UNITED STATES OF AMERICA

CENTERS FOR DISEASE CONTROL

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NATIONAL INSTITUTE FOR OCCUPATIONAL
SAFETY AND HEALTH

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ADVISORY BOARD ON RADIATION AND
WORKER HEALTH

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77th MEETING

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TUESDAY
MAY 24, 2011

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The meeting convened at 8:30 a.m., Central Daylight Time, in the Crowne Plaza St. Louis-Downtown, 200 North Fourth Street, St. Louis, MO, James M. Melius, Chairman, presiding.

PRESENT:

JAMES M. MELIUS, Chairman
HENRY ANDERSON, Member
JOSIE BEACH, Member
BRADLEY P. CLAWSON, Member
R. WILLIAM FIELD, Member
MARK GRIFFON, Member*
RICHARD LEMEN, Member
JAMES E. LOCKEY
WANDA I. MUNN, Member

PRESENT: (continued)

ROBERT W. PRESLEY, Member
GENEVIEVE S. ROESSLER, Member
PHILLIP SCHOFIELD, Member
PAUL L. ZIEMER, Member*
TED KATZ, Designated Federal Official

REGISTERED AND/OR PUBLIC COMMENT PARTICIPANTS:

ADAMS, NANCY, NIOSH Contractor
BALDRIDGE, SANDRA*
BARRIE, TERRIE*
BURGOS, ZAIDA, NIOSH
ELLISON, CHRIS, DCAS
FITZGERALD, JOE, SC&A
HINNEFELD, STU, DCAS
KINMAN, JOSH, DCAS
KOTSCH, JEFF, DOL
LEITON, RACHEL, DOL
LEWIS, GREG, DOE
LIN, JENNY, HHS
MAKHIJANI, ARJUN, SC&A
MORRIS, ROBERT, ORAU Team*
NESVET, JEFF, DOL
NETON, JIM, DCAS
RABINOWITZ, RANDY
ROLFES, MARK, DCAS
RUTHERFORD, LAVON, DCAS
STEPHAN, ROBERT, Office of Congressman Jerry Costello*
STEINBERG, GARY, DOL
STIVER, JOHN, SC&A
VLIEGER, FAYE*
WADE, LEW, NIOSH Contractor

*Participating via telephone

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

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

8:29 a.m.

CHAIRMAN MELIUS: Good morning and welcome to the 77th meeting of the Advisory Board on Radiation and Worker Health and I think a third time in St. Louis. I can't remember. We've been here six times? Okay. Several times. Not for a while so we're glad to be back.

Let me turn it over to Ted who will go through the usual housekeeping.

MR. KATZ: Good morning everybody. Welcome everyone on the line and in the room. This is the Advisory Board on Radiation and Worker Health. It's our 77th, I think, meeting which is quite an accomplishment in and of itself. Welcome from Secretary of HHS Sebelius and Director of NIOSH Dr. Howard as well.

Let me just cover a few things here. On the agenda we have a public comment session today at 6:00, from 6:00 to 7:00 and

tomorrow at 5:30 p.m.

If you would like to comment, for people here in St. Louis there's a sign-in sheet outside the door here. We would like for you to sign in and I'll try to remind people later because people will probably show up later in the day about that.

The agenda for the meeting as well as all the presentations that were here on time to be put up on the web so people who are listening in by phone can follow along with the PowerPoint presentations on the web there.

They are on the NIOSH webpage under the DCAS program under the Board, as well as under the meeting section so I think you can find it in either place.

Also, let me just note for people who are listening in by phone if you would please mute your phones during the meeting, except if you're commenting, for example, during the public comment session.

To mute your phone, if you don't

have a mute button on your phone, press *6 and then to unmute your phone you press *6 again. It's very important that you mute your phone, particularly for all the other people who are on the line as well because they will otherwise hear whatever background noise is coming through your phone.

And then last just a little bit of housekeeping about exits. Were there an emergency and you need to get out of the hotel for a fire or what have you, you go out these exit doors, take an immediate left, go through the two double glass doors, and then an immediate right. That's the quickest way. That puts you out on 6th Street, or some street, that's right out there.

I think that covers it. I would like to also check on the rolls. We have a number of Board Members who are attending by phone as opposed to in person here so let me check now and have Board Members who are on the line right now register your attendance,

please.

MEMBER ZIEMER: This is Paul Ziemer. I'm on the line.

MR. KATZ: Welcome, Paul.

How about Mr. Griffon? Or Mr. Gibson? Or Dr. Richardson? Very well. At this point they are not on the line. I think we expect some of them to join us.

CHAIRMAN MELIUS: Some of the Board Members had some travel problems getting in here due to the weather.

Why don't we start. Stu, you want to give us a NIOSH update? Then you can be followed by Lew who is going to give us an update. Lew Wade is going to give us an update on the 10-Year Review.

MR. HINNEFELD: Thank you and good morning everyone. For anyone who doesn't know me, I think maybe everybody here does know me, I'm Stu Hinnefeld from NIOSH from the Division of Compensation Analysis and Support.

I'm going to be very brief today

following the pattern that I followed at the last Board meeting rather than run through all the statistics. I'll talk a little bit about the news from the program. The statistics package has been available. If you have any questions, I'll try and answer any questions about the package that I forwarded in terms of progress.

Suffice it to day that we are continuing to make nice progress against the backlog of claims. Some number of years ago all who were here probably remember the backlog of approaching 10,000 dose reconstructions we had to do. We're now down to a total population in house of about 1,400 claims with us that need to be done or dispositioned in one way or another. We are very happy about that.

During the -- let's see. I think I went too far. Here is our program news slide. During this past period if you'll recall, we had an objective to complete claims

that were over a year old by last June 1st, I think, or June 30th, and there are certain categories of claims that kind of fall outside our accomplishment and these are kind of well-known situations.

Some of them belong to SECs where we believe -- sites where we believe there is likely going to be an SEC but it hasn't become effective yet and there are one or two technical issues. On occasion we'll be waiting for information from the DOE or DOL.

Typically that is because in trying to do the dose reconstruction we encountered this need for additional records. Oftentimes this will be based on something the claimant told us in the interview so we have to go back.

It's rare that an initial response from either agency takes that long. We make the supplemental request at sometime and they just didn't have time to respond. June of last year we got to the point where we could

do claims within a year of the time we got them. By May of this year, May of 2011, we have managed to get that down to nine months. Claims that we get today, whether they be new claims or reworked claims coming back to us, we've been successful in getting the maximum time down to nine months. Many of them are done more quickly than that.

Now, we have new objectives for the coming period in terms of timeliness. We want to have a high percentage of claims done within 60 days. I'm sorry, within six months. Approximately half within six months.

For reworks where we don't have to get additional data we want to get as many as possible. We set an objective as 80. The reason we don't make these 100 percent is it's hard to get 100 percent of everything because there are certain issues that pop up, odds and ends or unusual claims that you don't really get to 100 percent. We are trying, though, to continue to shorten the period for dose

reconstruction completion down to what we feel is maybe a more reasonable amount of time. Those are objectives going forward for timeliness that we intend to meet.

The reason for the six-month objective ending November 1st is that's a six-month period on our main contractor, Oak Ridge Associated Universities team. They have an award fee performance rating system and their contract date starts -- what would that be? May 1st.

They are evaluated on six-month intervals so that's the end of their evaluation period. We found the most effective way to make an objective on timeliness. To improve your timeliness is to make it award fee objective for your contractor so they have some incentive to agree with your objectives.

So that's how that works going forward. I believe that's the only actually new slide I have up there. I did with as

little time to think about this over the weekend come up with a couple more things that I wanted to mention very quickly.

One is that in early May we conducted another dose reconstruction SEC workshop in Cincinnati. We do this in conjunction with our worker outreach contractor ATL. They essentially identify an invitation list of advocates and people who are interested in the program, learning more about the program.

Very often these are representatives from sites that are currently working, maybe labor representatives that are asked frequently by their constituency, by their members for information about a program.

Many times these people don't feel that well equipped to answer the questions so we try to help them out and give them additional information to provide to their constituency. That was held in early May. Between 20 and 30 people attended.

ATL does conduct a satisfaction survey or a feedback survey at the end of it. I enjoy reading those feedback surveys because in general they really provide good feedback. People really valued the information they received and they thought it would be really useful to them in their jobs. I get at least one opportunity, or two opportunities a year, to read some good feedback. That's kind of nice.

The other item I wanted to mention, which is kind of addresses some thing that we'll probably hear about in a little bit which is that people don't seem to understand us very well, is that there have been a little bit news story lately about this Plain Language Act, or Plain Language Initiative that the government is supposed to embark on.

There's really not been a lot of guidance come down through the administration for how exactly or what's expected. We figured, well, certainly in our program it

cries out for some sort of action like that just based on the feedback we hear from polls of our claimants and feedback we hear from our claimants and some things you'll hear in the program review.

We are embarking on that trying, first of all, with some of our written products and we have a lot of them, to try to rewrite them with the idea of making them more readable and understandable to the general public. We tended to write them for ourselves and we like what they sounded like.

Not everybody talks like us which probably is good for most everybody. We're trying to rewrite those relying on our communications team to try to maybe make these a little more understandable. We have a lot of written products. It will take a long time to get through that. I think we are capable of doing it. It just takes a different way of working and perhaps a little more effort.

Those are the news items I wanted

to cover. I'm pretty sure my slides go into the statistics which I had not planned to cover. I would be willing to answer any questions about anything I talked about today or any of the statistics on the slides.

CHAIRMAN MELIUS: Anybody have questions for Stu? I do.

On one of those statistical slides, and you've probably explained this before but I'm still confused, if you take the status of the first 10,000 claims and you have 228 claims at NIOSH, 192 closed, 14 DRs with claimants, and then the parenthesis is what's got me confused. Three initial and 31 DOL reworks. I can't understand how 14, 3, and 31 relate to each other.

