thing to do. There are  
15 companies that have certain specialty expertise that  
16 you may want to bring in. We're very much open to  
17 doing that. But usually that takes a little longer  
18 because we have to put the contract in place, and the  
19 vetting process regarding conflict of interest becomes  
20 a little more burdensome. But -- but yes...

21 **DR. ZIEMER:** Okay, thank you very -- oh, here's a question.

22 Roy DeHart.

1 **DR. DEHART:** I actually was going to ask the question, but  
2 you answered it as you were talking through, and that  
3 is most of our -- essentially all of our cases that  
4 we're going to be reviewing have medical problems.  
5 They have cancer. And I noticed that there was the  
6 absence of any physician being listed, but when you  
7 mentioned Art -- you took care of that issue.

8 **DR. MAURO:** Okay, right. Yeah, Art and I are -- are  
9 friends. He -- he was part of the NYU -- New York  
10 University Medical Center program and over the years I  
11 -- we've been working with him. He's been an SC&A  
12 associate for many years.

13 **DR. ZIEMER:** Okay, thank you very much. We appreciate your  
14 being here today.

15 **REVIEW AND APPROVAL OF DRAFT MINUTES, MEETING 18**

16 We now have opportunity for a working session. We have  
17 several items that we need to address. First of all,  
18 beginning with the minutes to the 18th meeting -- let  
19 me get my copy back from Ray here. I'd like to ask  
20 Board members for any additions or corrections to the  
21 minutes.

22 Let me begin by indicating that in the executive summary I

1 have asked Ray to insert on -- looking for a page  
2 number here. It's the first page of the executive  
3 summary. It would be the third section under OCAS  
4 Program Status Report, David Sundin's report where he  
5 announces the number of claims to date. I asked Ray to  
6 insert the number of claims in the summary here so that  
7 it is more specific in the executive summary.

8 Likewise at the top of the next page where it indicates four  
9 completed site profiles, to identify those four sites  
10 in the executive summary.

11 Now other -- other comments? And again we're asking for  
12 substantive ones as opposed to simply grammatical. Did  
13 you all check those items that are attributed to you to  
14 make sure -- Wanda, you have one that you wanted to  
15 raise, I believe.

16 **MS. MUNN:** I have two. On page 20 where Ms. Munn begins  
17 talking. We've just finished talking about the  
18 procedure for individual dose reconstruction, and it's  
19 not clear to me in that sentence exactly what I was  
20 talking about.

21 **DR. ZIEMER:** Let's make sure at page 20 -- page 20, I'm  
22 looking to make sure because I have a downloaded

1 version which seems to have ended up with different  
2 page numbers and so on, but --

3 **MS. MUNN:** All right, the --

4 **DR. ZIEMER:** -- this is the copy that was in our packet, I  
5 guess.

6 **MS. MUNN:** Yes, in the center of the page, the motion to  
7 approve the procedure for processing passed  
8 unanimously.

9 **DR. ZIEMER:** Okay.

10 **MS. MUNN:** And then the next sentence, Ms. Munn indicated  
11 she was still concerned about the large number of site  
12 profiles being required.

13 **DR. ZIEMER:** Okay, so to -- for clarity, to add the words  
14 "of site profiles" --

15 **MS. MUNN:** "Of site profiles being required." Because our  
16 discussion was about how quickly these were going to be  
17 done.

18 **DR. ZIEMER:** Right. And so without objection, we'll add  
19 that.

20 **MS. MUNN:** And the other concern, page 32, second paragraph.  
21 Jim Neton was talking here and the first sentence of  
22 the second paragraph says "Determination of external

1 doses was covered by general considerations,  
2 unmonitored workers." I'm not certain exactly what  
3 that means. I think I'd have to go back to the  
4 transcript to get the full sense of that, but that  
5 sentence appears to need some grammatical correction of  
6 some sort. I'm not sure exactly what.

7 **DR. ZIEMER:** Yes, it's -- does not appear to be clear to --  
8 does anyone know what -- Jim, she's attributing this to  
9 you.

10 **DR. MELIUS:** No, Jim Neton.

11 **DR. ZIEMER:** Oh, to Jim Neton. Oh, oh, the other Jim.

12 Okay. Okay, so we will ask for that sentence to be  
13 clarified.

14 Does that cover the ones -- okay. So we don't know how that  
15 will be fixed right now, but we will fix it.

16 **DR. MELIUS:** Just put a mumble in there. Dr. Melius  
17 mumbled; couldn't understand a word he was saying.

18 **DR. ZIEMER:** I found the Gen Roessler statement that I was  
19 trying to understand.

20 **DR. ROESSLER:** Okay.

21 **DR. ZIEMER:** It's on page 32. It's bullet five. Dr.  
22 Roessler asked what part of the total was assumed for

1 the chest X-ray. What part of the total.

2 **DR. ROESSLER:** I think on that Jim was talking about typical  
3 doses to workers, and he had a chart up and he showed  
4 chest X-ray and I -- I kind of thought that was a maybe  
5 a major part of the dose and so I asked him  
6 specifically what -- what dose was due to the chest X-  
7 ray, and he didn't specifically have an answer. He  
8 just said it would be typical for whatever was used in  
9 medical facilities at the time. Does that help?

10 **DR. ZIEMER:** What part of what total? A typical total  
11 worker dose? Is that --

12 **DR. ROESSLER:** I think that's what he was talking about, as  
13 best I can remember. We might have to go back to the  
14 slides he was using, but I seem to recall he had one  
15 slide where he showed a typical dose and he included a  
16 chest X-ray.

17 **DR. ZIEMER:** So it would be something like what part of the  
18 total in the example? Well, perhaps we can ask that --  
19 that that --

20 **DR. ROESSLER:** I think we need to the record.

21 **DR. ZIEMER:** It's not clear to me exactly what they're  
22 talking about.

1 Other -- other items that anyone wishes to call attention  
2 to? Did you have another one, Wanda, or is --

3 **MS. MUNN:** No.

4 **DR. ZIEMER:** Okay. No others? Let me ask for -- if the  
5 group is willing for us to make appropriate fixes to  
6 those two spots, if you then are willing to approve the  
7 minutes, including the executive summary, as slightly  
8 modified. Is there a motion to that effect?

9 **MS. MUNN:** So moved.

10 **MR. PRESLEY:** Second.

11 **DR. ZIEMER:** It's been moved and seconded. All in favor of  
12 approving the minutes, subject to relatively minor  
13 fixes, please say aye.

14 (Affirmative responses)

15 **DR. ZIEMER:** Any opposed?

16 (No responses)

17 **DR. ZIEMER:** Motion carries.

18 (Pause)

19 **DR. ZIEMER:** Larry wants to ask a question relative to  
20 minutes.

21 **MR. ELLIOTT:** These minutes are very detailed in their  
22 content, and I would just ask for the Board's sense on

1           what you would be happy with. Is this what you're  
2           happy with as far as your minutes, or would you --

3 **DR. ZIEMER:** As far as level of detail, I think you're  
4           asking.

5 **MR. ELLIOTT:** Right. Or would you prefer perhaps to see  
6           something like the executive summary, six pages or  
7           less, and then use the transcript to rely on that, on  
8           what the verbatim is to what was actually discussed and  
9           held. How would you --

10 **DR. ZIEMER:** Yeah, just give us some feedback on this.  
11           We've been trying to condense them and they're --

12 **MR. ELLIOTT:** Cori, am I correct that -- that this executive  
13           summary and then the full text of minutes that we are  
14           using is not -- it's something we can change. We can --  
15           the Board wants to have just an executive summary  
16           style set of minutes, they can do that.

17 **MS. HOMER:** (Off microphone) We have some (Inaudible) can be  
18           met in a much shorter version.

19 **MR. ELLIOTT:** Yes.

20 **DR. ZIEMER:** Jim.

21 **DR. MELIUS:** Yeah, I actually like this particular style, so  
22           I speak in favor of keeping it. I think --

1 **DR. ZIEMER:** About this level of detail?

2 **DR. MELIUS:** About this level of detail, 'cause I think it  
3 is helpful to be able to not have to refer back to the  
4 transcripts to find what someone said at this point in  
5 time.

6 **DR. ZIEMER:** Gen Roessler?

7 **DR. ROESSLER:** I think we owe this amount of detail to the  
8 people who are looking at our minutes, and I know there  
9 are people -- particularly in health physics -- who are  
10 reviewing what we're doing, and I think we need at  
11 least this much detail.

12 **DR. ZIEMER:** Okay. Mark, did you also have a comment?

13 **MR. GRIFFON:** Just the -- the same comment as Jim, that not  
14 -- not too many people are going to turn to the  
15 transcripts, so I think this level of detail is good.

16 **DR. ZIEMER:** Okay. Other -- any others want to weigh in one  
17 way or the other? Do you want them shorter, longer,  
18 this feel --

19 **MR. PRESLEY:** I agree.

20 **DR. ZIEMER:** Seems to be a sort of a general consensus that  
21 maybe we're at about the right level. Okay. Thank  
22 you, that's very helpful.

1 Okay, Ray, I think --

2 **THE COURT REPORTER:** Who made the second to approve them? I  
3 didn't hear --

4 **MS. MUNN:** Presley.

5 **DR. ZIEMER:** I'm sorry?

6 **THE COURT REPORTER:** Who made the second to approve these  
7 minutes? I didn't see it.

8 **DR. ZIEMER:** Who made the second to approve the minutes?  
9 Okay. Robert, thank you.

10 (Pause)

11 **BOARD DISCUSSION/WORKING SESSION**

12 **DR. ZIEMER:** One of the issues that arose at our last  
13 meeting -- and I'll simply remind the Board of it and  
14 then we can handle it as you see fit -- was whether or  
15 not we should have a -- a subcom-- put in place a  
16 subcommittee, as opposed to a working group, a  
17 chartered subcommittee to handle the ongoing issues  
18 relating to dose reconstruction and our interactions  
19 with the contractor. It may be that the Board will  
20 wish to delay that decision on establishing a working -  
21 - or a subcommittee until after we have a chance to  
22 review the contractor's proposal later today. But

1 nonetheless, let me ask if the Board does at this time  
2 wish to move forward on that issue or -- in the absence  
3 of that, we remain operating as a committee of the  
4 whole on the issue of how we direct and work with our  
5 contractor. I'll open that for any comments or  
6 specific recommendations. Begin with Dr. Melius.

7 **DR. MELIUS:** I agree, it's difficult to talk about this with  
8 specificity now until we've gone into closed session.  
9 However, I think -- I am a little uncomfortable about  
10 us making major changes in Board procedure or sort of  
11 the issue of the public's access to what we're -- to  
12 our activities and so forth -- to do that in closed  
13 session. So I think it would be worthwhile having some  
14 discussion of the concept and -- of subcommittee and at  
15 least some sense of where we --

16 **DR. ZIEMER:** Yeah.

17 **DR. MELIUS:** -- where we should go with it and what the sub-  
18 - a subcommittee or working group might -- might do or  
19 not, but recognizing that we may have to sort of  
20 develop the specific charge for the subcommittee in  
21 closed session, given the situation, that all we can do  
22 right now is --

1 **DR. ZIEMER:** No, actually this could not be part of our  
2 closed session today.

3 **DR. MELIUS:** Okay, that was actually --

4 **DR. ZIEMER:** I'm sorry if I suggested that. I suggested  
5 that the decision on doing that may need to wait till  
6 the results of the closed session are known to us. But  
7 we -- we would not -- we cannot carry out other  
8 business in the closed session other than reviewing and  
9 addressing the cost proposal that is before us. This,  
10 of necessity, must be an open session item. So -- and  
11 all I'm saying is that unless we choose to do something  
12 this morning on that, we would defer and would continue  
13 to act as a committee of the whole until our next  
14 meeting, at which point we could decide to establish a  
15 subcommittee on an ongoing basis. There's not a  
16 necessity that we have a subcommittee at the moment.

17 **DR. MELIUS:** Yeah, can I just say two things to address  
18 that? And some of this is going to be a question for  
19 Larry. One is that I think first of all we ought to  
20 look and -- and see what -- what we might lose or gain,  
21 depending on what happens this afternoon, in terms of  
22 timing of task orders and so forth if we -- I think our

1 next meeting's what, about two months away -- until  
2 then 'cause -- I mean I think if -- to the extent we  
3 could facilitate this moving forward through a  
4 subcommittee, I think it would be -- be good. It may  
5 be that we would then -- so that's one question. The  
6 second question is I think it would be worthwhile  
7 having a larger discussion of what a subcommittee might  
8 do on an ongoing basis. We may have to defer the  
9 decision on that to the -- to the next meeting. But I  
10 wouldn't see -- there certainly might be some value to  
11 having a subcommittee that would last until the next  
12 meeting and would have a very specific charge to it in  
13 terms of what it -- it might do, though I'm not sure  
14 what that charge would be until I understand the  
15 process, and even then I'm not sure we can do anything  
16 in this session on a contingent basis --

17 **DR. ZIEMER:** Yeah, a subcommittee that lasts until our next  
18 meeting looks much more like a workgroup as it's ad hoc  
19 and very specific. But unless -- right now we would be  
20 operating in the absence of having a precise knowledge  
21 of what the charge would be to such a workgroup.

22 **DR. MELIUS:** Well, I think we could -- well, I'm not sure

1 'cause I'm not sure what the procedure is. I would  
2 think that, though -- that a -- as I understand it, a  
3 subcommittee can take actions on behalf of the Board  
4 between meetings; a workgroup cannot.

5 **DR. ZIEMER:** If the Board so authorizes.

6 **DR. MELIUS:** Correct. Correct. And so I guess my question  
7 is, number one, in the short term -- and this question  
8 I think is to Larry -- given the process, given what  
9 might occur this afternoon -- you know, what are the --  
10 what are the possibilities this afternoon, and then do  
11 any of those possibilities...

12 **MR. ELLIOTT:** I think --

13 **DR. MELIUS:** -- would be assisted by having action by the  
14 next meeting.

15 **MR. ELLIOTT:** I think it would be beneficial for the Board  
16 to hear again the process from -- from this point  
17 forward, and that'll give you a better sense of, you  
18 know, what kind of a delay might occur and how you  
19 might react to -- to that. So I'd ask Martha if she  
20 would again cover the ground of how -- how this thing  
21 is going to -- going to work.

22 **MS. DIMUZIO:** Well, basically, you know, we'll go into

1 closed session this afternoon to review the proposals  
2 and -- and the cost estimates that have been provided  
3 by Sanford Cohen. The Board at that point can either  
4 determine to accept the proposals as -- as -- as  
5 they've been submitted, and then we would move forward  
6 with award. If there are questions related to the --  
7 the approach or level of effort that may -- the  
8 contractor may be proposing and things like that and  
9 there are specific questions, we would generate those  
10 questions, those questions would be forwarded to our  
11 procurement office, who would then provide them to  
12 Sanford Cohen for response. At that point Sanford  
13 Cohen has seven days to respond to those questions and  
14 potentially re-propose against those four tasks, and  
15 that point in time we would have those proposals to  
16 forward out back to the Board for them to approve.

17 **MR. ELLIOTT:** And you can put forth an extension of time if  
18 -- if appropriate and necessary and justified.

19 **MS. DIMUZIO:** Right, yes, if Sanford Cohen needed additional  
20 time to prepare their responses or whatever, then yes,  
21 I mean we can give them additional time of seven days  
22 to respond, yes.

1 **DR. ZIEMER:** Okay, let's go ahead and get some other  
2 comments here and then we'll proceed. Let's see, Henry  
3 and then Wanda.

4 **DR. ANDERSON:** Yeah, my -- I guess my thoughts are if the  
5 intent is to have a subgroup so that we can move  
6 expeditiously, I think we could also continue with a --  
7 I mean for a subgroup you still have to -- or  
8 subcommittee, you still have to post it in the *Federal*  
9 *Re--* or you know, you've got to have all the advance  
10 notice and all that kind of thing. It would seem to me  
11 we could simply do that as a committee of the whole,  
12 recognize that the only thing we have to have is a  
13 quorum and, you know, if we have to have multiple  
14 calls, you know, getting a subcommittee together can  
15 probably be more problematic than just getting a quorum  
16 from the -- from the Board to address whatever needs to  
17 be talked about, but as far as the logistics of doing  
18 the announcement, it's not much different, so that  
19 might be the way -- and then as activities go, we could  
20 see whether there's some more routine activities that a  
21 subcommittee would be more advantageous, but I -- I  
22 just think we're early on enough that everybody's going

1 to want to see it and probably be involved in the  
2 decision process. And we just have to recognize on  
3 short notice some people won't make it and we'll just  
4 have to be sure that, whatever the call is, we've got  
5 the quorum.

6 DR. ZIEMER: Wanda.

7 DR. ANDERSON: You can't do it by --

8 MR. ELLIOTT: By call.

9 DR. ANDERSON: You can't do it by call?

10 MR. ELLIOTT: No. You cannot hold a closed session --

11 DR. ANDERSON: No, no --

12 MR. ELLIOTT: -- by phone call.

13 DR. ANDERSON: Okay, this would have to be a closed session.

14 MR. ELLIOTT: Yes.

15 DR. ANDERSON: Oh, okay, I was thinking --

16 MR. ELLIOTT: This is a negotiation --

17 DR. ANDERSON: -- a subcommittee action would be --

18 MR. ELLIOTT: This is a negotiation between --

19 DR. ANDERSON: Oh, this is for --

20 MR. ELLIOTT: -- you as the government and your contractor.

21 DR. ANDERSON: Yeah, okay, I see. I thought there would be  
22 other issues to look at. Sorry, never mind.

1 **MR. ELLIOTT:** Sorry.

2 **DR. ZIEMER:** It would be equivalent to doing what we're  
3 doing this afternoon with a -- some sort of perhaps a -  
4 - assuming we needed revisions.

5 **DR. ANDERSON:** Yeah.

6 **DR. ZIEMER:** Maybe we don't.

7 **DR. ANDERSON:** Yeah.

8 **DR. ZIEMER:** But if we did... Wanda.

9 **MS. MUNN:** Although it appears cumbersome to act as a  
10 committee of the whole, in the absence of a triggering  
11 event or substances that would -- circumstances that  
12 would clearly require the more concentrated efforts of  
13 a subcommittee, I see no reason for us to further  
14 discuss establishing one at this time.

15 **DR. ZIEMER:** Jim, did you have an additional comment?

16 **DR. MELIUS:** I have an additional comment. If I followed  
17 you, Martha, correctly -- and I'm guessing at times and  
18 given holiday seasons, but my sense is that the  
19 earliest go back and forth with Sanford Cohen &  
20 Associates would -- end with us getting a new proposal  
21 around the first of the year.

22 **MS. DIMUZIO:** That's correct.

1 **DR. MELIUS:** Yeah, so it would be about right. Our  
2 meeting's the first week in February, so we would be  
3 losing a month of work in terms of -- of tasks, should  
4 they have to be revised, et cetera.  
5 I guess another question is -- and I don't know that the  
6 answer is -- can the process go on more than once? Can  
7 we end up going back and forth with them...  
8 **MS. DIMUZIO:** Yes, technically you could. I mean if -- if  
9 level of effort was still not correct, if, you know,  
10 they still didn't fully understand the -- you know, how  
11 we wanted them to revise if necessary, then yes, you --  
12 you could be going back with -- with a follow-up, yes.  
13 **MR. ELLIOTT:** Martha, can there be back-and-forth in written  
14 form between the contractor and the full Board?  
15 **MS. DIMUZIO:** I believe so. I'd want to --  
16 **MR. ELLIOTT:** So for example, on a specific --  
17 **MS. DIMUZIO:** -- verify that with --  
18 **MR. ELLIOTT:** -- task, if -- if there were --  
19 **MS. DIMUZIO:** -- Larry, but --  
20 **MR. ELLIOTT:** -- limited questions or issues regarding a  
21 proposal on a given task, and the Board puts that  
22 together and goes back to the contractor and then they

1 get a revised proposal and it looks okay, the Board  
2 could take action on that and make an award by letter  
3 to procurement.

4 **MS. DIMUZIO:** Yes, you could do that. You would just have  
5 to have some mechanism for all of the Board to approve  
6 the questions --

7 **MR. ELLIOTT:** Approve and agree.

8 **MS. DIMUZIO:** -- and review the questions and okay the  
9 questions in some type of session that would not be  
10 open to the public. But yeah, I mean -- and I don't  
11 know how you would --

12 **MR. ELLIOTT:** Cori, is there a way to do that by -- by mail?

13 **MS. HOMER:** (Off microphone) I'm sorry, I was -- the music  
14 is a little loud back here.

15 **MR. ELLIOTT:** Okay. I'm trying to get at can the Board  
16 conduct some of this business of awarding a task  
17 without having a face-to-face meeting and going back  
18 and forth between them and their contractor by -- by  
19 mail, perhaps, and get a sense that -- that the full  
20 Board is in agreement, has a -- has a -- no?

21 **MS. HOMER:** I don't believe so. I -- I could check into  
22 that, but the -- any action taken by the Board is

1 considered a meeting, period -- has to be announced.  
2 If it's closed, it has to be announced as closed and  
3 approval has to be gained for that.

4 **DR. ZIEMER:** Yeah. Actually that sounds true. I mean it  
5 sounds -- it sounds like if you tried to do things by  
6 letter, you're circumventing the intent of the -- the  
7 process so that --

8 **MS. HOMER:** (Off microphone) Yeah, the same -- the same  
9 (Inaudible) for a subcommittee, as well.

10 **DR. ZIEMER:** I might add -- and let me ask this -- or  
11 perhaps make it a comment and ask a question. If --  
12 we're presuming that there might be changes, but maybe  
13 there won't. But let's assume that out of today's  
14 session the Board raises some comments and asks for  
15 feedback.

16 **MS. HOMER:** Uh-huh.

17 **DR. ZIEMER:** And the result is some sort of a revised  
18 proposal around the first of the year, as was  
19 suggested. If at that point the Board felt that there  
20 was some urgency in acting on that new proposal, would  
21 it not be possible to announce in the *Federal Register*  
22 that in two weeks or something we're going to meet --

1 MS. HOMER: Uh-huh.

2 DR. ZIEMER: -- I don't know, Cincinnati or somewhere for  
3 the express purpose, in closed session, of making the  
4 final -- taking the final action on that?

5 MS. HOMER: That's possible.

6 DR. ZIEMER: I know it's not optimal.

7 MS. HOMER: No, it's not. We have to have seven days.

8 DR. ZIEMER: But if there's some reason to shorten --  
9 otherwise we have the month, quote, loss, but if the  
10 Board felt that we can't afford to sit here for a month  
11 with nothing happening --

12 MS. HOMER: Uh-huh.

13 DR. ZIEMER: -- we need to go forward, we could meet.

14 MS. HOMER: It would be tough.

15 DR. ZIEMER: I mean whether it was the Board or the  
16 subcommittee, you have to do the same thing.

17 MS. HOMER: Yeah, I mean --

18 DR. ZIEMER: You have to make the announcement --

19 MS. HOMER: -- given the appropriate resources, we could --  
20 we could pull that off. I mean the -- the --

21 DR. ZIEMER: And could we not --

22 MS. HOMER: -- *Federal Register* notice --

1 DR. ZIEMER: -- even reserve some time in advance for that  
2 possibility?

3 MS. HOMER: I would suggest we do that, yes.

4 DR. ZIEMER: And then if we didn't need to use -- use the --  
5 it could -- is it easier to cancel an --

6 MS. HOMER: It's very difficult to cancel --

7 DR. ZIEMER: -- announced meeting than it is to add one?

8 MS. HOMER: -- hotel arrangements.

9 MR. ELLIOTT: I think --

10 MS. HOMER: If I have a contract with a hotel, it's very  
11 difficult to can-- I'm sorry.

12 MR. ELLIOTT: I think for the benefit of this discussion,  
13 though, we -- you could have your closed session and --  
14 in the offices --

15 MS. HOMER: Yes, we could.

16 MR. ELLIOTT: -- at NIOSH in Cincinnati. And let's be  
17 minimal in what the expectations are to set up that  
18 meeting.

19 MS. HOMER: Yes.

20 MR. ELLIOTT: That would be a seven-day advance notice for  
21 the *Federal Register* that we'd have to put in.

22 MS. HOMER: We have to have seven days to get it published.

1           It can be published on an emergency basis.  
2           Determination to close can probably be rushed. As long  
3           as we are not dealing with a contract with a hotel, I  
4           don't foresee a problem with that. I mean rooms are --  
5           I'm sure we can find lodging for you at a hotel which -  
6           - which would not --

7 **DR. ZIEMER:** Larry volunteered --

8 **MS. HOMER:** -- mean a contract.

9 **DR. ZIEMER:** -- four bedrooms.

10 **DR. MELIUS:** I can't wait.

11 **DR. ZIEMER:** I don't want to be in --

12 **MR. ELLIOTT:** I have a tent, too.

13 **DR. ZIEMER:** Jim.

14 **DR. MELIUS:** To me, rather than doing something contingent  
15           on a full Board, I think let's explore the subcommittee  
16           issue. We've got some time this morning and seems to  
17           me that if a subcommittee could be charged -- well, I  
18           guess this is the question again. Can the subcommittee  
19           be charged with, you know, reviewing a response from  
20           the contractor should be -- should it be necessary,  
21           based on our meeting this afternoon, and then approving  
22           it? And -- and the instructions for that approval, the

1 circum-- you know, whatever you want to call --

2 **MR. ELLIOTT:** With the bounds on it.