MR. HINNEFELD: What was the statistic again?

CHAIRMAN MELIUS: It says 14 DRs with claimants. In parentheses three initial and then 31 DOL reworks within the past year.

MR. HINNEFELD: Okay. I think

that's probably a typo.

CHAIRMAN MELIUS: Okay. There is a similar one down below, 19 DRs in process, five initial, 47 DOL reworks within the past year.

MR. HINNEFELD: Again, those are typos. Sorry about that.

CHAIRMAN MELIUS: Okay. The final line was the one I also had a question on which says three gathering information.

MR. HINNEFELD: I think probably what happened, I'm guess that those were reworks that came back to us with some new information that we have to then maybe get some clarification on the additional cancer of the additional employment or something to that effect. Or the employment was added and we have to get some more information.

CHAIRMAN MELIUS: Okay. I'm just trying to understand how there's a site that hasn't been worked on at all or if there is some other --

MR. HINNEFELD: No. I think all the sites we've -- I think we've worked on all the sites. During the past year you guys know we brought a lot of SEC petitions, 83.14s. We tried to finish up a lot of them during that.

CHAIRMAN MELIUS: Okay. Thank you.

Anybody else have questions for Stu?

Dr. Ziemer, do you?

MEMBER ZIEMER: I have no questions for Stu but I do have a general question. I think this is for Ted.

Did you say that the slides and so on or on the O: drive or where do I find those?

MR. KATZ: Yeah, Paul. They are on the O: drive. For most of the presentations they are actually on the internet for everybody and the public as well.

MEMBER ZIEMER: Okay. Well, on the internet I found the agenda under the

meeting but I didn't find the slides. Where would those be?

MR. KATZ: They should be --

Chris, go ahead. Why don't you come up to the mic so we can hear.

MS. ELLISON: This is Chris Ellison. They are in the process of being put up there. I believe by 10:00 a.m. this morning.

MEMBER ZIEMER: Oh, okay.

MS. ELLISON: Okay? Sorry about that.

MEMBER ZIEMER: On the regular website under the meeting when you click on that all you find is the agenda.

MS. ELLISON: And they will eventually be listed under the agenda on both the Advisory Board page and the public meeting page.

MEMBER ZIEMER: Great. Okay. Thank you.

MR. KATZ: Thanks, Chris.

MEMBER ZIEMER: I have no questions for Stu.

CHAIRMAN MELIUS: Okay. Thanks, Paul.

Any other Board Members on the line yet that have questions? Okay.

Lew. Lew Wade will now give us an update on the 10-Year Review.

DR. WADE: Good morning. As always, it's a pleasure and an honor to come and speak to the Board. I must say I get energized when I come and see all you fine people and get to chat with you a little. I sort of mourn the passing of this 10-Year Review as we end it because I won't get to do that so much.

I'm here and let me start by introducing two colleagues, authors in terms of the Phase I Reports, Randy Rabinowitz, and Nancy Adams who are here in the room should there be any questions about their pieces.

On Thursday you're going to have

the opportunity to hear a presentation on the quality of science, a piece that is going to be presented by Doug Daniels and you'll get to interact with Doug in a much more detailed way concerning his aspect of the 10-Year Program Review.

Let me remind you of the premise of the 10-Year Review. The only reason Dr. Howard decided to undertake such a review was on the hope that this would result in a better program. By better program we mean program that will better serve the people that we're here to serve, the claimants and petitioners. That's the end result of it.

It was going to happen in two phases. The first phase, which was to be a data-driven look at aspects of the program. There were five aspects of the program that were to be looked at; dose reconstruction, Special Exposure Cohort, timeliness, quality of science, and quality of service.

They were to be data-driven looks

at the program resulting in some recommendations as to potential improvement.

Phrase II, which will begin in earnest after this meeting, would be Dr. Howard and the senior NIOSH leadership looking at those recommendations and deciding which of those recommendations should be implemented and how exactly those recommendations should be implemented to make a better program. So Phase I and Phase II.

In terms of the status you now have, I'm going to shutter to say, on the website on the docket the five latest versions of the Phase I reports. You've seen various manifestations of them as we've evolved. You now should have the five latest versions of those reports in front of you.

The SEC report was, I think, the last to appear as an edited document that is there now, Randy Rabinowitz' report. So all five of those are in your possession in near-final form. I say in near-final form because

they will be changed again based upon public comments and we receive comments from this Advisory Board. Hopefully they are nearing their final form and probably by the next full Board meeting they will be in final form for you.

The Phase II will begin in earnest when Dr. Howard convenes a meeting of his senior leadership. It's scheduled for June 8th, next month, where they will start to look at the recommendations that have flowed from Phase I. Believe it or not there are 78 recommendations. A boat load of recommendation have resulted from Phase I.

Dr. Howard and his senior leadership will begin to look at those recommendations and decide which should be implemented and exactly how those recommendations should be implemented again to make a better program. That's where all of this is going.

Now, what I'm going to do with the

brief time I have with you today is sort of highlight some of those recommendations. I'm not going to go through all 78 of them, although I'm sure we would thoroughly enjoy the quality time we would spend together as I went through all 78 of those recommendations but we're not going to do that. I'm going to highlight for you some of them that are the author's picks as to their most significant or highest priority recommendations.

The Board can react spontaneously as we present in their working time. You might have things you want to say to Dr. Howard and his leadership. You can say them on the record here and he will hear those comments and will react to those comments.

You might lend your voice to certain of the recommendations. You might say that you don't agree with certain of the recommendations. You might want to offer additional recommendations. All that can happen on the record.

Certainly after this meeting individual Board Members can communicate in writing to Dr. Howard or myself in terms of thoughts you might have. We would ask that all of that be also made available to the public docket. We've tried to make this process as transparent as possible.

The Board might wish as a body to offer its opinion to Dr. Howard. I talked to some of you at breakfast this morning and you said, "I'm sorry. I haven't gotten you this comment or that comment." Let me tell you that the Board has done a tremendous job in terms of shaping this review.

If you read this review, a lot of it is based upon the fine work that you guys have done over the years. The Board has had a great hand in the review to this point. I know Dr. Howard would welcome comments by individual Board Members or the Board as a whole as he begins to move forward in terms of choosing those recommendation that will form

the basis of NIOSH's attempt to improve its program.

Those are the introductory comments. I'm sure this is all painfully familiar to you because I've had this discussion with you before. It is enjoyable if you consider it in a certain way.

You have these documents. There are all of these recommendations that exist in your package. I'm going to go through and highlight several handful of them to try and engender a reaction from you or to simply put on the record those that are considered to be the highest priority by the authors.

I'll start with dose reconstruction which was written by a very able author, that was me. This author would highlight Recommendation No. 1 which goes to the fact that the Board in its review of individual dose reconstructions has come to several hundred findings.

I think it's incumbent upon NIOSH

to reevaluate its QAQC programs to try and understand why NIOSH internally didn't come to these findings and the Board had to. I'm not minimizing the importance of the Board's work. I think it's wonderful that you're there to find these things.

I do think that NIOSH based upon the body of findings that have resulted from the Board's review of individual dose reconstructions, I think NIOSH really needs to take a hard internal look in terms of its QAQC procedures.

Let me pause here and say that when Dr. Howard first spoke to you about this review he also said he was not going to wait for the review to be over to begin to implement some of the changes. A number of the changes that I'm going to highlight for you under consideration I know Stu and his people have already started to work on and that's most appropriate.

I think this is one of them, but I

think NIOSH in a public forum speak to its QAQC efforts and begin to understand why the Board review found these findings and they weren't scrubbed by NIOSH before those findings came from the Board so one recommendation.

If you throttle down to No. 6 under the DR, this is a bit of a complicated one. Let me speak to it a bit. This goes to the fundamental tension that exist between realizing the best possible science and the need to get things done in a timely way.

NIOSH has issued many changes to the manner in which it does individual dose reconstructions based again upon the work of this Board. When that happens NIOSH has to go back and redo individual dose reconstructions. When that happens that takes time.

People are confused as to why they are getting now a new dose reconstruction done. These is this fundamental tension that exist between getting the science complete and

right and the need to do things in a timely way.

This recommendation goes to the fact that NIOSH needs to better manage that tension. Again, the people at DCAS need to think about this. It is right to get the science right. But it also creates confusion within the claimant community as we go through this process.

We have to think about ways to manage both of those values, complete science and the tension associated with the redoing of dose reconstructions. You'll see this point echoed again when we talk about Special Exposure Cohort petitions because that tension exist again.

When do you know that you've done enough work to make a decision on an SEC petition in a timely way versus chasing that next piece of evidence that might be the magic box that would allow you to move forward and make a better "decision."

This tension between complete science and timing needs to be better managed by NIOSH. Again, that's the basis of Recommendation No. 6. At any point anyone can chime in on any of these. Okay. Good. I've got one agreement.

MEMBER ZIEMER: Can I chime in?

DR. WADE: Sure, Dr. Ziemer.

MEMBER ZIEMER: This is Paul Ziemer. I just wanted to -- I appreciate those comments, Lew, and I just wanted to echo that. I think it's a very important issue that we might need to deal with in terms of maybe developing some guidelines.

We have this situation even now at a number of sites. I think to some extent at Mound, at Fernald, at General Steel Industries. The tension between how much time it takes to get the science just right and closing out petitions is a very important issue.

DR. WADE: I did change the

wording, Dr. Ziemer, based upon your edits of the report to best available science. In inappropriately used "right science" and Dr. Ziemer pointed out that employed that we were using the wrong science.

MEMBER ZIEMER: Yeah, that was the point I was trying to make. I just think the issue is a key issue that we need to grapple with and come to closure on in some organized way because when do we make that decision that we have gone as far as we should go?

DR. WADE: And when we come to Randy's comments, you'll see this point underlined again with regard to SEC petitions.

MEMBER ZIEMER: Right.