3 **DR. MELIUS:** -- with the bounds on it could be, to some  
4 extent, set this afternoon by -- by what our  
5 instructions are back to the -- I mean I think in  
6 essence we end up doing that when we -- the questions  
7 and -- should we send those back to the contractor. I  
8 mean to me it would be a lot more --

9 **DR. ZIEMER:** What you're proposing if you're bounding it,  
10 for example, in terms of dollar values, I don't think  
11 we can do that in -- at this point.

12 **MR. ELLIOTT:** You couldn't do that in this meeting.

13 **DR. ZIEMER:** In this meeting.

14 **MR. ELLIOTT:** You couldn't do that in this public meeting.  
15 You could -- you could do that in -- if you set up a  
16 subcommittee or if you set up, as part of your  
17 discussion in the closed session this afternoon, what  
18 your expectations are and the next meeting is either a  
19 subcommittee or a quorum of this body, that's your  
20 guidance.

21 **MS. HOMER:** I would like to --

22 **DR. MELIUS:** And that's going to --

1 **MS. HOMER:** I'm sorry, Dr. Melius, but I would like to point  
2 out that you can make the decision to establish a  
3 subcommittee, but administratively it still has to be  
4 established prior to any meeting taking place.

5 Whatever --

6 **DR. ZIEMER:** Has to go through the --

7 **MS. HOMER:** -- decision that you make --

8 **DR. ZIEMER:** -- CDC process.

9 **MS. HOMER:** Correct, uh-huh.

10 **MR. ELLIOTT:** It has to have a charter.

11 **MS. HOMER:** Yes.

12 **MR. ELLIOTT:** The charter has to be signed off on.

13 **MS. HOMER:** Well, it's an establishment memo that will  
14 provide membership, it will provide the function, it  
15 will provide frequency of meetings --

16 **MR. ELLIOTT:** Delegation of authority from the Board.

17 **MS. HOMER:** Well, and that's something -- yeah, we would  
18 probably have to discuss that.

19 **DR. MELIUS:** How long?

20 **MS. HOMER:** I suspect it could take two weeks. With the  
21 holidays, maybe a little longer.

22 **DR. MELIUS:** Christmas Eve we'll...

1 **DR. ZIEMER:** Comment over here.

2 **DR. DEHART:** If I understand, we would need only a quorum of  
3 this committee, which is 50 percent plus one, and the  
4 odds of being able to find that number to attend a  
5 meeting is probably greater than having a subcommittee  
6 with limited numbers to be able to meet, so I see no  
7 advantage at all at this point to try to create and  
8 generate a subcommittee and just have the -- just have  
9 us as a whole try to address the issue.

10 **DR. ZIEMER:** Okay. Other comments?

11 **DR. MELIUS:** Yeah, I guess I was just thinking the opposite,  
12 that -- that we could establish a subcommittee of say  
13 four people and those four people could pick a date a  
14 lot easier than whatever the quorum is -- what, six or  
15 seven -- I don't even remember what a quorum is, seven  
16 --

17 **DR. ZIEMER:** One more than half.

18 **DR. MELIUS:** -- seven, so seven -- four people are easier to  
19 meet than seven. The question is, can we come -- I  
20 think the real question would be more do we want to  
21 spend the time and can we come to agreement at this  
22 meeting on a subcommittee charter, or is that going to

1 be something that's going to take us more than one  
2 meeting to work out.

3 **DR. ZIEMER:** Well, it's not obvious that four is easier than  
4 seven because it's a specific four versus any seven out  
5 of 12, so I'm not sure -- it's not obvious to me that -  
6 - if it's a specific four, it may be actually harder to  
7 find a date, but that's what you're suggesting. And  
8 who knows, it depends on who the four are and who --  
9 what the dates are, so who knows.

10 Other comments? Henry.

11 **DR. ANDERSON:** I guess the other thing to talk about, what  
12 would be the activities going forward of such a -- I  
13 think it's advantageous to have a relatively small  
14 group which would basically act as our project officer  
15 for the Board, as a collective group dealing, so kind  
16 of moving forward it would seem to me if there were  
17 questions that had to be dealt with --

18 **DR. ZIEMER:** Well, the original idea on this was more of a  
19 management type --

20 **DR. ANDERSON:** Yeah.

21 **DR. ZIEMER:** -- of group that would --

22 **DR. ANDERSON:** Yeah.

1 DR. ZIEMER: -- work with the contractor closely, help  
2 decide who --

3 DR. ANDERSON: Yeah.

4 DR. ZIEMER: -- which of the Board members would participate  
5 in different cases --

6 DR. ANDERSON: Yeah.

7 DR. ZIEMER: -- and so on, as opposed to a specific decision  
8 such as this one --

9 DR. ANDERSON: Right.

10 DR. ZIEMER: -- which is on the contract itself. Okay.  
11 Other -- a comment, Cori?

12 MS. HOMER: Yes, also something to consider would be that  
13 even if a subcommittee has been formed and the  
14 establishment has taken place, the Board still has to  
15 meet to determine what authority they're going to give  
16 to the subcommittee. That's still going to take a full  
17 meeting of the Board, at least one.

18 DR. MELIUS: Again, just a question. Wouldn't you do that -  
19 - couldn't -- if we did that today, doesn't that  
20 establish the charter and the -- the --

21 MS. HOMER: It does establish the charter, but it does not  
22 establish the authority that the Board is going to give

1 the subcommittee. Because the way that it works,  
2 without any authority, the subcommittee cannot take  
3 action without approval of the full Board.

4 **DR. MELIUS:** But --

5 **MS. HOMER:** If the Board decides to give the subcommittee  
6 authority to act on their behalf, that authority has to  
7 be developed and approved before it can -- you know,  
8 before the subcommittee can take any action.

9 **DR. ZIEMER:** Can that authority be given prior to the  
10 approval of a charter, which is what --

11 **MS. HOMER:** I would suggest not.

12 **DR. ZIEMER:** -- which is the situation that we would have  
13 today.

14 **MS. HOMER:** You could develop them at the same time.

15 **DR. ZIEMER:** But until the charter was approved, the  
16 authority could not --

17 **MS. HOMER:** The authority has no -- no -- you have no  
18 authority.

19 **DR. ZIEMER:** This is a little knotty, but I think in the  
20 interest of moving forward -- and we can return to this  
21 -- I think I'm simply going to rule that we will  
22 continue to operate as a committee of the whole for now

1 and -- particularly on this issue, and if necessary,  
2 try to establish some kind of a -- what I might call an  
3 emergency meeting of the Board if we need to do  
4 something before our next meeting. In the meantime, a  
5 -- more details on the charter can be developed. And  
6 actually there is some work that's been going on. Mark  
7 and I have worked together on some draft things for a  
8 possible charter and -- and may be that we'll have a  
9 chance to present that a little later even today, Mark,  
10 for this subcommittee.

11 We do need to take a break and then return, so let's take a  
12 break till 10:15.

13 (Whereupon, a recess was taken.)

14 **ADMINISTRATIVE HOUSEKEEPING AND BOARD WORK SCHEDULE**

15 **DR. ZIEMER:** This is the time on our schedule that we take  
16 care of some administrative/housekeeping issues. We'll  
17 first turn the mike over to Cori to see if she has any  
18 particular items that she needs to bring to us.

19 **MS. HOMER:** (Off microphone) Just a few things. Am I on?  
20 Okay. A couple of things just real quickly. Please don't  
21 forget to e-mail Larry your work time for the Board,  
22 prep time, any working groups that you -- that you were

1 on or worked for, and your Board time separately. Go  
2 ahead and send that to Larry as soon as you can, and cc  
3 me.

4 I wanted to mention, I have some trouble getting all of the  
5 e-mails quickly. That delays payment for everybody, so  
6 please respond as quickly as you can with your time to  
7 Larry so that I can get you guys paid quickly.

8 The closed session will be held in the Mesquite I Room, just  
9 past the front desk, down that long hallway. It's the  
10 first room on your left-hand side. It's taking place  
11 as scheduled on the agenda.

12 **DR. ZIEMER:** At 2:00 o'clock at Mesquite --

13 **MS. HOMER:** At 2:00 o'clock at Mesquite I. Now for those  
14 that are going on the tour, we have a very, very full  
15 agenda for that day. Please dress casually. There  
16 will be no cameras, phones, blackberries, palm pilots,  
17 no forms of communication allowed, period.

18 **MR. PRESLEY:** Picture I.D.

19 **MS. HOMER:** Uh-huh. Bring water, because there will be ice  
20 chests, if you'd care to. And we'll be departing  
21 around 6:15, 6:30. I have an agenda and I will make  
22 you copies, but I haven't had the opportunity to do

1 that just yet.

2 **DR. ZIEMER:** So you want people in the lobby at 6:15. Is  
3 that what you're saying or --

4 **MS. HOMER:** Yes. My apologies, but that's the agenda. They  
5 arrive at about 6:15 with the bus.

6 **DR. ZIEMER:** Yeah. And it's a drive out to the test site,  
7 an hour and a half, roughly.

8 **MS. HOMER:** Well, they're saying about an hour, hour and 15  
9 minutes.

10 **DR. ZIEMER:** Okay.

11 **MS. HOMER:** Please be ready to pay --

12 **DR. ZIEMER:** So what -- what's the time to meet in the  
13 lobby, very speci--

14 **MS. HOMER:** Around 6:15, 6:30 --

15 **DR. ZIEMER:** Around? Exactly --

16 **MR. ELLIOTT:** Give it --

17 **MS. HOMER:** 6:20.

18 **DR. ZIEMER:** 6:20.

19 **MS. HOMER:** How's that? That'll give the bus five minutes.

20 **MR. ELLIOTT:** How about if you say this. The bus leaves at  
21 6:30.

22 **MS. HOMER:** There you go, the bus leaves at 6:30.

1 **MR. ELLIOTT:** Be there or --

2 **MS. HOMER:** Or miss the bus.

3 **MR. ELLIOTT:** -- miss the bus.

4 **MS. HOMER:** Since we've ordered lunches, for those that have  
5 ordered lunches, please be prepared to pay -- I believe  
6 it's \$6.95 -- to their guide. I'm not going to be  
7 collecting any cash, so --

8 **MR. PRESLEY:** And they do take -- that's all they do take is  
9 cash.

10 **MS. HOMER:** Is cash, so -- any questions?

11 **DR. ZIEMER:** It can be in quarters, if necessary.

12 **MS. HOMER:** Yeah.

13 **DR. ZIEMER:** Nickels, for the big spenders.

14 **MS. HOMER:** Period, they will confiscate them.

15 **MR. ELLIOTT:** Not on the bus.

16 **DR. ZIEMER:** What --

17 **MS. HOMER:** That tell -- he was -- David was asking if we  
18 could even bring anything on the bus, and we cannot.  
19 Leave everything in your room.

20 **DR. ZIEMER:** And by everything, you're talking about --

21 **MS. HOMER:** I'm talking about the electronics.

22 **DR. ZIEMER:** -- any cameras, any --

- 1 **MS. HOMER:** Yes.
- 2 **DR. ZIEMER:** -- electronic things.
- 3 **MS. HOMER:** Uh-huh.
- 4 **DR. ZIEMER:** Don't even bring them there.
- 5 **MS. HOMER:** That's right. They'll be confiscated.
- 6 **DR. ZIEMER:** Permanently.
- 7 **MS. HOMER:** No, they'll be given them back at the end of the  
8 tour when we arrive back at the hotel. That's --  
9 that's what I've been instructed.
- 10 **DR. ZIEMER:** Thank you.
- 11 **MS. HOMER:** Will that be it?
- 12 **DR. ZIEMER:** Any questions for Cori?
- 13 **MR. ELLIOTT:** When you turn your time in to me, keep in mind  
14 that the working group on the Board audit or the --  
15 Mark Griffon's working group has now completed its  
16 charge and as of yesterday I believe the working group  
17 on -- Dr. Melius's working group on evaluating the  
18 interview process had completed its charge, so working  
19 groups have a finite life and they have -- once they  
20 meet their charge, then we can't bill time against  
21 them.
- 22 **DR. ZIEMER:** But the time that they spent up till now --

1 **MR. ELLIOTT:** Yes, yes.

2 **DR. ZIEMER:** -- but don't come in two months or three months  
3 from now --

4 **MR. ELLIOTT:** Well, the point here is the working group on -  
5 - Mark Griffon's working group on DR evaluation  
6 essentially completed its charge last meeting, so  
7 between last meeting and this meeting there shouldn't  
8 have been any -- any effort for that.

9 **MS. HOMER:** Okay. Now did you want to discuss dates for a  
10 potential --

11 **DR. ZIEMER:** Yes, that's in fact the next item.

12 **MS. HOMER:** Okay.

13 **DR. ZIEMER:** Let me remind you that we have -- we are slated  
14 for the 5th and 6th of February, the meeting site being  
15 Augusta. And we may want to identify a contingency  
16 site in early to mid-January. This is -- we do require  
17 I think the presence of the Federal official, so we  
18 need as a front end -- I know that Larry's schedule I  
19 understand is pretty busy in January and so Larry, are  
20 there -- I think we start with you and I guess we also  
21 are required to have a Chair.

22 **MR. ELLIOTT:** I think so.

1 **DR. ZIEMER:** But my guess is that your schedule in January  
2 is probably tighter than mine. I have decided not to  
3 attend the Citrus Bowl game on January 1st where Purdue  
4 will play Georgia, and my only conflict right now is  
5 the 30th of January, so I'm okay. Where are you,  
6 Larry, on --

7 **MR. ELLIOTT:** January 12th, 13th and 14th I plan to be in  
8 Richland with the site profile team disseminating that  
9 bit of information out there in -- for the Hanford  
10 folks, so I'll be on travel then.

11 **DR. ANDERSON:** (Off microphone) Are you going to be there  
12 for the health effects subcommittee meeting, too?

13 **MR. ELLIOTT:** I hadn't planned on that, don't know anything  
14 about that, so...

15 **DR. ANDERSON:** 'Cause that's the 22nd and 23rd, I think.  
16 No, no, it's the 15th and 16th.

17 **MR. ELLIOTT:** No, I had -- I had not planned to participate  
18 in the health effects subcommittee.  
19 Then on the -- January 2nd of course would be not a good day.

20 **MS. HOMER:** No.

21 **MR. ELLIOTT:** That's coming back from the holiday. And the  
22 19th would not be a good day, either. That's a --

1           that's a holiday I'd kind of like to take this time.  
2           And then the -- looks like the 26th and 27th would not  
3           be good days.

4 **DR. ZIEMER:** Let's start with the week of the 5th then --

5 **MS. HOMER:** Dr. Ziemer, I have leave that week.

6 **DR. ZIEMER:** Okay, that takes care of that week. Let's look  
7           at the week of the 12th. So you're out the 12th, 13th,  
8           14th --

9 **MR. ELLIOTT:** And 14th.

10 **DR. ZIEMER:** -- and is the 15th a travel day also, then?

11 **MR. ELLIOTT:** No, I'll be coming back on the 14th.

12 **DR. ZIEMER:** We actually -- if we need a, quote, emergency  
13           meeting, we're talking about a one-day maximum, I  
14           think, so let -- let me ask about the 15th and 16th,  
15           are either of those days bad for anyone?

16 **DR. MELIUS:** 16th is a -- may be problematic for me. The  
17           15th works, though.

18 **MR. GRIFFON:** 15th is okay.

19 **DR. ZIEMER:** Okay, 15th is a possibility? Let's look at the  
20           next week, 19th?

21 **MS. HOMER:** No, somebody couldn't.

22 **DR. ZIEMER:** 19th is a holiday.

1 **DR. MELIUS:** Yeah, the week of the 19th I'm tied up all  
2 week.

3 **DR. ZIEMER:** Tied up all week. Others? And remember, we  
4 actually only need a quorum, but if possible, we'd like  
5 to get everybody there -- 20th through the 23rd are  
6 days then when we -- is there any -- are there more  
7 than one person not available on those days, and just  
8 make a note --

9 **MR. PRESLEY:** I can't be there the 22nd or the 23rd, but I  
10 can be there the 20th and the 21st.

11 **MR. ESPINOSA:** I'm out the 23rd.

12 **DR. ZIEMER:** Once we're beyond that, we're almost up to our  
13 other meeting, so there's no point in going further.

14 **DR. ANDERSON:** After the 19th, we might as well put it off.

15 **DR. ZIEMER:** Right. As -- there are possibilities, if  
16 necessary, 20 and 21, but it looks like perhaps the  
17 15th might be the day then. Should we go ahead and  
18 block that out? Is that too soon after you get back?

19 **MR. ELLIOTT:** Huh-uh, that's --

20 **DR. ZIEMER:** You're all right? Is that agreeable? That's  
21 kind of half-way between --

22 **MS. HOMER:** The 15th is fine for me.

1 DR. ZIEMER: It's fine for counsel or -- okay.

2 MS. MUNN: It's fine for me. I can fly back with Larry on  
3 the 14th.

4 DR. ZIEMER: Okay, then let's set aside Thursday the 15th as  
5 a special meeting, if needed.

6 MR. PRESLEY: Cincinnati?

7 DR. MELIUS: Are we talking Cincinnati?

8 MS. HOMER: I think that would be best.

9 DR. ZIEMER: Cincinnati's all right?

10 DR. MELIUS: Can we do it like 11:00 to 2:00 or something so  
11 people can fly in --

12 DR. ZIEMER: Fly in and fly out? Sure.

13 DR. MELIUS: -- day trip, I think it would also allow I  
14 think the --

15 MS. HOMER: Will that be enough time?

16 DR. MELIUS: -- west coast people to get back out.

17 DR. ZIEMER: 11:00 to 2:00 or 11:00 to 3:00?

18 MR. ELLIOTT: Yeah, we can do that.

19 MS. HOMER: Okay.

20 DR. MELIUS: And that would avoid the hotel issue, to some  
21 extent.

22 MS. HOMER: Yes.

1 **MS. MUNN:** Only to some extent.

2 **DR. MELIUS:** Where are we going to put --

3 **DR. ZIEMER:** Or it would minimize the --

4 **MS. HOMER:** The Westin.

5 **DR. ZIEMER:** -- overnights, right. And that would be at

6 NIOSH.

7 Okay, is that agreeable? Any objections?

8 (No responses)

9 **DR. ZIEMER:** Okay. So pencil that in. Does the Board wish

10 at this time to also look ahead into the March/April

11 time frame and set aside some dates?

12 **MS. HOMER:** We already have, Dr. Ziemer, for April.

13 **MR. PRESLEY:** I was going to say, we set aside --

14 **DR. ZIEMER:** That's right --

15 **MS. HOMER:** April in Richland.

16 **DR. ZIEMER:** Yes, we --

17 **MS. MUNN:** We have 20, 21, 22.

18 **DR. ZIEMER:** I see it, it's here. Actually we set aside 19

19 through 23, did we -- did we finalize the dates?

20 **MS. HOMER:** No, I haven't.

21 **DR. ZIEMER:** Okay. We sort of --

22 **MS. HOMER:** Yeah, just keep that week open and --

1 **DR. ZIEMER:** So that -- well, I think -- settling on it was  
2 going to be dependent on what you could find --

3 **MS. HOMER:** What was available, yes. Wanda and I are  
4 working on that right now.

5 **DR. ZIEMER:** Okay. So that basically takes us up to May.  
6 That covers the next six months then.

7 Question arose as to the possibility of a Savannah River  
8 Site tour. Bob, can you help us -- whether -- how that  
9 would be done? Is that something you can help with?

10 **MR. PRESLEY:** Yes. Yeah, the guy that used to be the head  
11 of Savannah River is now at Oak Ridge heading up DOE so  
12 if y'all want to go to Savannah River, I can call him  
13 when I get back and see about a tour, if that's -- if  
14 that's what everybody wants, that's up to y'all.

15 **DR. ZIEMER:** Are you okay on that, Ray? I wasn't sure it  
16 was -- okay.

17 Let me -- let's get a straw vote here. Board members, how  
18 many of you would like to tour the Savannah River Site,  
19 show of hands quickly.

20 **MR. PRESLEY:** Now it would have to be on Wednesday the 4th.  
21 The tour would have to be before the meeting because  
22 we're going to meet the 5th and 6th, so it would have

1 to be on a week day, the 4th.

2 DR. ZIEMER: Show of hands, Savannah River Site tour?

3 (Affirmative responses)

4 DR. ZIEMER: One, two, three, four, I would go if you had it

5 -- I've been there a few times, but you can never see

6 it all, actually.

7 MR. PRESLEY: How many?

8 DR. ZIEMER: Looks like five.

9 MR. PRESLEY: Six, sev-- how many people on the staff?

10 DR. ZIEMER: Looks like another five or so.

11 MR. PRESLEY: So we're talking about 10 to 12 people.

12 DR. ZIEMER: Again, this would be restricted. Right?

13 Spouses --

14 MR. PRESLEY: Yes, sir.

15 DR. ZIEMER: -- could not attend?

16 MR. PRESLEY: Don't know about spouses down there yet.

17 MS. MUNN: Nice boat trip.

18 DR. ZIEMER: You can check on that, perhaps.

19 MR. PRESLEY: Yes.

20 DR. ZIEMER: Okay. Okay, Cori?

21 MS. HOMER: Absolutely.

22 DR. MELIUS: Can I bring up one other issue regarding the

1 meetings? I think the suggestion was made yesterday in  
2 public comment period that we have availability  
3 sessions or, Larry, you want to call them a public  
4 comment session in the evening to accommodate people's  
5 work schedule and so forth, can that be arranged for I  
6 guess the next two meetings that are on the schedule?

7 **MS. MUNN:** That's rough. That's rough, Jim.

8 **DR. ZIEMER:** I would think it's sort of the Board's call if  
9 you want to meet in the evening, is it not? I mean --  
10 now we couldn't have done it here 'cause Dave Brenner  
11 probably wouldn't give up the auditorium. But if we  
12 can find a spot...

13 **MS. MUNN:** Well --

14 **DR. ZIEMER:** Do the Board members object? And we could  
15 adjust the meetings so that we didn't go all day and  
16 all evening, if you wanted to do that.

17 **MR. ELLIOTT:** We may be -- I'd like to hear the sense of the  
18 Board, but we may -- as you think about this, we may be  
19 limited in our ability for space. Once we -- we have  
20 to contract this with --

21 **DR. ZIEMER:** With the hotel.

22 **MR. ELLIOTT:** -- with the hotel, and given their

1 availability...

2 **DR. ZIEMER:** We could look into that. Also during the  
3 public comment period today, if any of those who  
4 comment from the public might provide the Board their  
5 views on whether you think this would be valuable for  
6 members of the public to be able to attend in an  
7 evening session as opposed to during the day, why we'd  
8 be glad to solicit that input, too. We heard from a  
9 speaker yesterday that suggested that that might be a  
10 useful thing.

11 There was one other thing suggested yesterday that had to do  
12 with making known -- outside of the perhaps the  
13 official routes of publishing in the *Federal Register* -  
14 - to local people the presence of this Board. For  
15 example, it appears that there's not a crowd of Nevada  
16 people here at this meeting. And one would say well,  
17 what was the advantage then of coming to Nevada if in  
18 fact no one from this area attends? And one of the  
19 issues is how well do the -- particularly the potential  
20 claimants and workers in the area know that we really  
21 are here, so we need to be thinking perhaps about how -  
22 - are there some other channels to develop that

1 information besides the official channels that are  
2 being used in the *Federal Register*, and I know there's  
3 a big e-mail list that -- and so on.  
4 Now obviously we can't drag people in off -- well, we could  
5 drag people in off the street, but -- but at least make  
6 sure that certain people know. I mean I -- they may  
7 not come anyway, but -- can we think about how that  
8 might -- I don't know if you've had a chance since  
9 yesterday and maybe the staff --

10 **MS. HOMER:** Dr. Ziemer --

11 **DR. ZIEMER:** -- can think about ways that might be utilized  
12 --

13 **MS. HOMER:** -- if I may... previous experience with other  
14 committees, and there have been other methods used to  
15 announce meetings. For example, a meeting announcement  
16 might be prepared and distributed to -- to various news  
17 agencies or newspapers, TV stations, things of that  
18 nature. I'm not sure exactly how we might go about  
19 doing that, but it's certainly been done in the past.  
20 I would have to also check into what our options might  
21 be in other areas, what -- what methods are being  
22 pursued by other committees right now.

1 **DR. ZIEMER:** We had a nice turnout in St. Louis, but I think  
2 you'd have to say that that's largely due to the work -  
3 - the effort of the local person. Denise made special  
4 efforts to get people out. Maybe there are folks at  
5 other sites that might be key contact persons that  
6 might be helpful. I don't know if others have some  
7 ideas that might help here that --

8 **DR. MELIUS:** Can I just comment -- point out that -- not  
9 necessarily through any fault of NIOSH staff, but this  
10 hotel's had an active picket line up for the last six  
11 months by the building trades and therefore I don't  
12 think anybody from the building trades, which are most  
13 of the people we're talking about Nevada Test Site  
14 would come into this hotel to appear, and that's a  
15 major -- a major issue.

16 **DR. ZIEMER:** Right. So is there some mechanism for  
17 identifying those kind of issues in advance? I'm not -  
18 -

19 **MS. HOMER:** Well, when I contact the hotels to make  
20 arrangements in the future, I can always ask them if  
21 they are a unionized hotel or if there are any other  
22 union issues that I need to be aware of. But I have to

1       rely on the information that they provide me with.