DR. WADE: In my report looking at individual DRs it happens when the Board goes through the review of a Site Profile. It says, "We need to make certain changes." Those changes trigger the redo of individual dose reconstructions. That adds time but adds confusion.

I'm not saying it's wrong but it needs to be managed consciously. I think Dr. Ziemer is right. We need to think about procedures for doing this that are uniformly followed that people can understand. Again, an important one to think about. Any other comments on that one?

Brad.

MEMBER CLAWSON: I just wanted to -- also one of the biggest things that I have seen is communication. A lot of people when we go into this process they don't understand it and the process of communicating to them is somewhat lacking. I don't know if that will come up or not. A lot of these people are older and so forth like that.

All of a sudden they've got one dose reconstruction. Another one is being done. To communicate to them kind of a little bit more of a personal touch of explaining to them that we have found that there are some things we need to change. I think that is

critical of the communication point.

DR. WADE: I think it's true. In fact, that point will be underscored by No. 7 which is the third I would highlight here. That goes to the use of over or underestimating techniques, efficiency techniques versus the performance of a full dose reconstruction.

We do have situations where NIOSH in an attempt early in the program to get through this tremendous mountain of individual dose reconstructions would say let's do an overestimating approach on a dose reconstruction and, as a result of that, still result in a Probability of Causation less than 50 percent.

If there is a need to go back and redo that dose reconstruction and redo a best estimate for whatever reason, a new cancer, additional employment, change in science. Sometimes it comes back that the redo results in a lower PoC.

This makes sense to us sort of scientific nerds inside the program. It makes absolutely no sense to the people out there who had 36 percent, another cancer. It comes back 24 percent. This is an unclimable mountain for NIOSH to deal with from a communications point of view.

In the report I find that the time efficiencies realized by the use of over and underestimating techniques really aren't so great anymore. I'm not going to quote you the numbers. They are in the report. If you start to look at 2006, 2007, 2008, the savings in time of using overestimating techniques is not so great.

I would offer the perspective that maybe it's time just to do best estimate dose reconstructions and remove this conundrum of how do you explain to people that a new cancer resulted in a lower dose and things like that.

I think Dr. Howard will ask Stu to consider this issue and to speak to the cost

that will result in terms of the increased time of only doing best estimates versus doing efficiency approaches. I think maybe the time has come to think about just doing best estimates and not have to try to climb this hurdle anymore.

Brad, this is a communications nightmare that Solomon could not explain away to people I don't believe. That's recommendation No. 7. Any comments on that?

Okay. Now we'll come to No. 8. This goes to the vehicle of partial dose reconstructions. You guys know what that's about. If you grant an SEC, then people with the 22 cancers are compensated. People with the cancer other than those 22 have to have a partial dose reconstruction done.

I think the NIOSH, the Board, the Department of Labor have done a wonderful job of trying to see that partial dose reconstructions can include as much reasonable dose as is possible. I think we need to work

harder at that.

The way you work harder at that is making evermore precise the dose that is excluded from consideration in doing a partial dose reconstruction by the granting of a Special Exposure Cohort petition. Again, you have a little bit of an intellectual conundrum.

To grant the SEC petition you have to say, "I can't do dose reconstruction." But it doesn't say I can't do everything. It says, "I can't do this." This is enough to warrant the granting of the SEC. Everything else is in play.

I think the Board, I think NIOSH, I think the Department of Labor, have moved in a positive direction towards allowing as much dose to enter into a partial dose reconstruction as possible.

I think we have to work even harder at it in the future to see that as much dose is allowed in to a partial dose

reconstruction once the decision has been made to grant an SEC. Again, a fourth recommendation that would be highlighted here.

Any comment on that? I know you guys struggle with that through your definitions. I think we just need to all work harder at it so that people who are not on that list of 22 cancers have their best shot at getting allowable dose considered in their partial dose reconstruction.

CHAIRMAN MELIUS: Lew, I'd have one comment on that. My only concern there because, first of all, I think we large do that now and I don't think it's as much of a problem as it may have been in the past.

Secondly, I do get concerned that given how long it takes to do an SEC evaluation and the review of that, adding additional tasks to that process is just going to delay it because I think the Board has some reluctance, at least some of us do, of approving the use of the method without having

had the time to review it.

We tend to concentrate in an SEC evaluation only on those exposures where there might be difficulty doing dose reconstruction or the situations. We don't tend to focus on what can be done.

I know it's come up in the past that by approving something that we haven't reviewed, we then at least give DCAS sort of the sense that the Board would then accept that in other situations without the benefit of any real in-depth review. I think the Board does need to do a better job of coming back and looking at sort of what we would refer to as Site Profile issues.

You approve the SEC but there are these other issues out there that need to be looked at. I worry about trying to integrate it too much into the SEC evaluation process just on the basis of timeliness. You would add another several months, I think, to the process.

DR. WADE: Point taken. I agree, Jim. I think the record shows based upon your comment, and I'll certainly carry to Dr. Howard, I don't think that decision should slow the decision of the SEC. Once that decision is made, I think NIOSH has work to do in terms of these Site Profile issues, as you define them, to see what can be in and what can be out. That's where I think the work needs to be done, not prior to the making of an SEC judgement. Point well made.

MR. KATZ: Bob, can you use the mic, please? You have to turn these mics on. Thanks.

MEMBER PRESLEY: This is Bob Presley. On the SEC petitions I don't have a problem with us granting SEC petitions, but making some of these SEC petitions very, very large so that they encompass a tremendous amount of people that may not have had anything to do with working with radiation.

It bothers me that cancer is one

of the number one killers in the United States whether you worked with radiation or whether you didn't. It bothers me some that we have broadened some of these SEC petitions not only in the length of the SEC but also in the broadness of not tying down these SEC petitions to various parts of some of the work environments. Thank you, Lew.

DR. WADE: I think that's important point, Bob. Thank you for getting that on the record.

Anything more? If not, we'll move into the timeliness part that was ably authored by Nancy Adams. No. 2, "NIOSH should consider a target of 90 days or less to complete the dose reconstruction once information is in their hands."

Again, Stu talked this morning about nine months. Again, this is the finding of the author. I support the finding. I think Stu would support it as well. It has worked towards that but I think once

information is in hand, once the tools are in place that 90 days is a target that could be achieved. It doesn't have to be achieved overnight but I think the movement has been in that direction from the years it used to take to the year it took last June to the nine months now. I think that 90 days might be a reasonable target and I think the author feels that.

John Howard can start to debate that with Stu and his staff as to if and when such a mark should be put in the sand but wouldn't that be a glorious day when it was 90 days after the receipt of information that a dose reconstruction was done. I think it's within our sights.

No. 3, "NIOSH should give a higher priority to return claims in setting its goals for a timely completion of claims." Again, I think this is something that Stu has begun to work on. Again, you have this universe of claims that need to be dealt with, new dose

reconstruction and then rework claims. I think the author's point, and I think I would agree, that priority needs to be given to the rework claims. People that have already been through the process once and for some reason have to go through it again, I think priority should be given to those claims as opposed to the next new claim. Again, I don't know if you have any comments on those two timeliness issues but they seem to make sense to me.

Now we are going to come to the most provocative part of the report, at least in my opinion, and that's the SEC piece, ably authored by Randy Rabinowitz. I will highlight some of the things but Randy is here to talk about them should you wish.

No. 2 is an old favorite, "NIOSH should revisit its interpretation of the statutory phrase, "with sufficient accuracy to give fuller effect to the role of scientific uncertainty."

We've all struggled with the

definition of that phrase and what it means. Some of us feel there is a definition somewhere. Some of us feel that there isn't. I think Randy's point is that recognizing that there is uncertainty that surrounds everything, NIOSH needs to revisit its interpretation of the phrase.

I think the Board talks about this from time to time. I think this would be an interesting one for Dr. Howard to begin to discuss with his staff as to how we go about that.

I don't know if there is any comment on the record you would like to make or, Randy, if you have anything you would like to add on that one. Okay. Just a small simple little sentence that carries with it God knows how much work.

No. 3 is a complicated one. Let me speak to it and then, again, if you have comments or Randy can speak to it. "NIOSH should recognize that SEC petitions often

raise science policy questions where science can inform the policy decision but that science may not provide the facts to govern these choices.

NIOSH should clearly articulate these policy choices and should compare the policy choices it makes in reconstructing radiation dose across SEC petitions against other occupational health policy choices."

This goes to things like the use of coworker data, the use of surrogate data where, again, these are not simply science decisions but they do represent policy choices that NIOSH makes.

Randy is saying, if I might paraphrase for her even though she's here, that NIOSH needs to clearly articulate these decisions and then it needs to weigh these decisions against other statements and other policies it follows in other aspects of occupational safety and health and, if there are differences, begin to articulate the

reason and the rationale for such differences. We will be talking more about surrogate data on Thursday, coworker data. I think this points goes to that issue.

Randy.

MS. RABINOWITZ: This is Randy Rabinowitz. I would add another layer to that which is where there's scientific information at stake and science can provide answers, then deference to the judgment of scientists seems most appropriate.

But when you are choosing among really policy inferences, different people can reasonably bring different conclusions to it based on their own backgrounds and experiences often from different disciplines. Scientists don't necessarily have any monopoly on making good policy choices in those instances. If the policy choices are clearly articulated, different decision makers may come to different conclusions even if the science done by DCAS is done well and done with high

professional quality, it's not a critique of their scientific work as much as just drawing a different policy conclusion from the same information.

DR. WADE: Bob.

MEMBER PRESLEY: Randy, when we do this now do we document this information so that down the road somebody can go back and say, "Yeah, this is what we did?"