2 **DR. ZIEMER:** Okay, thank you.

3 **DR. MELIUS:** I've had discussion with Larry. I think we can  
4       provide some additional information. You just happened  
5       to pick the one non-union hotel left in Las Vegas, at  
6       least near the strip, so -- probably why it was  
7       available.

8 **MS. HOMER:** Well, I wasn't aware.

9 **DR. ZIEMER:** Okay. Now any other general comments,  
10       housekeeping nature, any other items we need to  
11       address? Wanda? Thank you.

12 **MS. MUNN:** I guess one thing I would request in our efforts  
13       to better inform the public of our meetings, it would  
14       be most helpful I think if in our meeting announcements  
15       we mention what we do so that people do not have the  
16       mistaken notion that we are an adjudicating body or  
17       that we hear individual claims, because I think it's  
18       misleading for people to think they may have an  
19       opportunity to be speaking to people who will have a  
20       bearing on how their claim is viewed, when our  
21       responsibility is one of process, not of individual  
22       claims. It would be very nice to have more public

1 attention to what we are doing, but at the same time I  
2 don't think it's fair if we don't make it very clear to  
3 them what it is we are doing.

4 **DR. ZIEMER:** A good point. On the other hand, we need to  
5 recognize that the process is within the framework of  
6 the individual claims, and sometimes a knowledge of  
7 what's happened in individual claims cases helps us  
8 understand where the process may or may not be working.

9 **MS. MUNN:** This is true, no question.

10 **DR. ZIEMER:** I think we all recognize that when we hear  
11 people relating particular stories, that we are not in  
12 a position to act on that particular case, but we may  
13 in the process learn something either about the site,  
14 about how claims are being handled and processed. So  
15 in that sense, I wouldn't want to discourage people who  
16 wish to come to the Board with -- and I think most of  
17 those who would come to talk to us, with some  
18 exceptions, general public individuals, truly in the  
19 general public, are people who have claims or are  
20 either directly or on behalf of a relative, and who may  
21 have concerns that they think that might help us in the  
22 process. So in that sense, we don't want to discourage

1           that.

2 **MS. MUNN:** No, that wasn't my intent. No. No.

3 **DR. ZIEMER:** Right. Yes, Henry.

4 **DR. ANDERSON:** I mean one -- one thing that might help is if  
5           we were to put out and say we're very interested in  
6           hearing about people's experiences with the process and  
7           their -- you know, the interviews and -- and paperwork.

8           I mean we heard about paperwork, but that might be the  
9           kind of thing to -- 'cause I would assume the people  
10          who are interested in coming are those that have filed  
11          claims and they want to indicate when they submitted it  
12          and how it's been processed. And I think feedback to  
13          us as to how --

14 **DR. ZIEMER:** Yeah.

15 **DR. ANDERSON:** -- how --

16 **DR. ZIEMER:** And that's the --

17 **DR. ANDERSON:** -- even though it's going to be a biased  
18          sample, I think it is helpful to get a sense of what  
19          their perception is and things like that.

20 **DR. ZIEMER:** Yes. Other comments or input on that or other  
21          related... And I think, Board members, if any of you  
22          have particular ideas on -- or can identify individuals

1 or groups that might be useful to contact at a given  
2 location, I'm sure the staff would welcome that. It's  
3 -- sometimes it's just a matter -- we can provide the  
4 information, but who do we send it to? So if we can  
5 help identify those, that would be useful. I assume  
6 that's the case, Larry?

7 **MR. ELLIOTT:** Yes, absolutely.

8 **DR. MELIUS:** And if it would -- helpful, at least for me,  
9 Cori, if you would let us know as soon as possible  
10 about the availability of a room for the evening,  
11 'cause that makes some difference in terms of how you  
12 outreach to people.

13 **MS. HOMER:** Well, normally the room is available on 24-hour  
14 hold by contract. That's how I always set it up. The  
15 -- having an evening session will also have to be  
16 announced in the *Federal Register*.

17 **DR. MELIUS:** Right.

18 **MS. HOMER:** So that will have to be identified ahead of  
19 time, as well. I don't foresee that there'll be any  
20 problem having an evening session, as long as we know  
21 about it in advance and can announce it.

22 **DR. ZIEMER:** And in fact an evening session could be simply

1 a time devoted for public comment, if necessary. We  
2 don't have to conduct other business necessarily.  
3 Okay, are there any other items dealing with the Board work  
4 schedule or administrative that need to be addressed at  
5 this time?

6 **DR. MELIUS:** I have one follow-up to yesterday 'cause I'm  
7 not sure what the -- what the plan is. There was the  
8 Congressional letter from Quinn, Slaughter and Reynolds  
9 to the Advisory Board and --

10 **DR. ZIEMER:** Right, and that letter was addressed to me. As  
11 I indicated, I did study it on the plane coming out  
12 here. I want to discuss with the Department and  
13 perhaps with legal counsel -- some of the things  
14 suggested in the letter appear to me to be well  
15 outside the charter of this committee, but I need to  
16 identify that and I need to prepare a response to -- to  
17 those Senators.

18 **DR. MELIUS:** Actually Congressmen, but --

19 **DR. ZIEMER:** Yeah, they were -- three Congressmen, I'm  
20 sorry. That's quite correct.

21 **DR. MELIUS:** Can that be shared with the committee then so  
22 we --

1 DR. ZIEMER: I'd be glad to do --

2 DR. MELIUS: -- can understand what's going --

3 DR. ZIEMER: I'd be glad to do that, and I think the  
4 committee has received copies of that, so you can --  
5 you can reflect back to me if you have particular  
6 comments to me on that. But I will prepare a letter  
7 and that will be made available.

8 **BOARD DISCUSSION/WORKING SESSION**

9 The next item on our agenda is further time for discussion  
10 and working session. I think we completed all the  
11 items before us. Is there any other item that needs  
12 discussion at this time? 'Cause if there is not, I'm  
13 going to suggest that we go ahead with public comment,  
14 but --

15 DR. MELIUS: Could we talk a little bit about the agenda for  
16 the next meeting then?

17 DR. ZIEMER: We could certainly talk about agenda. That  
18 would be quite in order.

19 DR. MELIUS: And I --

20 DR. ZIEMER: In fact -- yeah, let's kick that off. There's  
21 another workgroup that you're involved with, Jim, and  
22 maybe you could suggest --

1 **DR. MELIUS:** I'd say the research group should have a report  
2 at the next meeting. I think Henry and I will figure  
3 out our schedules finally and maybe on Christmas Day  
4 we'll both be home in the office and do that, so  
5 research group's --

6 **MR. ELLIOTT:** (Inaudible) Russ?

7 **DR. MELIUS:** Russ, yeah.

8 **DR. ZIEMER:** So the research subcommittee -- certainly be on  
9 that agenda.

10 **DR. MELIUS:** I had suggested yesterday that -- requested  
11 that Jim Neton or someone give us a presentation on how  
12 the site profiles are being used in the individual dose  
13 reconstructions, just to walk us through some of that.  
14 I think that -- that would --

15 **DR. ZIEMER:** Sounds good.

16 **DR. MELIUS:** At least for me that would be helpful. I don't  
17 know if others...

18 **MS. MUNN:** Yes, I agree.

19 **MR. ELLIOTT:** I'm assuming there you would like to see  
20 examples of dose reconstruction conducted under the  
21 site-wide document, under site-specific type documents  
22 with --

1 DR. ZIEMER: Maybe both.

2 MR. ELLIOTT: I'm sure both --

3 DR. MELIUS: Both, both, yeah, yeah.

4 MR. ELLIOTT: -- and see kind of a sampling of those.

5 DR. MELIUS: A sampling of those, but I think -- I'm going  
6 to leave it up to your discretion, but it would be I  
7 think helpful to look at -- particularly on a -- what I  
8 call a complex site, like Savannah River, how that's  
9 being used, and then some of the others, with then  
10 examples, you know, appropriately masked and so forth  
11 from, you know, individuals and what's being done.

12 MR. ELLIOTT: Okay.

13 DR. ZIEMER: Okay, good. Other agenda items that anyone  
14 wishes to identify at this time for that meeting?

15 DR. MELIUS: Can we work on -- between now and -- some sort  
16 of way of getting moving forward on this possible  
17 subcommittee issue, how to --

18 DR. ZIEMER: The answer is -- the answer is yes, and I think  
19 I'll -- I'll commit -- and Mark and I have done some --

20 DR. MELIUS: Okay, yeah --

21 DR. ZIEMER: -- some work on that and -- and we'll prepare a  
22 -- I think a straw man document for us. I've also

1 asked Cori to provide me with the details on exactly  
2 what it takes to set up a subcommittee in terms of the  
3 structure and the ground rules.

4 **DR. MELIUS:** Yeah.

5 **DR. ZIEMER:** So we'll provide all of that.

6 **DR. MELIUS:** Good.

7 **DR. ZIEMER:** So --

8 **MR. ELLIOTT:** That could be held under a general agenda item  
9 of -- like we have Board discussion and working  
10 session, so I won't -- I'll just leave it at that.

11 **DR. ZIEMER:** But make sure -- well, we need to make sure  
12 that that's earmarked --

13 **MR. ELLIOTT:** You want a specific agenda item earmarked for  
14 that?

15 **DR. ZIEMER:** Let's earmark it so it doesn't fall between the  
16 cracks.

17 **MR. ELLIOTT:** So that's --

18 **DR. ZIEMER:** That will remind us --

19 **MR. ELLIOTT:** -- a discussion on subcommittee...

20 **DR. ZIEMER:** This'll be a -- for lack of an exact title  
21 right now -- subcommittee on dose reconstruction.  
22 Actually it's broader than that, but --

1 **DR. MELIUS:** Yeah.

2 **MR. ELLIOTT:** Next meeting --

3 **DR. ZIEMER:** Subcommittee on dose reconstruction reviews.

4 **MR. ELLIOTT:** At some point in time in the near future,  
5 probably your next meeting, you're going to have to  
6 identify, from the pool of completed cases, those that  
7 meet your -- your sample --

8 **DR. ZIEMER:** Right.

9 **MR. ELLIOTT:** -- for assignment.

10 **DR. ZIEMER:** Right.

11 **MR. GRIFFON:** I'm not sure I...

12 **DR. ZIEMER:** Question?

13 **MR. GRIFFON:** I mean -- yeah, yeah, we -- there's -- there's  
14 quite a few things we probably need to do or the  
15 subcommittee needs to do. I don't know that the  
16 individual reviews, if there's a large enough pool to  
17 sample a lot from right now, but -- but there's also  
18 site profile things and -- and other things we can get  
19 rolling on.

20 **DR. MELIUS:** My recollection is that Pete Turcic is supposed  
21 to talk next time and -- about the outreach that  
22 they're doing?

1 **MR. ELLIOTT:** That is correct, he's made that commitment.

2 **DR. MELIUS:** Okay. Would it -- would a presentation from  
3 NIOSH on your outreach sort of complement that and --  
4 is that -- does that make -- make sense as a --

5 **DR. ZIEMER:** Put outreach on the budget (sic). Pete will be  
6 there representing Labor, and if there's some  
7 complementary things that NIOSH could say -- okay,  
8 here's what we're doing that complements what Labor is  
9 doing, it would be useful.

10 Any other items?

11 (No responses)

12 If in the interim something jumps into your mind that you  
13 think we ought to place on the agenda, you can let  
14 Larry know or you can let me know, because we'll  
15 develop the agenda jointly and -- and then you'll have  
16 another opportunity to see the draft agenda. It can  
17 always be modified.

18 **DR. MELIUS:** Maybe Ted Katz can present the final SEC regs  
19 to -- next time.

20 **DR. ZIEMER:** Am I not correct that the -- well, I won't ask  
21 the question.

22 **DR. ANDERSON:** That was rhetorical.

1 DR. ZIEMER: Yeah.

2 MR. GRIFFON: Paul, is there a possibility of -- since by  
3 next meeting we're -- all Board members are going to  
4 have a copy of the IMBA software, could we have a  
5 training session at night? This doesn't have to be on  
6 Board time or whatever, but is it possible to arrange -  
7 -

8 MR. ELLIOTT: Like we did for NOCTAS?

9 MR. GRIFFON: Yeah, yeah, like a training session.

10 DR. ZIEMER: Well, one of the questions will be can you have  
11 a training session at the location of that meeting, and  
12 that -- it might be that the training session would  
13 more easily be done at the special meeting in  
14 Cincinnati.

15 MR. GRIFFON: Yeah, that's true.

16 DR. ZIEMER: So we might -- we might, if it's possible at  
17 that time, have some of the Board members -- 'cause we  
18 can't -- we're not going to do it all at once as a full  
19 Board, but training sessions for individuals who might  
20 be available prior or after that meeting, as a  
21 possibility. They can -- they can look into it and let  
22 us know.

1 **MR. ELLIOTT:** I would offer this. At any point in time a  
2 Board member's traveling through Cincinnati and they  
3 want to stop by, they want to have an afternoon  
4 available to them, we'll give you some training.  
5 Right, David?

6 **MR. SUNDIN:** I think I've been volunteered.

7 **DR. ZIEMER:** Provided somebody's there to train us. Thank  
8 you.

9 **PUBLIC COMMENT PERIOD**

10 We're a little early for the public comment period, but if  
11 the commenters are here -- and I think they are -- and  
12 are willing to proceed, first Denise Brock is here from  
13 the St. Louis area. And Denise, welcome and please  
14 bring us your comments.

15 **MS. BROCK:** Hi, I'm Denise Brock, for the record. I have  
16 several questions today, as usual, and some comments  
17 I'd like to raise with the Board.

18 First of all, I would again like to say thank you for coming  
19 to St. Louis. We really appreciated that.

20 We've had a chance to look at the TBD for the Destrehan  
21 Street site, it's been a little bit of time since  
22 you've been there, and I would also like to know if

1 there has been any further discussion with the Board  
2 about coming back to St. Louis to address that with the  
3 claimants. Perhaps we could get a bigger meeting place  
4 and maybe more of a crowd this time and have time for  
5 Q&A?

6 **MR. ELLIOTT:** The Board has not had that discussion, but at  
7 NIOSH there has been a discussion and a -- a plan of --  
8 being developed to go around and, as we've done at  
9 Savannah River Site last month, as we're getting ready  
10 to do at Hanford next -- next month. I can't say today  
11 where we're at with regard to the schedule of -- of  
12 those site visits, but yes, we do intend to come back  
13 to St. Louis and -- and talk about Mallinckrodt.

14 **MS. BROCK:** Wonderful. If -- if there would perhaps be any  
15 scheduling conflicts in the near future, if you would  
16 consider coming to St. Louis, I would be more than  
17 happy to -- to do whatever I could to help you draw in  
18 a crowd. I don't have a problem doing that, usually.

19 **MR. ELLIOTT:** We will certainly be contacting you, Denise.

20 **MS. BROCK:** Thank you, Larry. I also understand that there  
21 have been some more Mallinckrodt Chemical worker  
22 records that have surfaced in Georgia. Are you aware

1 of that or is that something -- I understood that it  
2 was just something that happened rather recently and  
3 that DOE managed to get ahold of those. Are you aware  
4 of that?

5 **DR. ZIEMER:** We'll ask Richard Toohy if he can respond to  
6 that question.

7 **DR. TOOHEY:** I'm not aware of DOE coming up with anything,  
8 but on one of our data capture trips to the Atlanta  
9 National Archives or Federal Record Center, whatever it  
10 is, as we routinely go searching through boxes looking  
11 for such, we did find some more files on Mallinckrodt.  
12 But I honestly don't know what they contained, but  
13 they -- they are certainly being reviewed, analyzed and  
14 would be incorporated into the Technical Basis Document  
15 if there was anything in there that we didn't already  
16 know.

17 **MR. ELLIOTT:** We're not aware of anything that DOE has  
18 provided on Mallinckrodt at this point, so --

19 **MS. BROCK:** And perhaps --

20 **MR. ELLIOTT:** -- the discovery's been at -- at the benefit  
21 of our labor and ORAU's labor.

22 **DR. ZIEMER:** Give credit where credit is due here.

1 **MS. BROCK:** And perhaps that's right, maybe that was a  
2 misunderstanding on my part. If I understand  
3 correctly, could that possibly be then internal -- or  
4 actual individual data on people or -- or site  
5 information or both, or you just --

6 **DR. TOOHEY:** I don't know.

7 **MS. BROCK:** You don't know, that's quite all right.

8 **DR. ZIEMER:** I'm sure as that becomes available, it will be  
9 incorporated --

10 **MS. BROCK:** It will be added to the TBD then as we -- we go  
11 forward. Thank you.

12 And in reference to the Weldon Spring and Hematite  
13 facilities, claimants have noticed and commented on the  
14 fact that in NIOSH or ORAU correspondence that neither  
15 are listed as up and coming site profiles. Is there an  
16 expected time line on either one of those? And if so,  
17 could you give me an idea of that that is? And we're  
18 also somewhat curious, because they are all  
19 Mallinckrodt facilities -- I understand that obviously  
20 they were different materials that they were working  
21 with, but I'm a bit perplexed as to why they don't all  
22 get grouped into one, why the TBDs for that one

1 facility are not all done at once.

2 **DR. TOOHEY:** Dick Toohey, ORAU, for the record. Okay, good  
3 questions. The -- we did, as a result of the St. Louis  
4 meeting, move Weldon Springs up on the list for site  
5 profile production, and we expect to be starting on  
6 that shortly after the first of the year.

7 The other one, the Hematite facility, I -- I don't think  
8 that's on the drawing board. Unfor-- I don't have the  
9 list with me, unfortunately, but as always, we try to  
10 be responsive to the Board or -- or the public's  
11 interest and we can certainly move that up, and  
12 especially since, as you mentioned, sites did much the  
13 same thing, it should not be too hard to do.

14 **DR. ZIEMER:** Thank you.

15 **MS. BROCK:** And that brings me to my next question or  
16 comment, and I think Dr. Toohey -- yeah, just stay; I'm  
17 sorry -- Dr. Toohey and I had spoke about this earlier.

18 I've had several situations in where claimants are  
19 coming to me with a problem. A lot of times these  
20 workers worked not just at one facility, but perhaps  
21 two or even sometimes three. And the problem arises --  
22 first of all, when perhaps there's a miscommunication

1        somehow or the records are missing, just -- perhaps as  
2        Mrs. Ehlmann spoke yesterday, her husband had worked at  
3        two facilities and for some reason, even within the  
4        same Department, she's getting different stories. And  
5        that causes a situation where perhaps if a worker was  
6        at the downtown St. Louis site and they are being dose  
7        reconstructed as we speak, perhaps that person could be  
8        dose reconstructed and compensable before having to  
9        wait for further TBDs to even be completed and so I was  
10       hoping that perhaps ORAU could take a look at any of  
11       the workers or claimants that have worked at more than  
12       one facility. And if in fact they were at the downtown  
13       site, could they be dose reconstructed just to see if  
14       they meet that compensability?

15 **DR. ZIEMER:** Dr. Toohey?

16 **DR. TOOHEY:** Simple answer: Yes.

17 **DR. ZIEMER:** Thank you.

18 **MS. BROCK:** And for the record, I wanted to know if all of  
19       the phone interviews in the dose reconstruction for the  
20       Destrehan employees -- and that is just for the  
21       employees that worked at Destrehan or the St. Louis  
22       site -- are those -- are those all completed?

1 **DR. TOOHEY:** I wouldn't say they've all been completed, but  
2 as far as I know, all the ones have been completed  
3 where the -- we feel the files are ready to move into  
4 dose reconstruction. Some of them where people had  
5 worked both downtown and also Weldon Springs we kind of  
6 put on hold because we didn't have the Weldon Springs  
7 site profile done. Others, as we reviewed the files,  
8 we find some inconsistency or other problem, say the  
9 ICD-9 code doesn't match the cancer diagnosis or the --  
10 the employment dates seem to be inconsistent or  
11 something like that, and we look at those and try to  
12 get that corrected before we actually queue them up for  
13 interview and dose reconstruction.

14 **DR. ZIEMER:** Thank you. Further questions or comments,  
15 Denise?

16 **MS. BROCK:** Sorry, just a few more. And actually I don't --  
17 I don't think any more for Dr. Toohy. One thing that  
18 I noticed, and maybe I didn't correctly understand what  
19 I read, but I noticed that on the Technical Basis  
20 Document or actually on a dose reconstruction, I guess  
21 -- it's what it was, it was a dose reconstruction, the  
22 Dupree-Ellis -- Elizabeth Dupree-Ellis was cited, and

1 that just alarms me for the simple reason -- I guess  
2 this is a comment -- that she completely excluded  
3 internal dose, and I felt like she grossly  
4 underestimated things. I just wanted to make that  
5 comment.

6 And I don't know if I can do this. I wanted to ask a  
7 question of Dr. John -- is it Moreau?

8 **UNIDENTIFIED:** Mauro.

9 **MS. BROCK:** Mauro? And I don't know -- can I ask it? I  
10 guess you won't necessarily be able to --

11 **DR. ZIEMER:** Depends on the question.

12 **MS. BROCK:** Okay, can I say it to the Board, say yea or nay,  
13 either one?

14 In reference to off-site exposure, Hematite, Weldon Spring  
15 and St. Louis I understand had a lot of residual  
16 radioactivity or ground water problems, air problems,  
17 things such as that. And I was curious if a member of  
18 the public could request Sanford Cohen & Associates to  
19 look into that? Like there's a situation in Hematite  
20 where there's residual radiation. The Department of  
21 Energy doesn't want the responsibility to clean this up  
22 because they're saying there was a problem with nuclear

1 subs. Everybody passes the buck and so nobody wants to  
2 clean up this mess. And I'm wondering how that can be  
3 addressed or how would I go about that and if that's  
4 something that they're able to handle.

5 **DR. ZIEMER:** It seems to -- it seems to me that in terms of  
6 their role with the Board that that could certainly be  
7 inappropriate, but that's something the legal folks  
8 would have to address.

9 **MR. ELLIOTT:** As a member of the public, you're -- the  
10 contract with Sanford Cohen & Associates is with the  
11 Board as a government entity, and they're given a  
12 specific charge, a specific scope of work that they're  
13 proposing against. And what you're asking for is not  
14 included in that scope.

15 **MS. BROCK:** So find other health physicists. Right?  
16 Basically.

17 **MR. ELLIOTT:** And you'd have to have the money to support  
18 that -- that effort.

19 **MS. BROCK:** Right, or maybe attorneys would, I'm assuming,  
20 because I think that's what a situation was in another  
21 area, too.

22 Let's see. And another comment was, in reference to dose

1 reconstruction, in or with the absence of datas (sic),  
2 I understand that there is to be the surrogate coworker  
3 data and the use of site profiles are extrapolation.  
4 My concern is, again, how do you know that these datas  
5 are -- you're using are not -- are even accurate?  
6 There is a distinct probability -- at least in the case  
7 of Mallinckrodt -- that there was altering or coverup  
8 of datas or numbers, if you will. And again, back to  
9 those badges, I -- I understand that somebody was  
10 referencing to badges; I think that was Dr. John -- I'm  
11 sorry, Morau, Moreau --

12 **UNIDENTIFIED:** (Inaudible)

13 **MS. BROCK:** -- yeah, okay, Mauro, and I -- I've heard  
14 repeatedly from workers that these badges were useless,  
15 and it just is a grave concern of mine that when  
16 somebody's looking at a badge and you have two workers  
17 working side by side and one comes -- comes up red hot  
18 and the other comes up with a big fat nothing, and when  
19 you go in there to try to dose reconstruct these people  
20 and that badge is coming up with no reading, that is a  
21 big concern to me and I'm really afraid that when you  
22 use those sort of readings, I don't know how you can be

1 so sure that the datas are accurate, and I guess that's  
2 my comment. Thank you.

3 **DR. ZIEMER:** Thank you, Denise. Let me ask if any Board  
4 members have questions. Yes, Jim?

5 **DR. MELIUS:** I have a follow-up question -- I think it's for  
6 Dick -- but based on what Denise asked, though. But is  
7 the -- for the site profiles, is there a schedule of  
8 those site profiles, a sort of a listing --

9 **DR. TOOHEY:** Yes.

10 **DR. MELIUS:** -- on the web site with an estimated --

11 **DR. TOOHEY:** It's not on the web site, but we supplied it to  
12 NIOSH, so I --

13 **DR. MELIUS:** Would it be possible to put on --

14 **DR. TOOHEY:** -- could get it --

15 **DR. MELIUS:** -- my -- I guess my question is would it be  
16 possible to put that on the web site so that people  
17 would, you know, have a way of knowing sort of what the  
18 schedule is and -- and you know, possi-- it doesn't --  
19 doesn't have to be, you know, exact, but estimated  
20 spring of whatever, something like that or --

21 **MR. ELLIOTT:** We'll --

22 **DR. MELIUS:** -- (Inaudible) subparts are.

1 **MR. ELLIOTT:** We'll consider that. I can't give a guarantee  
2 today, but we'll consider that. This is a -- this is a  
3 plan that's being reviewed and evaluated right now for  
4 its feasibility and its realisticness -- if that's a  
5 word -- realism, I guess -- can we achieve it, so we're  
6 working toward that.