MS. RABINOWITZ: More or less well depending. I don't think there's a consistent approach to it. I do think not being a scientist this may not be the greatest example but I'll try and offer one. There are certain uncertainties that surround all kinds of model. If you articulate what those uncertainties are, then it might be that the Board says this is more uncertainty than I'm willing to tolerate in my decision making. It's not that the modeling exercise was bad or it wasn't very sophisticated one but it's just that this is more than I think is reasonable

and different people can have different judgments about it. Having the debate be between DCAS and SC&A sort of masks the fact, I think, that it's really just a policy choice. Other people could equally participate in the choice without in any way diminishing the scientific quality of the underlying evaluation.

MEMBER PRESLEY: Thank you.

CHAIRMAN MELIUS: Can I just each back? I think if you look in both No. 2 and No. 3 there are some key terms that we as the Board struggle with every time we are reviewing either dose reconstructions and more likely the SEC evaluations.

Those are of sufficient accuracy, claimant friendliness, plausibility situation involved and so forth and that need to be narrowed down or not necessarily in a scientific way, though science would contribute to that, certainly to the sufficient accuracy but less so probably to

claimant friendliness. I think coming to some agreement and some guidelines on those I think would be helpful for everybody involved in this effort.

DR. WADE: I think if prudent ears listen to the deliberations of this Board over the years, there is much to inform that process but it needs to be done. It needs to be done and someone needs to put it down and then let this Board react to it or let NIOSH leadership react to it.

MEMBER CLAWSON: Lew, this is Brad. Also the one that we hear quite often is professional judgment. I won't take it away, but these all kind of run together in the issues that we deal with.

DR. WADE: Just keep your comments for one second. I take you to No. 9 on Randy's list which says, "NIOSH's heavy reliance on expert judgment to evaluate SEC petitions is an inherently subjective criteria in the sense that reasonable experts can

reasonably disagree about the outcome of any petition.

NIOSH should consider developing objective criteria to limit the exercise of expert discretion so that similarly documented exposures are treated similarly across sites."

Brad, I think that's your point. I think that's Jim's point. I think it's an important point. It's not an easy point. It's not an easy thing to do but I think it needs to be done.

MEMBER CLAWSON: Something that Mr. Presley brought up was understanding what the process and what has been done. One of the things we've seen in the dose reconstruction, and Stu is working on getting a better -- when we look at their dose reconstruction, we can't come up with how they did it because there's been so many changes to different work books and so forth like that in the process.

We're trying now to be able when

the dose reconstructor goes through this that he makes a paper trail of what was used so we can understand because we can't determine how he did it.

DR. WADE: I think a very important point Randy makes. It doesn't mean that those of us who have practiced this art before are bad people. It just means that we can do a better job, a more definitive job, a more repeatable job. I think that's important.

Now I'm going to buck you down to Nos. 19 and 20. "NIOSH should consider creating presumptions to be applied across all SECs. Such presumptions should be based upon objective criteria. Increased use of presumptions would create more timely uniform decisions on SEC petitions."

No. 20 says, "In developing presumptions under EEOICPA NIOSH should take steps to ensure that its policy choices under this program are either consistent with its

policy choices on related issues and other occupational health context are justified by the different statutes and regulations for each program."

When I asked Nancy for illustrative presumptions, you might be talking about dose reconstructions in the 1940s and early '50s. Maybe there needs to be a presumption about those years that apply across SEC petitions.

You guys have worked with Super S plutonium and issues related to that. Maybe these become presumptions that apply across SEC petitions and we don't have to go through each time and work those issues. Maybe we can apply them across the board to petitions that come in. I think that's Nancy's point. Correct? Randy. I'm sorry. My wife's name is Nancy.

MS. RABINOWITZ: I think a lot of programs use presumptions so you don't have to repeat it. I was struck with data from the

40s or internal thorium doses. The Board and NIOSH overwhelmingly SEC petitions are granted for the absence of internal thorium monitoring but there are few instances where NIOSH has modeled thorium doses in the absence of internal dosimetry.

One question I would have as an outsider is it seems like that would be ripe, fertile ground for a presumption. If you were going to part from the presumption, then NIOSH would have an obligation to just clearly articulate the rationale for not applying the presumption in a particular instance and it would make it easier for the Board to judge on a policy basis whether it agreed with that choice or did not agree with that choice.

DR. WADE: Thank you, Randy. Not a trivial discussion but one that needs to take place.

I take you all the way down to No. 27, one little sentence that carries with it a great deal of effort. "NIOSH should minimize

revisions to Site Profiles while an SEC petition is pending."

You know, it goes beyond those simple words. This goes to the issue of if the scientific basis for the evaluation of an SEC petition is constantly changing, then what burden does that put on the petitioners. The whole issue needs to be rethought. We lived through a number of situations where NIOSH says "I'm going to do it this way." The Board in its wisdom says, "Well, what about this and that?" NIOSH says, "I think I'll do it that way." Things change. It puts the petitioners in a very difficult situation and that needs to be thought through. I'm not saying that -- Wanda and I talked about fairness as a false god earlier today. I'm not saying that fairness is the answer to this but consideration of the position it puts petitioners in I think needs to be thought about by NIOSH as it imagines how it will conduct its business. Again, this goes back

to the tension between getting it done to the best available science versus the playing field as it relates to petitioners. I think that needs to be thought about. Or Randy thinks that needs to be thought about.

MS. RABINOWITZ: One other comment which is the more revisions there are to method, the more it suggest to me that we are not talking about scientific facts and we're talking about inferences and policy choices from science because reasonable people are disagreeing about the methods and revising them constantly. I think it's just an illustration of an area where we are treading not in fact but in science policy.

DR. WADE: Thank you.

CHAIRMAN MELIUS: I would just -- I noticed you left No. 8 off your list but you had many to choose from and they were good recommendation. I do think that is also key. I think it's not just in terms of the methodology. It's also in terms of data

availability. I think as we recognized in the last -- come to realize in the last year that despite a lot of efforts to gather all the data that DCAS and others think is available for a particular site, there always seems to be more data or new boxes discovered or more information. If SEC evaluations will stretch on for years, or the review of that stretches on for years, then I think we're almost bound to find new data along the way. That does really further because it's not just new methods. It's the new data that comes up. I think at some point going back to the recommendation on dose reconstruction, we just sort of have to close the books and say this is what we have now and let's reach a conclusion. I think we all recognize that in five or 10 or 15 years we may find more data. We may understand the science better in some way that these methods may -- what we thought couldn't be done in terms of dose reconstruction will now be feasible to do. We

may have to revisit this, or revisit an SEC as much as we revisit a dose reconstruction. I think there needs to be some closure in terms of that part of it also.

DR. WADE: Thank you. For the audience No. 8 says, "NIOSH should consider limiting the number of revisions it makes to its SEC petition analysis." The harsh truth be told, that is what I thought I put the star next to and I put it next to the other one but they both make the point. It's a terrible thing to get old.

MEMBER CLAWSON: Lew, this is Brad again. On No. 27 where it says, "NIOSH should minimize revisions to the Site Profile," it also is kind of a catch-22 because when we go into the SEC a lot of things change and it puts a lot of dose reconstructions on hold. This is where the petitioners really have a hard time understanding, "How come can't you work it?" Some of these SECs have gone on for four years or even longer.

DR. WADE: This whole issue of the tension of completing it, getting it as complete as -- well, finding the best available science and timing is, I think, a mega issue. It appears in dose reconstruction and it appears more here.

I'm going to skip over the quality of science recommendations because you are going to have your shot at the author Dr. Daniels come Thursday. We'll go to the seemingly innocuous but really not innocuous recommendations relative to quality of service. In my opinion, these are maybe the most vexing.

I'll take you to No. 7 which is --

MEMBER ZIEMER: This is Ziemer. Can I make one comment --

DR. WADE: Please, Paul.

MEMBER ZIEMER: -- on minimizing SEC revisions, or Site Profile revisions while an SEC is pending. I think in essence NIOSH does try to minimize the number of revisions

by waiting until all of the issues are resolved on a Site Profile before a revision is made.

That delay is actually implementing a number of revisions that have been agreed to. A case in point is General Steel Industries where we have agreed to a number of changes which would change previous dose reconstructions because when you make the change, then you have to go back and redo those dose reconstructions.

There have been a number of changes agreed to but they are not yet implemented because not all of the Site Profile issues have been resolved. In the effort to minimize revisions, you are delaying all of those things. Many of those are underway while an SEC comes into play. There is a down side to doing what No. 27 talks about. That is not making the revisions as you identify the issues.

CHAIRMAN MELIUS: Can I comment?

I need that recommendation. I agree with what you're saying, Paul, but I think that recommendation goes to the issues of that as part of the SEC evaluation review of that evaluation where DCAS then in response to the criticism then comes up with a new method which is essentially --

MEMBER ZIEMER: Which is driven by the SEC.

CHAIRMAN MELIUS: -- driven by the SEC. I think that is the problem. I agree with you that if it's another issue and there are problems with the contracting process. They may have already charged ORAU or whoever, the contractor, with making changes to the Site Profile. You don't want to stop that process.

I think when the change or what is going on in terms of Site Profile or dose reconstruction methods is directed at the major issue that is under consideration for the SEC that it becomes problematic because

you keep changing it.

We've had SEC Evaluation Reports that basically say, "Well, we're going to try this method. If this method doesn't work, we'll get this data. If that method doesn't work, we'll try a third time." I think that part of it is the more problematic part. It's not looking at something that is just an agreement that dose reconstruction can be done but it could be done in a better way and the recommendation goes to that.

DR. WADE: The motivation to get it right or to get it complete is a good one but it goes against another value and those values need to be laid out and decisions made.

I would like to put on the record one very interesting finding from the DR piece. About 20 percent of the dose reconstructions that NIOSH does it redoes for whatever reason; change in science, new cancer, or new employment, 20 percent.

Of that 20 percent 10 percent have

resulted in the Probability of Causation going from below 50 percent to above 50 percent so there is benefit to all of this rework. One just has to put it in context. Enough said on that.