7 **DR. MELIUS:** No, and I think if it -- once it's -- the plan  
8 is finalized, that's the point I think it might be  
9 helpful for the public to be able to see, you know,  
10 what you're -- you're planning on doing before it gets  
11 all...

12 **DR. TOOHEY:** Can I make another comment, possibly partial  
13 answer to Denise's last one on accuracy of coworker  
14 data or badge readings or anything? I would just like  
15 to mention -- don't forget, every dose reconstruction  
16 we do contains an estimate of the uncertainty in that  
17 value. And many times that uncertainty can be very  
18 large. And then that gets run through the IREP program  
19 in the uncertainty on the probability of causation.  
20 And since we're at the 99 percent confidence interval  
21 for the decision criteria, a lot of the errors or  
22 inaccuracy in the point estimates that we get in the

1 workers are accounted for by including the uncertainty  
2 in those values.

3 **DR. ZIEMER:** And many people don't realize that in most  
4 cases, larger uncertainties help the claimant because  
5 it spreads that distribution out more. It's one of the  
6 exercises I have my students do. They -- I give them  
7 some hypothetical problems to solve with IREP and to  
8 look at the effect of uncertainty on the award or on  
9 the probability of causation. Generally it tends to  
10 favor the claimant, the more uncertain that information  
11 is.

12 Our next speaker from the public is Richard Miller.

13 Richard, welcome. Richard's with the Government  
14 Accountability Project.

15 **MR. MILLER:** Richard Miller, for the record. Good morning.

16 I guess with respect to the schedule and agenda, I'd  
17 like to offer a plea for you to enjoy the lake effect  
18 off of Buffalo at some point. I think that there's  
19 enough interest in what's going on in western New York  
20 that I know there's probably going to be some other  
21 efforts to communicate with people up there. But there  
22 seems to be an awful lot of interest in the work of

1 NIOSH and the Advisory Board, and I think --  
2 notwithstanding the delightful climate there, I think  
3 that might be worth looking at as a potential future  
4 location. There's certainly plenty of people I think  
5 would be happy to cooperate with the Board and NIOSH  
6 and in having either evening sessions or outreach  
7 activity to ensure a full and robust participation,  
8 given that it has one of the largest concentrations of  
9 facilities in the country.

10 Second suggestion is -- is -- well, let me just -- as a  
11 footnote to that, I think it would be helpful to have  
12 some discussion about whether and if the Board or what  
13 policy the Board will address if people want to get a  
14 site profile reviewed. You -- Dr. Melius raised one  
15 letter that just came in from three members of  
16 Congress, and Dr. Ziemer said something to the effect  
17 of well, these are legal issues and I'll respond. But  
18 I -- I think there's a broader question here, which is  
19 you've got -- as you develop these site profiles and in  
20 those sites where there's some, you know, concentrated  
21 community interest -- certainly like St. Louis -- it  
22 wouldn't surprise me if you'll see more than one of

1 these come forward because the audit process is in fact  
2 the only check and balance on this program in -- in --  
3 within the program's boundaries itself. I mean there's  
4 other checks and balances in government, but this is  
5 the -- the design of the program. And so, you know, I  
6 was sort of looking at -- at John Mauro's presentation  
7 and there was -- I saw there was like ten to 12, you  
8 know, DOE sites and four -- two to four AWEs, I'm  
9 thinking two to four AWEs, hmmm, well, what happens if  
10 you get six letters from six Congressional areas, you  
11 know, or districts or facilities wanting you to do site  
12 profile reviews? What do you say to them? Too busy,  
13 come back next year? Legally we can't take your  
14 request? I mean I don't know what the answer's going  
15 to be, but it seems to me there's -- there's probably  
16 an opportunity here for some -- for some policy  
17 development about what the Board takes in in terms of  
18 these kinds of inputs and then how do they get resolved  
19 and addressed -- or prioritized, for that matter? I  
20 mean you could spend all your time looking at uranium  
21 facilities and -- and miss Hanford and Savannah River  
22 in your site profile reviews, and so part of it may be

1 an allocation of resource issues. But I think that --  
2 but on the other hand, I think there's this intense  
3 public interest and obviously Congress is an important  
4 stakeholder in all of this -- this program, as well.  
5 And I just -- I just think that given, you know, this -  
6 - this -- the program is now ripening to the point  
7 where the audit function's going to start to take on,  
8 you know, flesh and bones and a real activity, that it  
9 would be very helpful -- 'cause I don't think this is  
10 something that ought to be dressed simply as a legal  
11 question. I think it's a policy question at large, so  
12 that's just my suggestion to the Board. You all think  
13 about how you want to address that. I have my own  
14 thoughts on that, but I don't know that this is the  
15 time to do it.

16 The third question is -- has to do with Blockson Chemical.

17 This is now the third time I've raised Blockson  
18 Chemical and I know that NIOSH and the Secretary of  
19 Health and Human Services haven't asked for the Board's  
20 opinion on Blockson Chemical, but I'm going to see if I  
21 can't spur you all to kind of stick your nose into this  
22 a little bit, 'cause it's a really interesting what I

1 think is policy question. Again, I don't think it's a  
2 legal question alone. And that has to do with whether  
3 or not you include, and how much of this chain of  
4 production you include, of radon exposure at these  
5 uranium phosphate facilities that were used for -- I  
6 mean -- I mean rock phosphate facilities that were used  
7 for uranium extraction.

8 And the -- the -- oh, dear, I apologize. And I guess the  
9 thing that -- the thing that is interesting is --  
10 excuse me, I thought I turned that off -- that's  
11 somebody else's. I don't know.

12 That -- the Blockson Chemical issue -- I don't know, has  
13 anybody had a chance or -- just to the extent you have  
14 had a chance to look at the Blockson Chemical report,  
15 you'll see in there there's a section on radon which  
16 says reserved, so -- and -- and claimants have been in  
17 touch with me and I've had the pleasure of chatting  
18 with a number of people in the Joliet, Illinois area  
19 who have received their dose reconstruction reports.  
20 They have not been sent to DOL for adjudication.  
21 They're being held in abeyance at this point. And the  
22 question is, where along the food chain of this -- of

1 the intake of the rock phosphate through to the  
2 production of phosphoric acid and through the various  
3 precipitating processes and oxidation processes and  
4 through to the final uranium process and -- and so  
5 forth, do you or do you not include radon exposure?  
6 And I am aware that there are a variety and a diverse  
7 set of views because just like Gaul, this program is  
8 divided into three Federal agencies and -- and here I  
9 think each of the agencies may even have their own  
10 views on this subject. But it is as much a policy call  
11 about where you draw the boundaries around what  
12 constitutes attributable radiation exposure for  
13 purposes of this program as it is whatever some lawyers  
14 decide to concoct. And the reason I say that is,  
15 having had a chance to review the contract between the  
16 Atomic Energy Commission and Blockson Chemical, they  
17 purchased it by the pound. And so they wound up with a  
18 purchase of all of the inputs from the raw phos-- rock  
19 phosphate coming in from Florida all the way through  
20 until the uranium was extracted. And so the economic  
21 transaction would argue for a broad encompassing  
22 approach to including the radon exposure. And there

1 are other ways of slicing this would say but wait a  
2 minute, that rock phosphate also came in and was used  
3 to make trisodium phosphate, Tide detergent, and should  
4 the program be compensating people for making Tide.  
5 Right? I mean you could -- you could make that  
6 argument.

7 And on the other perspective, one could say well, maybe  
8 there's a middle ground to be carved out here and --  
9 and we can find some sort of discrete spot to carve it  
10 out because this was a multi-purpose facility. You  
11 could also argue that this facility's economic life was  
12 substantially extended and bolstered because they ma--  
13 they did this uranium extraction, and it was a very  
14 lucrative contract for Blockson Chemical. And -- and  
15 but for this contract existed, that facility existed in  
16 -- in economically turbulent times when the fertilizer  
17 industry was definitely on the bottom of the commodity  
18 cycle. So there's a lot of ways to debate this  
19 question. I'm not here to present every single one of  
20 those choice points.

21 I guess all I'm floating is that I think this is an item  
22 which is also ripe for Board consideration. Now that

1 doesn't mean that NIOSH is inviting your comment or  
2 even interested in your comment. But at the end of the  
3 day, I don't see how the Board can not look at this  
4 kind of question, because at the end of the day, you're  
5 going to be auditing it and these are generic issues to  
6 numerous phosphate to uranium processes. This isn't  
7 the only plant, as many of you know. So I just thought  
8 I would add that to your list of items where a  
9 deliberative process -- you could review the  
10 engineering reports. NIOSH I think has done an elegant  
11 job of laying out in the site profile the production  
12 process, so you could at least see it, maybe see the  
13 source documents, the contracts, and begin to grapple  
14 with this to figure out where do you draw the line.  
15 Otherwise, I think that -- that this is going to get  
16 decided behind closed doors. You're going to be left  
17 auditing something where it's going to be preordained  
18 whether or not you get to even examine that dose  
19 because the agencies have prejudged it. And I think  
20 what -- there's an ongoing deliberative process now. I  
21 don't think -- I don't know, Larry, maybe you can --  
22 I'm prepared to stand corrected here, but I don't

1 believe that issue is fully closed, at least as of last  
2 week, so I just thought I'd lay that out as a -- a  
3 topic where I think your expertise in combination here  
4 would be really valuable.

5 Am I to prepare to stand corrected, Larry?

6 **MR. ELLIOTT:** I have no comment.

7 **MR. MILLER:** Well, that gives you a flavor, unfortunately.

8 Next item I'd like to put on the plate for the Board, I  
9 guess -- again, and -- and for NIOSH, it's just a  
10 suggestion that a policy be developed with respect to  
11 professional standards -- conflict of interest I guess  
12 is sometimes too narrow a term, but it -- we've all  
13 used it in shorthand here to cover the broad  
14 professional standards of -- of -- of -- that are  
15 expected here, that go well beyond financial conflict.

16 And -- and -- and I just can't help but observe that  
17 it seems like almost every meeting we have kind of a  
18 dandelion coming up in the lawn of another conflict of  
19 interest sprouting. And it seems like it's largely  
20 attributable and -- and frankly, fortunately, that  
21 NIOSH was willing to provide some transparency on who's  
22 working on these teams, but people seem to be

1 identifying these things for you, and it seems to me  
2 this ought to be a Federal agency function up front.  
3 They ought to be combing through this issue up front  
4 and the public serves as a check and balance, rather  
5 than the public serves as the only policeman for these  
6 professional standards questions. And so I would just  
7 urge you all to -- to think very hard about whether you  
8 want to revisit this. As Jim Melius noted at the --  
9 yesterday's meeting, in a way, a lot of us sort of  
10 thought the site profiles would accumulate the value of  
11 the knowledge of each individual dose reconstruction,  
12 and so the site profile and the conflict of interest  
13 issue really didn't ripen until -- as this program  
14 ripened. And I think it's worth re-examining.  
15 Otherwise we've kind of locked ourselves in to only  
16 looking at dose reconstruction and -- and -- and -- and  
17 not the site profile, and it may be the very fertile,  
18 raw material out of which each of the cookie-cutter  
19 dose reconstructions in some cases are going to be  
20 extracted. So I just would encourage you all to  
21 rethink whether it's maybe time to have a  
22 recommendation to NIOSH in a formal way urging some

1 kind of conflict of interest provisions which mirror  
2 those that are used by Dr. Toohey and others at Oak  
3 Ridge Associated Universities on the dose  
4 reconstruction conflicts. I just -- I don't know how  
5 many more of these you want to have sprout up before  
6 you finally take Board recommendation in this area.  
7 I would just offer this with respect to the evening meeting  
8 question. I think it varies. I think it goes from  
9 site to site. If you've got well-organized claimants  
10 or well-organized institutions that can help you do it,  
11 you know, it's where you are. Right? I mean I think  
12 there'll be lots of volunteers in western New York and,  
13 you know, maybe you'll have them, maybe you won't have  
14 them. And I think it ought to be -- I think you ought  
15 to figure out in advance -- if you're going to schedule  
16 an evening meeting, figure out if it's going to be  
17 productive -- right? -- and -- and not just do it and  
18 then have an empty room and sit there for two hours and  
19 close the record. So -- and I'm certainly happy to  
20 help NIOSH network with people where they're not  
21 already plugged in. And I'm sure there are others on  
22 and off the Board that would be delighted to do so

1 because I think it would be immensely productive and it  
2 would also promote greater understanding. I think  
3 there needs to be a two-way communication on this  
4 'cause it's complicated.