If we go to the quality of service No. 7, I won't read you all the words but just the first sentence. "Not making changes to dose reconstruction because no DOE records were found seemed to indicate that DOE records are more accurate (and I would add parenthetically and more important) than worker comments."

We've all heard this. I think the recommendation needs to be considered by NIOSH leadership where workers say, "I remember this." They seem to come away with the feeling that their comment doesn't carry the work of some record.

Maybe that's true but that communications issue needs to be dealt with. It's not trivial. It's a terribly powerful

point that was found here by Ms. Chang and I think it needs to be talked about.

No. 10 reinforces something I think Brad or Phil said earlier. That is people feel they need more tutorials and workshops available to them to understand what's going on. We can always do a better job of bringing information to those we serve. I think that is a point that's made here and I think it's a powerful point.

No. 13 and 14 is the last I'll touch upon here. It basically speaks to the fact that through the CATI process submission of work history, although voluntary, they seem to place a great burden on the worker and a burden that is hard for them to meet because they are just a person without the resources of a government agency or a contractor. This whole idea of burden and where burden falls, even if you could say you don't have to do it, it seems in people's mind that it's in their best interest to do it, and yet there's a

burden for them to meet that is hard for them to meet. NIOSH needs to think about where this burden is placed and how we might assist in their carrying of that burden.

Phil.

MEMBER SCHOFIELD: I would like to make one comment to that. Many of these cases, particularly some of the older facilities, you didn't talk about what you did at home so your families don't really know what kind of work went on behind those gates. Because of security concerns you weren't allowed to share any of this information. That puts a great deal of burden on people who have no way of knowing what happened.

DR. WADE: So I think this whole issue of burden needs to be thought about.

That's the end of the recommendations I would highlight. In the minute I have, let me make one promise to you. Dr. Howard will meet with his leadership. He'll come to a list of recommendations that

he thinks should be implemented and a draft list of recommendations that he thinks should be implemented and some beginning thoughts as to how those recommendations should be implemented. The Board will see that in draft form before it's final. You will get to react to Dr. Howard's reaction to this list of 87 and you'll have another opportunity to say, "I think you left out something terribly important. I think your approach needs to be modified." So you'll get another bite out of the apple when this comes back to you. Again, Dr. Howard meets with his people in early June. I don't know if we'll have something for the next Board call. Certainly by the next Board face to face you'll see a draft of Dr. Howard's implementation plan and you can react to that. Again, sorry for the long-winded tutorial but I think it was worth sharing this with you. Individual comments, collective comments. Again, remember that we value the transparency of this exercise.

Anything you want to say to us as individual Board Members, please say on the docket as well so everyone can read your comments. The docket will remain open for individuals to make comment on not only Phase I but also Dr. Howard's draft Phase II. Thank to the Board for their forbearance today, but also for the tremendous foundation you've provided for the conduct of this review. You have to see clearly your hand in the basis of what was done here and I commend you for your work.

CHAIRMAN MELIUS: Don't leave yet.

Mark, are you still on the line? You have one comment. Mark was going to be on and off this morning. If not --

MEMBER GRIFFON: Yeah, I'm on.

CHAIRMAN MELIUS: Do you want to make that comment?

MEMBER GRIFFON: Which one? I have several.

CHAIRMAN MELIUS: Oh, go ahead.

MEMBER GRIFFON: Looking at the

last section you presented, Lew, I was looking at Item 3, and also later in that section, Item 13, a couple things struck me. In my opinion this is more than just a communication issue with the claimant.

There is serious consideration around the impression that they can provide that and it can be useful in the overall program of dose reconstruction. The same, I guess, for Item 13 with the CATIs.

I think that is something that we touched on in the Dose Reconstruction Subcommittee as well for our first 100 cases review. The other thing that strikes me is that those two items are in the quality of service section rather than dose reconstruction section.

I wonder if that is something that sort of is reflective of how NIOSH is perceiving the use of that information. It's more of a service to customer issue rather than a serious information resource. I just

wanted to make those comments.

DR. WADE: Point well taken. I would encourage you to read this change report where what she tried to do was listen to new information that was presented by people in CATI and then follow that through to see whether or not NIOSH reacted to that information or used that information.

That's the basis of the points Mark is making. I never thought about what you said, Mark, as to where it appeared and whether that speaks to a mindset. I think there is something maybe there to think about.

CHAIRMAN MELIUS: I agree. I thought her report was very useful. Mark's other comment, earlier comment I was referring to, was in Randy Rabinowitz' report on the SEC was No. 24 he wanted to highlight also. "NIOSH should reduce delay between filing of a claim and decision that a petition under 83.14 should be pursued." That may be more of a process now but I think it speaks to the fact

that we've had these long delays for giving up on some of these 83.14s, or in terms, I think, developing the information that would be needed for doing dose reconstruction. I'm not sure how many of those are left but on an ongoing basis I think it would be helpful. I think DCAS has been improving at doing that.

DR. WADE: This goes back to the early triage, sites with large numbers of cases and putting focus on those and let some of the smaller sites to later in the queue. I think that's partial explanation but I think it's a good part. All of these will be considered.

Ma'am.

MEMBER BEACH: I have a question. It looks like you've gotten quite a few comments from workers on the docket. I know from the Board and other folks some of them are making it into the report. Some of the comments may be important but not to the level of getting into these reports. How are you

handling those comments to get back to the public based on the comments that they've made?

DR. WADE: Well, first, the comments that come in are sort of triage to the authors for consideration and then inclusion. I think at the end of the process it would be incumbent upon us if possible to respond back to the author saying, "We heard your comment. We modified the report in a certain way." Or, "We heard your comment and we didn't modify the report." In some cases we don't know who made the comment.

MEMBER BEACH: Oh, is that true?

DR. WADE: Where possible I think we would try to close the loop at the end.

MEMBER BEACH: Okay.

DR. WADE: Right now we're sending the comments to the appropriate authors. They are to be included in the appendix of each report and the report is modified based upon the office consideration as to whether it

should be done or not.

MEMBER BEACH: I guess I was interested in the ones that didn't make it to any of the authors but it sounds like you --

DR. WADE: If it hasn't been given to any author, it would appear in the final summary. All the comments will appear. If we didn't think it related to one of the five sections, then it wasn't dealt with but it would be included on the record.

MEMBER BEACH: I read some of them and they are in a great deal of detail. Thank you.

DR. WADE: Thank you.

MEMBER CLAWSON: Lew, I have one more. On 27 where NIOSH should minimize the revision Site Profile, that also falls under something to the Board's responsibility, especially as a Work Group chair myself. When we go through this SEC process, we may have 20, 30, 40 different changes to the Site Profile from the information that we receive

but then we've got to go back -- say an SEC was granted, we've got to go back to the Work Group and assure that these changes were made, too. I think that falls under the Board's responsibility.

DR. WADE: This was not undertaken as a review of the Board but we're in this together.

MEMBER CLAWSON: That's part of the thing is NIOSH takes that on but then we don't see anything after that.

DR. WADE: Enough. Thank you.

CHAIRMAN MELIUS: Thank you, Lew.

Next on the program we have an update from Department of Labor. I'm not sure how you're going to do this. We have a new person, a new face. Welcome, Gary Steinberg, who -- I'm not sure of the exact title but it's at the Department of Labor. I should know this. I've heard you speak a few weeks ago and I've already gotten the title. Welcome, Gary.

MR. STEINBERG: Thank you. It's a pleasure to be here. Good morning to everybody. I guess I want to start by congratulating you on your 77th meeting. I think that is certainly reflective of the enduring value that the Board has and the important role that the Board has in terms of working with us in DOL, working with NIOSH, working with Energy, and to carry out the program in a highly effective way.

My name is Gary Steinberg and I'm now the Acting Director for the Office of Workers Compensation Programs. I guess I'll put it into context. As I shared with you just a couple of weeks ago, I'm new to DOL but I'm not new to the federal government. I've been in the federal government for 21 years.

I spent nine years at NASA so I know a little bit about science but more of the rocket science and the space science side of things so I've had an opportunity to support the Aeronautics and Space Program.

I spent about three-and-a-half years actually at HHS in one of the headquarters organizations, and nine years at the Department of Veterans Affairs. In that respect, if you will, providing health care and benefits as the Deputy Assistant Secretary for Planning and Evaluation looking across all of the programs in terms of where the organization should be going and how the organization can better serve the veteran population and their families.

One of the opportunities, though, that I had when I was at VA was to look at the Department workers' compensation program and the safety program. These were programs that really were in difficult straits.

Our IG had done a comprehensive review of the workers' comp program and determined that there were a number of major flaws with the operations of the program, communications, training, a whole variety of different things.

We endeavored to, if you will, evaluate the program and we put together a strategic plan and an implementation plan. This was all new to me but, quite honestly, I was asked to lead the implementation of the plan once it was developed.

Over a four or five-year period I developed, if you will, a great appreciation for the importance of all different types of workers' comp programs. The reality over a five-year period we became a best practice and that's where I met Shelby Hallmark, the individual who brought me to DOL and who suggested that I be his successor.

Shelby's thought was with the hands-on experience at the Department of Veterans Affairs dealing with, if you will, both planning, operational issues, and implementation that I could bring some of the best practices to DOL for not only the Federal Workers' Comp Program but for the other programs that we have responsibility for as

well including the Energy Program, the Black Lung Program, the Long Shore Program, and the DBA Program where we provide service to civilians who were supporting the government. That's exactly what I hoped to be able to do.

With that, I really would want to turn and applaud Stu and Lew and others at NIOSH for after 10 years taking a comprehensive look at their aspect of the program and really being able to look and coming up with 78 initiatives.

As you suggested, there are probably more that have been melded into the 78 but you have an opportunity to really look at where are we now. How do we move forward after 10 years of operations.

How can we improve operations. How can we improve efficiency. I've heard talk about how we improve customer satisfaction. That is something core to what I want to achieve at DOL as well.

I won't go into the specifics of

what we do at DOL because you already know. I know that Rachel and Shelby have talked to you in the past. Let me talk a little bit about some of the things that I view as priorities as we move forward and I think they directly correlate with the conversation that you've had thus far this morning. I think we're in lock step and moving forward.

In organizations that I've gone into and, again, I've been a senior executive for 13 years, and oftentimes brought into organizations that have problems either from an operational perspective or a customer satisfaction or an employee dimensioned perspective, I don't think we have that within the Office of Workers Compensation Program but I do think we have an opportunity for continuous improvement.

I think that's what NIOSH is looking at as well. In that respect I really see four overarching themes that we're going to be looking at across all of our OWCP

programs. The first is maintaining high levels of customer satisfaction.

I've only been there for six months but one of the things that we've already instituted is a new electronic customer satisfaction survey. It's not highly complicated. It has seven questions to it. We're looking at, not if you will, the outcome and the decision with regard to a particular claim but the nature of the interaction.

Was our staff responsive, did they provide a timely response, were they knowledgeable, were they able to provide answers, were they courteous, and what was the over level of satisfaction with regards to the engagement and the interaction.

I think it's important we look at that for anybody who wants to share with us the good, the bad, and the ugly because the good we can enhance. The bad and the ugly, well, we need to be aware of that so we can improve on things.

I don't think we have too many bad and uglies with respect to the nature of the interaction. Clearly we are going to have individuals who are frustrated on any one of our four programs when their claim is denied.

I think what we're talking about here in terms of making sure that we have a good science based decision as to acceptance or denial, that's fundamental to what we're doing. Customer satisfaction, I think, is job one from my perspective.

Two is continuing to enhance our operations and our effectiveness. I talked about continuous improvement. I don't think that any of the programs that we have responsibility need to be re-engineered. They don't need to be blown up and restarted.

They need to be continuously improved and we're going to be looking for ways to continuously improve our operations, our implementation, improving timeliness, improving quality, improving the nature of the

interaction with our claimants. Improving internal and external communication.

That is something that you talked about in terms of the dialogue, not only with the claimants but with the stakeholders as well. I think even with a program that is 10 years old there is always an opportunity to improve the level of engagement, improve the level of communication because things change and people need to receive information as the program changes and the requirements change and so forth.

That's going to be the fourth priority. I'm sorry, the third priority. The fourth priority is working with our internal workforce. I think, as everybody knows, within the federal government we're, if you will, at a cusp of the detention for retirement.

I want to make our office an office where people want to come to work, where they feel motivated, they feel excited,

they feel rewarded, and they want to keep doing the great work that they're doing because I think by in large we have a passionate and highly dedicated workforce and I want to make their work environment even better for them.

Those are really going to be the priorities that we're going to be focusing on in the years to come. I think it coalesces from what I've heard from NIOSH. I hope these are concepts and theories that you endorse and over time we'll provide you with updates in terms of how we're progressing as an organization.

When I look at those four priorities, two of the things are really fundamental to where we are moving forward on the energy program. The first is obviously outreach and community. I know that Rachel and her leadership team have endeavored to develop the joint outreach task force working hand-in-hand with NIOSH, with DOE, with our

ombudsman.

You play a role in that as well in terms of the Board and in terms of your findings and recommendations. We need to be able to communicate to both stakeholders as well as to claimants. That's a core function in terms of moving forward.

It's something that I endorse and it's something that we're going to be monitoring and hopefully, again, we'll be able to share more with you in terms of how that's progressing, where we are experiencing successes.

I welcome input from you in terms of areas where you think we can do a better job in terms of communication and outreach both in terms of the fundamental tenants of the program, what the eligibility requirements are, what the process is, but also the changes that are taking place as we look at the SECs and we look at other aspects of the program.

The other areas from an

operational perspective. Lew in his discussion talked about timeliness. Obviously that is something critical from our perspective as well. It shouldn't take three years to make a determination. It's something that we should be able to do much sooner because lives depend on this.

The well being of individuals depend on this and it's something that we need to do as quickly as we possibly can. Clearly one of the things that I'm going to be working with with Rachel with the help of you and others is how can we make our process more timely, more effective.

How can we maintain the high levels of quality that we have. Those are two of the things that I think have even been reinforced this morning that we're going to be focusing on as we move forward.

Before I turn the podium over to Rachel, I guess I wanted to acknowledge just a couple of people. With me today is Jeff

Nesvet. Jeff has been the counsel, the associate listener on this program since the onset. He was involved in the development of the statute.

I would suggest that there are a lot of attorneys in the federal government, as we all know, but I think he's one of the best. I've worked in four different departments. I think it's a rarity when you have an individual who is so well versed on both the program as well as the law. I encourage you to spend some time talking with him over the day.

Janette is our regional director in Denver. I think she does a marvelous job in terms of the interaction with the stakeholder community, with the claimants and so forth. She volunteered her and her staff to come and help with some of the administrative work over the next couple of days.

I think that is emblematic of the

nature of the program and the people that we have. Then I'll finish off with Rachel who in the short time that I've known her this is the future of the government.

This is the type of people that we need to nurture and grow because she's passionate about the program day in and day out, both of her employees as well as the claimants that we serve as well as the stakeholders that we work with.

I'm very pleased now to turn the podium over to her. She's going to talk a little bit about some of the things that we're moving forward with and some of our priorities. I look forward to the opportunities to talk with many of you during the day.

Although this is your 77th meeting, this is my first meeting. You can count on me being at more of these meetings. I'm passionate about serving the public. That's why I came to work in the federal

government 21 years ago.

I think the Department of Labor is the foundation of what serving the American public is about. You an expect to see me for many more years to come. I applaud you for the work that you're doing for the individuals who have supported the country in terms of our nuclear weapons. Thank you and I look forward to working with you in years to come.

MS. LEITON: Thank you, Gary.

I'm very happy that Gary is with us. I think he's going to lend some positive support to the program. I think we are going to be able to work closely together on some improvements on customer service and various other factors in service to our workers.

Before I run through the presentation, I just wanted to mention a couple of things we have done in the last year. We did have a customer service satisfaction survey that we conducted last year with all of our -- well, random

selections of claimants. That included survivors.

It included people who were denied benefits, who were accepted benefits, who had hearings, who had not had hearings just to ask them what their experience was with the process, with the letters that they got, with the communication with our hearing reps and our district office staff.

The results of that were actually not -- they were fairly positive in that 71 percent of them said they would recommend the program to others. Of course, we found that the ones who had been denied benefits were a little bit more frustrated than those who had been approved.

One thing in particular that we did take away from it, as I believe Lew Wade had pointed out, is the complication of the program and the frustration with the claimants with the process. They don't understand all the various complexities. That's one of our

priorities that we've been working on in the last year is to try to make it a little bit more understandable.

We revised our procedure manual for our claims examiners combining Part B and Part E. As you know, we've had -- you may or may not know we've had two separate procedure manuals since we had two separate programs but it's really one program.

We revised that and we've combined it, updated it with various changes that have occurred over the years. That's currently online for everyone. It's helpful for our claims examiners.

In addition to that we are about to publish a new recommended decision chapter which kind of makes the process for how we explain the decisions a little bit easier for the claimants to understand I'm hoping. Basically the format is a little bit more claimant friendly.

Various little things like that we

are hoping to make a difference. We've also developed more brochures that explain wage loss, impairment, our process for recommended decisions and final decisions. Those are the sorts of customer service activities that we're engaging in at the moment to just try to help them understand, the claimants understand, our process.

We are also going to be conducting some more training at our district offices that actually conduct training on a regular basis that they have new staff or new procedures come around.

Our national office staff is going to go out and talk to our claimants and families, train them a little bit on various factions of the program that may be more complex than others. I'm hoping that will also help to improve customer service.

As Gary mentioned, we have new goals that we are going to be looking at for Fiscal Year '12. High priority goals with

regard to overall processing times from beginning to the end of the process. NIOSH looking at your processing time will affect our processing time in terms of those goals in the years coming forward.

I think we've seen improvements in the amount of time that it's taking at NIOSH. I think working together with NIOSH we'll be able to improve that overall for the claimants who are the ones that become the most frustrated with our processes and our processing time.

In addition, our website we are looking at ways to make it more claimant friendly, help claimants so that maybe they can determine and have a better understanding exactly what the process means, where their claim might be in the process, that sort of thing.

We also have a new medical director in the last year who has been working with us on medical directives. She just

conducted training with all of our district offices. She is still in the process but I think she's almost done.

Just on some basic concepts, understanding better some of the cancer diagnoses and all of our Part E conditions. I've heard from the districts that's been a pretty beneficial training for our claims examiners.

She's also working with our district medical consultants and having regular telephone calls with them so that their reports are a little bit more consistent across.

It's always difficult for doctors to have the same format and they are obviously not going to have the same opinions but understanding what causation means and that sort of thing, what we are looking for in our reports and how we can best serve our claimant population. Those are just some of the things that we're looking at right now, what we've

been moving forward on.

Now I'll go through our presentation. As most of you know, the program was enacted in October of 2000. We had a Part B and a Part D at that time. Part D was administered by the Department of Energy. Then in 2004 they abolished Part D and they created a federal program called Part B. All of the cases that were with Department of Energy were transferred to Department of Labor to administer Part E.

Over the last 10 years we've had almost 144,000 cases filed. Now we've just hit over $7 billion of compensation paid to date. As you know, we have four different federal agencies involved in the program, Labor, Energy, HHS, and Justice.

We do have four district offices in Jacksonville, Cleveland, Denver, and Seattle. Our Washington, D.C. national office is in our Final Adjudication Branch. As I indicated, of the $7 billion we have a

majority in Part B. The rest are in Part E and 11 percent of that in medical.

For the number of payees that we've actually been able to compensate, a majority, again, are Part B cases, 60 percent and 40 percent for Part E.