5 Finally, I would just propose -- probably for the last time  
6 I'll raise it publicly, here at least -- but I -- I  
7 have -- will -- will sort of -- I guess raise the  
8 question -- I'm delighted that the Board is going to be  
9 -- apparently going to get trained and learn to use  
10 IMBA and all of those good things and -- and -- and I  
11 was delighted to read that if you want to go to  
12 Cincinnati, you can, even as a member of the public,  
13 have an opportunity to use IMBA. I -- I think there  
14 need to be some creative solutions to dealing with the  
15 proprietary software issue. I don't know how much  
16 creativity's been applied to it at this point, or maybe  
17 there's a way your support service con-- you know, Oak  
18 Ridge, could provide some kind of service so that if  
19 you don't want to provide proprietary software, at  
20 least you can make somebody available who can, for  
21 members of the public, make use of IMBA and IMBA  
22 outputs. It's -- it's a very difficult thing to take a

1 blank site profile which are where the doses are  
2 conveyed and -- particularly the internals are conveyed  
3 and, you know, DPMS or whatever with solubilities  
4 identified and -- and be able to replicate the results  
5 that NIOSH is providing to individual claimants. And -  
6 - but more particularly, it becomes more important as  
7 you get into things like extrapolation where you don't  
8 have data and -- and I -- I would just encourage you  
9 all to think about whether it makes sense to have a  
10 program relying on proprietary dose reconstruction  
11 software where it effectively is inaccessible to the  
12 public except in the most -- except with a very high  
13 barrier, meaning that -- that the price tag for  
14 interacting with NIOSH or with this program or even  
15 this Board at a technical level is ponying up some six  
16 figures or five or six figures to get access to  
17 software. And -- and I -- I know I -- I respect that,  
18 you know, people are in the business of making money on  
19 their software programs, but you've got a public  
20 program here -- public compensation program relying on  
21 private software. And it -- it -- it -- I think it  
22 poses a transparency question and I would hope that you

1 all would -- once again, I'm revisiting this now for  
2 the third time; as I say, it will be the last time I  
3 revisit it here -- but I -- I -- I just think you've  
4 got a problem assuring transparency throughout, and  
5 this is a huge obstacle in that transparency, so I  
6 would encourage some thought to that. Thank you.

7 **DR. ZIEMER:** Thankful -- or thank you, Richard, for your  
8 thoughtful comments. Let's take a minute and see if  
9 Board members have questions to pose to you relative to  
10 your remarks. Any?

11 **DR. MELIUS:** Yeah, I have one question and I -- for both I  
12 guess Larry and Richard, and that's the Blockson  
13 Chemical -- if I understand that correctly -- and I  
14 don't understand it completely, but what's an issue --  
15 more of a generic issue with a number of the AEC sites  
16 in particular where there's a sort of a commercial use  
17 and a -- commercial exposures or exposures from other  
18 industrial process as well as from the AEC process, and  
19 the issue is how you parse the exposures and do them,  
20 and I -- and I don't understand to what extent it's  
21 policy, legal or whatever, but I think certainly a  
22 briefing on that would -- at some point soon would be

1 very helpful to the Board so at least we understand  
2 what -- what's involved in the decision-making, as well  
3 as how it will affect future dose reconstructions,  
4 so...

5 **DR. ZIEMER:** And Richard also entered into the public record  
6 some related comments. I think the Board members have  
7 gotten copies of your written comments on that Biloxi  
8 issue, Richard.

9 Let me ask a somewhat related question. Does this revolve  
10 around the official definition of -- of the facility  
11 insofar as it relates to weapons production?

12 **MR. MILLER:** You know what, it's like lawyers say, it  
13 depends who you ask.

14 **DR. ZIEMER:** Well, but -- but that -- that lies at the crux  
15 of it, as the starting point that it's defined in a  
16 certain way and then that gets interpreted. Well,  
17 where is that line exactly? Does it cover this -- the  
18 -- clearly there's radon related to the phosphate  
19 thing. I know -- I see Dr. Roessler here, who worked  
20 with phosphates a lot down in Florida and very much  
21 aware of the radon issues, but then the issue is where  
22 -- where does that end as far as what that company was

1           doing anyway and where does the -- the uranium work  
2           begin and were the uranium workers also exposed and is  
3           this part of their occupational exposure. That's --

4 **MR. MILLER:**       It's a great set of questions, Dr. Ziemer,  
5           and it's --

6 **DR. ZIEMER:**       Yeah, I --

7 **MR. MILLER:**       Well, go ahead. I mean -- I didn't mean to cut  
8           you off.

9 **DR. ZIEMER:**       Well, and I think Jim is saying we -- we don't  
10          necessarily know what all those issues are, either. I  
11          understand that perhaps NIOSH has itself been  
12          addressing that or looking at that, and I don't know if  
13          you want to make any comments on that, but that's  
14          certainly been part of the issue. You're -- you're  
15          perhaps questioning whether or not the decision has  
16          been made and is fixed in concrete, and it may affect  
17          other facilities, as well. Is that --

18 **MR. MILLER:**       Well, I think there's several things. I mean I  
19          -- I don't know what the final status of the  
20          interagency deliberations are in this. I know there's  
21          certainly some options and comments that have been  
22          circulated. I guess the question is, let's leave aside

1 the interagency debates for a moment and just step back  
2 by bringing to the fore what actually this Board  
3 brings, which is a remarkable rich diversity of  
4 expertise, and ask the question -- assuming that an  
5 atomic weapons employer facility lawfully encompasses a  
6 facility, broadly defined, and you're looking at the  
7 production of materials that are ultimately used for a  
8 nuclear weapons program where you have this dual-use  
9 issue -- right? -- commercial and non -- and non --  
10 military and non-military, we'll say, or DOE and non-  
11 DOE -- where you then have to ask the question where it  
12 may even be inseparable, and let's assume that legally  
13 you can look at the whole thing. And then let's say  
14 okay, where does it make sense to tease it out? In  
15 other words, can we apply common sense to this  
16 question, 'cause it's a thought puzzle, I think. It's  
17 a thought puzzle. I mean -- you know, having sat down  
18 and kind of sketched out about five options, I could  
19 persuasively -- to myself, at least -- argue five  
20 different ways to draw the line on this thing. But in  
21 fact it's a -- partly a health physics question and  
22 it's partly a engineering question and it's partly a

1 policy call about how you deal with the equities for  
2 individuals, and it is -- I mean -- and -- and one  
3 could just -- I mean the myriad of equity issues just  
4 jump out at you. Right? Well, the -- so the person  
5 who makes rock phosphate and gets radon exp-- you know,  
6 processes this into phosphoric acid and they have radon  
7 exposures but they make Tide and they're not  
8 compensable, but the individuals who -- who make -- who  
9 -- who are part of the -- how do you even parse it out  
10 because the same person's making it for both -- both  
11 production chains. I don't have the -- the ri-- in  
12 other words, I'm not here advocating a particular  
13 solution, but I do think the options ought to be  
14 fleshed out because it's -- it is so important to the  
15 equities about whether or not you attribute dose that  
16 is at lea-- least partially attributable to the work  
17 that you're doing that wound up as part of this  
18 company's work for the Atomic Energy Commission or not.

19 And it's not so remote that it's laughable. Right?  
20 It's just -- it's an equity issue. It's -- It's a  
21 Solomon-like activity, where are you going to divide  
22 the baby? And I think reasonable people could differ

1 on this thing, but I think it ought to be aired out and  
2 -- and I think it ought not be decided simply in an  
3 interagency deliberation process. Or to the extent it  
4 is, at least it would be useful if the perspectives of  
5 this Board were also informing the thinking of the  
6 Federal -- Federally-responsible officials in this  
7 respect. That -- that's sort of my pitch.

8 **DR. ZIEMER:** Thank you.

9 **MR. MILLER:** Let me -- let me just -- just add one last  
10 thing, which is -- is -- is -- is since poor Larry  
11 often seems like my -- my good friend Eeyore who -- who  
12 -- who dreads coming to these meetings and -- and looks  
13 very unhappy most of the time, and I want to say  
14 something nice for Larry for a change, before I say  
15 something else, and -- so you can get off your pins and  
16 needles now. I found -- NIOSH's work on the site  
17 profile at Mallinckrodt begs numerous questions.  
18 Denise raised terrific questions, and I have them, as  
19 well. How are you going to deal with the periods of  
20 time where you don't have good dose information or any  
21 dose information, and how can we have any confidence  
22 that we're not estimating -- underestimating the

1 periods where you don't have dose data, and  
2 particularly when you're relying on, you know, 50-year-  
3 old methods of analysis. But in the course of the site  
4 profile, I found a terrific footnote for a document  
5 that at least I had been looking for for over a year,  
6 diligently, with numerous requests all over the place,  
7 by Merril Eisenbud and had -- was very pleased to see  
8 that it was footnoted in the site profile, and -- and  
9 in this Eisenbud document -- I don't know if the Board  
10 has had a chance to look at it, but it was the basis  
11 for an article that ran in the *Riverfront Times*, it's -  
12 - it's called an estimate of cumulative multiple  
13 exposures to radioactive materials at Mallinckrodt's  
14 plants four and six from November of 1950. What was  
15 stunning, in addition to the level of doses that were  
16 estimated for a typical worker in the matrix that was  
17 used, which was about 1,000 rem to the lung over about  
18 a two-and-a-half-year period, was -- was the -- and  
19 this formerly secret memo said, and it just -- just to  
20 tickle your fancy, it -- it -- if I could just read one  
21 paragraph to you, it says here (reading) Early in 1947  
22 the New York operations office evaluated the potential

1 hazards in these plants and, after finding it to be  
2 considerable, recommended the necessary corrective  
3 actions. In addition, steps were taken by NYOO in  
4 cooperation with the contractor to institute procedures  
5 for effective environmental and personal monitoring.  
6 It was recognized that pending elimination of excessive  
7 exposures, here was a unique opportunity to conduct  
8 clinical studies on a fairly large-sized population  
9 whose radiation exposure for several years had been  
10 considerably in excess of any group for which data was  
11 available.

12 And I just have to say that this really was a remarkable  
13 window in a candid memo about the perspectives that  
14 were in place at least at that time about how  
15 convenient it was to study the workers at Mallinckrodt  
16 without regard to how they were put in harm's way. And  
17 that really was the foundation of a lot of what  
18 informed the passage of this law. And every now and  
19 then these -- these -- these remarkable historical  
20 documents finally see their way to light and -- and I  
21 just would like to thank NIOSH for making sure that  
22 this one found its way to light and -- and they

1 produced it without need for a FOIA request and did so  
2 in a transparent way. And so I just wanted to express  
3 that appreciation.

4 **DR. ZIEMER:** Thank you. Thank you, Larry -- or thank you,  
5 Richard. Thank you both.

6 Okay, that concludes our public comment requests.

7 **MS. BROCK:** (Off microphone) Dr. Ziemer --

8 **MR. ELLIOTT:** She's thought of something.

9 **MS. BROCK:** -- (Off microphone) can I make one more comment?

10 **DR. ZIEMER:** Yes, you may. Denise Brock.

11 **MS. BROCK:** I forgot to mention earlier, I -- in reference  
12 to what Cori and -- and Larry, I believe, were talking  
13 about how to alert people or media. I actually had a  
14 list recently that I used that actually listed all of  
15 the papers -- suburban journals, any paper that I could  
16 come up with through the state of Missouri and through  
17 Illinois, as well as the -- the news channels and the  
18 radios, and I sent letters out to each and every one of  
19 them actually looking for any of the 3,300 employees of  
20 Mallinckrodt or anybody involved in the building and  
21 construction trades. And I've gotten a lot of response  
22 from these papers saying that they are going to run ads

1 looking for -- for people that worked at these  
2 facilities.

3 I was also contacted by some people in Illinois who are  
4 wanting me to come there to help them organize and kind  
5 of do what we did for the Mallinckrodt site, so I'm  
6 going to do that, as well.

7 But I was curious if it's ever possible to do like a public  
8 service announcement, if that's possible, to put  
9 something like that on TV and maybe just try to get  
10 contact people in each area to alert claimants or to  
11 try to -- and I think that's probably part of the  
12 outreach with the Department of Labor, as well.

13 **DR. ZIEMER:** Thank you. That's very helpful. We then are  
14 at the end of our open business session. Let me ask if  
15 any of the Board members have any additional items or  
16 comments for the good of the order? 'Cause if they  
17 don't, we are going to adjourn the public session. We  
18 will take our lunch break a little early. I think we  
19 probably -- well, in fact they do need to clear this  
20 room out anyway and prepare it for the big show  
21 tonight, so you need to get all of your stuff out of  
22 here.

1 We will reconvene at 2:00 o'clock in the Mesquite I Room --  
2 the Mesquite I Room at 2:00 o'clock. I will, for the  
3 record, again emphasize that this is a session that is  
4 only for the discussion of the task orders and the  
5 independent government cost estimate. The Board will  
6 do no other business at that meeting.

7 We now stand adjourned as far as the public meeting is  
8 concerned. Thank you very much.

9 (Whereupon, the public portion of the meeting was  
10 adjourned.)