There are very important distinctions between Part B and Part E with regard to employment factors. That would be that under Part E just DOE contractors and subcontractors and that's also under B but B is more inclusive in terms of coverage for DOE federal employees, Atomic Weapons Employers, beryllium vendors. Those are not covered under Part E.

The relevancy to a case that is accepted from NIOSH if it's a Part B case, it's going to be accepted under Part E but they have to have met these eligibility criteria under E so those AWEs will not be covered. RECA, Radiation Exposure Compensation Act, is covered under Part B.

Again, very important distinctions between the two parts are the covered conditions. Under Part E pretty much essentially any condition that an individual develops that is related to toxic substance exposure would be covered. Under Part B there are only four conditions; that's CBD, beryllium sensitivity, chronic silicosis, and cancer.

Survivor definition is also different under Part B and Part E. As you can imagine these differences are rather frustrating and confusing to claimants but that's the way the law was written. We try to explain it to them as best we can. Basically adult children are covered under Part B and they are not under Part E. That's the main distinction there.

Benefits between the two parts. Under Part B there's a lump sum compensation of $150,000 for an employee survivor. For RECA employees it's a $50,000 lump sum. Under

Part E it's impairment and wage loss.

Impairment is $2,500 per percentage of whole person impairment as determined by a medical physician and testing that's conducted. Or wage loss which is between $10,000 and $15,000 depending on the level of wages that were lost as a result of the covered condition. For survivors under Part E it's $125,000. The cap is $400,000. The main difference for Part E really is that they can receive ongoing compensation.

If they have an impairment and then it worsens over the next two years, they can file again. And the same for wage loss. That can be an ongoing benefit which is different from Part B which is just lump sum compensation.

Some of the challenges that we have are probably similar to the challenges that NIOSH has with regard to the data that is available out there. One of our challenges is to verify employment and obtaining records.

We go to various lengths to assist claimants in verifying this employment that's going to the Department of Energy first and foremost. Then we also have access to the ORISE database which has various information about where people worked.

The Center for Construction Research and Training, CPWR. We also look at corporate verifiers, SSA wage data and affidavits. This becomes very important, as you know. When it comes to SEC Classes trying to place people in particular locations can be a challenge. A Class Definition is very specific, that's where we run into challenges at certain times. We try to work as closely as possible with NIOSH to let them know where our challenges may lie.

MEMBER FIELD: Can I ask a question?

MS. LEITON: Yes.

MEMBER FIELD: For Social Security wage information do you have data prior to the

70s?

MS. LEITON: They have --

MEMBER FIELD: Employer specific?

MS. LEITON: Yes. Well, they do. Often times that data is more scare that they have to go back to microfiche. They can do it. It's a little bit more time consuming and it's usually a certain cutoff where they divide it into quarters, when they don't, but we are able to get information from them.

Okay. Dose reconstruction probably causation. Obviously dose reconstructions are conducted by NIOSH and determine the level and extent of occupational radiation dose. A Probability of Causation is undertaken which is a scientific calculation of likelihood that radiation exposure, cause of cancer.

Department of Labor uses the NIOSH IREP database system to determine the PoC based on the dose reconstruction what is conducted by NIOSH. If once we have used that

report and plugged it into the program, it's 50 percent or greater, then an individual is compensated. Otherwise, they are not.

Special Exposure Cohort. Probably don't need to go into this too much, as you all know, but it's a worker group designation of presumption that the occupational radiation causes cancer. You have to have had 22 cancers that are named in the law. If you don't, hopefully there's a partial dose reconstruction available to the employees.

There's also employment work criteria. In the majority of cases that's 250 workdays having worked in a particular location for a particular time frame that is defined by HHS. If an individual is determined to have fit into that Class, they do not have to undergo dose reconstruction.

There were four legislative SEC Classes at three gaseous diffusion plants plus Amchitka. NIOSH also designates new SEC Classes and thus far there have been 72

additional SEC Classes added as of May 24th. We adjudicate the SEC Classes but we have no role in the actual designation of those Classes.

Just some of our statistics here. We've approved overall 32,000 cases and about 22,000 have been denied. A majority of the reason for that is the PoC less than 50 percent under Part B. Then the second is that sometimes we do not get enough medical evidence to support the claim.

Part E briefly. As I indicated, you have to establish that any toxic substances they were exposed to in the work place caused the condition, caused, aggravated, or contributed to a condition and the causation standard is at least as likely as not.

We have various tools that we work with to establish causation under Part E. We conduct occupational health questionnaires with the claimants, either the employees or

their survivors. We've developed a Site Exposure Matrix which is basically a tool that is used by our claims examiners.

We found that early in Part E our claims examiners weren't able to place people. They weren't able to determine what they might have been exposed to. The claimants were having a difficult time providing us with that information.

Although it's their burden, we wanted to help our claims examiners and help our claimants to try to establish exposure so we developed the Site Exposure Matrix working in close collaboration with the Department of Energy.

It's basically a database that provides information about facilities, the buildings that were there, what types of exposures might have been there. Then there's a link to Haz-Map which is a relational database which determines in some cases what an individual might have been exposed to that

was related to a condition.

The SEM is not an end all and be all. It's just a tool to assist the claims examiners in adjudication and development of the claim. We also rely on the document acquisition request from the Department of Energy, Former Worker Program work history interviews, CPWR. The DOE had position panel findings from Part D that we also used in this determination. We also rely in some cases on affidavits and facility records.

Under Part E this is our distribution for final decisions. We have approved almost 27,000. We have denied about 22,000. You'll see here that the PoC is a factor in some of these denials. For cancer cases related to radiation we do rely on the dose reconstruction process for Part E.

We will be able to accept a cancer if we determine that a different toxic substance other than radiation caused it. In a lot of cases since it is an "at least as

likely as not" threshold we do rely on dose reconstruction for that.

This is our information on the NIOSH referral case status. As I indicated earlier, I believe there's been a lot of improvement over the last several years in terms of the timeliness, the amount of cases that have been returned from NIOSH. We've had 34,000 referrals and 32,000 have been returned, some with dose reconstruction, 4,000 without dose reconstruction. Our records indicate there are approximately almost 2,800 cases that are currently at NIOSH, 2,100 of which are initial referrals and 668 which are reworks or returns to NIOSH.

I know that Jeff has been through this with you before. Our statistics sometimes are a little at variance with NIOSH's but that is partly because of the way we define certain items.

SEC Classes that had been added. There have been almost 3,300 cases withdrawn

from NIOSH for SEC Class review. We've issued almost 3,000 final decisions of which almost 2,900 have been final approvals. Right now we have 24 recommended decisions awaiting final decision.

There are 80 cases total pending from all the SEC Classes and 275 cases were closed. Either they weren't eligible -- for some reason they were not eligible. We also have five new Classes that were just added and we're working on the bulletins for those. We've actually been very successful in meeting our goals.

Once an SEC is created we have very specific goals for issuing a recommended decision, particularly in those that have been screened and determined will likely be in the Class. They have 60 days to issue a decision on that case. We've been measuring that and have been successful.

We've been very lucky to have been able to work closely with NIOSH in developing

lists, on pulling back cases that may be there. Our claims examiners are trained now and have a pretty good understanding of exactly what they need to be doing to screen through these cases and pay the individuals that should be approved as soon as possible.

NIOSH dose reconstruction case status. This is just a breakdown of what I basically said before. A majority are denials for dose reconstruction cases but it's about a 35 percent approval.

Part B cancers with a final decision to accept. Accepted dose reconstruction cases about 7,600. SEC cases obviously are the majority, 13,000. Then we break it up a little bit. In some cases we have a 50 percent or greater and an SEC status just because there might have been an acceptance under dose reconstruction and then an SEC Class was added or a new cancer was added, or something along those lines.

Part B cases sent to NIOSH.

Monthly this kind of gives you a general idea. As you can see it's pretty steady at this point. We are getting to a steady state at the Department of Labor with both Part B and Part E. It hasn't fluctuated very much in the last year. New Part B cases received monthly. Again, this is just another breakdown that shows pretty much a steady state of receipts.

Top four work sites are still Hanford, Y-12, Oak Ridge, and Bethlehem Steel. We've got some breakdown of these statistics. You can review them at your leisure but they are declining slightly over all in these four top facilities. I think it just might be that we've gotten all the cases that we can in some of these situation and we are working through them.

This is just a breakdown of AWE cases versus our DOE cases received monthly. While they are still pretty steady, we had a little uptake in April but AWEs are always smaller because they are smaller facilities

and we don't get as many cases from AWE facilities.

This is just a run-through and you can look at these on your own. These are the cases that we've received and the claims that we've received from the various facilities that are under discussion with the Board. The majority have been from Hanford, Savannah River Site, and then FMPC. The rest are smaller but steady.

Then Part B cases filed. The majority are NIOSH cases. Well, it's a good portion. Thirty-five percent are NIOSH cases and 36 percent other.

That's really all I have for the presentation but I'm happy to take any questions you may have.

CHAIRMAN MELIUS: Board Members with questions for Rachel or Gary?

Yes, Brad.

MEMBER CLAWSON: I was just wondering if a person filed under Subpart E

and then receives a letter from you stating that they are waiting pending a dose reconstruction, or it's under Part E and it doesn't need one, why would that be that way? Is that verifying employment or --

MS. LEITON: No. Actually, the only time that we would be waiting for a dose reconstruction under Part E is if it's for a cancer case for radiation exposure because the definition as the law states is "at least as likely as not" which we have defined to be a 50 percent or greater threshold.

For radiation it would be inconsistent to be saying for radiation that at least as likely as not threshold means something different. It means the same. It is confusing for claimants. It's the way for consistency purposes that we've interpreted the law.

It's a relation state. Basically for anything else other than radiation for cancer cases, we need to rely on the NIOSH

dose reconstruction due to the way the definition reads.

MEMBER CLAWSON: The reason why is because this was actually a harmful substance. He was a decon tech is what he was. His dose levels weren't that high but the chemicals that he dealt with and that's why he filed under like --

MS. LEITON: We would look at that separately. If there are other toxic substances besides radiation, we definitely look at that and there are instances where we'll accept a cancer case that is related to somebody besides the radiation when the dose reconstruction is below 50 percent.

CHAIRMAN MELIUS: Phil.

MEMBER SCHOFIELD: When you use the SEM database how is that applied because a lot of these people have no idea what chemicals they're exposed to and, in some cases, we're talking an excess of 10,000, 15,000 different chemicals. How does that

apply to a claimant's case?

MS. LEITON: Well, basically we look at the job category, where they worked, what buildings they may have worked in and that narrows it down in the database. If a person files and they worked at Hanford, we can talk to them and say, "Do you know what building you may have worked in?"

Or even if we don't know what building they may have worked in, if they know what job category they worked in, that may narrow it down to what buildings. Within those buildings and within those job categories we've been able to gather enough records to establish these are the things that likely this person would have been exposed to in this building in that job category.

As I said, it's not the end all and be all and we are always updating it. We take information from the public and we are constantly doing research with DOE records to update it. It is a struggle for the claimant

and that's part of the reason we developed this Site Exposure Matrix was to help them determine -- help us determine what they might have been exposed to.

MEMBER SCHOFIELD: Let me throw out this scenario. You have people who for whatever their job category is may not directly work with the chemicals but they go through these laboratories. They go through all these rooms with all these different chemicals maybe once or twice a day. They are taking recordings.

They are checking security, checking doors, whatever it is, but they are in these facilities day in and day out. Even though their job category doesn't say they work with these chemicals, they are around them constantly.

MS. LEITON: That's part of the reason that we do occupational history questionnaires. It's also part of the reason that the Site Exposure Matrix is not a

decision making tool. If they are not in there, if their job -- you know, if they say they may have been exposed to something, in particular when they say it, their doctor says it, their records show it, and it's not in the SEM, we don't rely solely on the SEM.

In some cases we've had cases referred to national office where we have industrial hygienists that will review the information, the specifics of the case, and say this is what we determined. This person likely would have been exposed to for this duration.

Then we make a causation determination based on medical evidence using whatever resources we can to get that medical evidence. The SEM is just a tool when we don't have other information. If it's not in there, we will seek further information. We will not deny it based solely on the SEM.

CHAIRMAN MELIUS: I have a couple questions and actually a couple requests.

I'll start with the requests. The information, the new communications information you've talked about for claimants, could you share that with the Board when that's ready because it would be --

MS. LEITON: Sure. You mean our brochures?

CHAIRMAN MELIUS: Brochures and so forth. I think it would be useful given we do the public comment periods and just for us to understand how you're communicating there and hopefully we can --

MS. LEITON: We can send you the weblinks with that information on it.

CHAIRMAN MELIUS: Whenever that's ready.

The second request is sort of related back to Lew's presentation. One part of the Quality Assurance Program for dose reconstruction is the review that is done by DOL as cases go and then the reworks that you ask for.

I think a number of years ago we got a presentation from DOL on cases that were referred back sort of by category and so forth. Pete Turcic came in and did that. Maybe my memory is off. I think that would be useful at some point.

MS. LEITON: The number of reworks?

CHAIRMAN MELIUS: Well, number but also classify why were they sent back.

MS. LEITON: Right.

CHAIRMAN MELIUS: I think it helps us understand is there something because we have our own program for reviewing dose reconstruction. It's a little bit different obviously. I think it's useful in terms of understand the process and so forth.

It may not have changed and a lot of it is just new information becomes available on the second cancer or job site information or whatever. I think it's helpful for us to understand that at some point.

Third item is actually a question and that is the Rocky Flats issue with Ruttenber Data.

MS. LEITON: I know this has been a challenge for a while now. We keep telling you that we're going to get you an answer. We actually are much closer. We've been working with NIOSH on this. Our struggle currently is what the neutron dose means in the Ruttenber database. We are working with NIOSH on that determination.

In terms of the buildings, we are also working with DOE. I was hoping to have an answer for you today. I really hope to have an answer to you by next time.

CHAIRMAN MELIUS: Okay. Thank you. We'll ask again next time.

MS. LEITON: I'm sure you will.

CHAIRMAN MELIUS: Okay. Then my final question goes back to, I think, part of the hardest issue we have, at least from the Board's perspective, in working with you, and

it's just a difficulty we share, and that's the Class Definition issue that comes up. We struggle with it.

I think we've gotten better with it over the 10 years or so but it still is a problem trying to come up with -- one is for us to define a Class in conjunction with NIOSH on a particular site is re-review the information site and then how do you turn that Class into something that's workable or useable by the Department of Labor.

I think it's probably best discussed on individual cases because every situation is different in terms of what is available but it's certainly something we would like to continue to work with you on and communicate as much as possible on so we sort of get the intent of the SEC turned into something that you can implement.

MS. LEITON: Right. I do really appreciate those efforts and the efforts of NIOSH to share your ideas on it. Our biggest

thing is always can we place them there. If DOE can't provide us with records or we don't have any other methods to get them in a particular location that has made the Class, then we are going to have to deny these cases in which case it kind of defeats your purpose. I do appreciate that collaboration.

CHAIRMAN MELIUS: Thank you.

Paul or Mark on the line, do you have any questions?

MEMBER ZIEMER: Dr. Melius, I have a question.

CHAIRMAN MELIUS: Yes.

MEMBER ZIEMER: First, let me thank both Gary and Rachel for their excellent presentations.

Rachel, I would like to ask a question that has been kind of an ongoing question of mine over a number of years but I'm going to ask it in a slightly different way. It has to do with the final number that cranks out of the Probability of Causation

calculation, the IREP Program.

I'll ask it this way. Does Labor have an official policy on the number of decimal places to which they make the calculation? The reason I ask that is I've always maintained that two decimal points are unjustified by the uncertainty in the calculation.

I believe one is also unjustified. The question boils down to why aren't we going to simply whole numbers? The official policy on that that demands two decimal places is a misleading figure in my mind.

MS. LEITON: I'm going to have Jeff Kotsch help me with this, our resident --

CHAIRMAN MELIUS: I thought that is why Jeff Nesvet came. We haven't seen you for a number of years.

MR. KOTSCH: Jeff Kotsch, DOL. We still adhere to the number of decimal points that NIOSH provides is generally the way the output comes which is two decimal places.

MEMBER ZIEMER: Is that a policy -- or an official policy?

MR. KOTSCH: I have to hesitate.

MS. LEITON: I think we basically adhere to what NIOSH --

CHAIRMAN MELIUS: Legal counsel is really going to --

MEMBER ZIEMER: They really show me that Labor has to make the decision on that issue.

MR. NESVET: Well, I think this is something we'll probably have to talk to NIOSH about. One has to keep in mind that the Probability of Causation regulations are regulations that are issued by the Department of HHS, not the Department of Labor. We do our best to interpret those regulations and we clearly work with HHS in shaping them. Some of you folks recognize me.

I've been around the block on this program for some years starting from before it was a program. To the extent that we need a

legal interpretation of decimal points, that is something we would have to work with HHS to come to so I don't think we're in a position to give you an answer right now.

MEMBER ZIEMER: I've got a burr in my saddle. I think at some point, and maybe the 10-Year Review should bring this up, and I haven't raised that in the 10-Year Review with Dr. Wade, but it would seem to me to push anything beyond a full number is really a stretch from a scientific point of view.

That means, for example, a 49.7 is a 50 percent. You can't scientifically say it isn't. It's that kind of issue. I don't know at what point we are in a position to address this but I thought I would at least get it on the record.

I think it's very misleading even I think to claimants to think that we can do this to two decimal places. We're at four significant figures. That's personal. I don't know if the other Board Members agree

with this but it certainly is an issue in my mind.

CHAIRMAN MELIUS: I think now that you've raised it, Paul, I think we probably would be interested in an answer.

I will tell you, Jeff, we didn't wait five years or however long it's been since you've been to a meeting. We haven't saved up the question.

MR. NESVET: I appreciate that. I'll be back in another five years. That is something we can talk to NIOSH. We may have to get some interpretation of that. As I said, it is an HHS regulation that we are bound by so we certainly are bound in this instance to consult with the authors of the regulation, one of them I see in front of me.

CHAIRMAN MELIUS: Who's not being helpful either. Okay. Thank you.

Anybody else? Josie. I'm sorry.

MEMBER BEACH: I just have a quick question, Rachel. You mentioned the survey at

the beginning of your presentation. I don't know if I caught it. Is that available on the website so we can look at those results?

MS. LEITON: It is not currently but we are working towards putting the results online.

MEMBER BEACH: Okay. Thanks.

CHAIRMAN MELIUS: Anything else? Okay. Thank you, Rachel.

MS. LEITON: Thank you.

CHAIRMAN MELIUS: Thank you, Gary and Jeff. We appreciate you coming here. Thank you for the presentations, the updates. We look forward to seeing you all again.

Next item on our agenda is Department of Energy. I do want to give you -- we will do this presentation and then we will take our break.

LaVon, I think you're going to get bumped.

He expects it, you know. I think Friday morning -- no. Guess Pat didn't make

it so Greg is here. Okay.

Welcome, Greg.

MR. LEWIS: So I'm Greg Lewis with the Department of Energy, Office of Health, Safety, and Security. Pat Worthington was planning on being here but couldn't make it. She assures everyone she will be at the August meeting in Hanford so you've got me for today.

I'm going to talk a little bit about how we support the EEOICPA Program over at the DOE. Again, the Office of Health, Safety, and Security is the office that administers the program and coordinates within DOE. We work closely with all of the field sites, at least over 20 that have a significant role in the program.

Our core mandate at the Department of Energy is to work on behalf of the program claimants to ensure that all available worker and facility records are provided to DOL, NIOSH, and the Advisory Board.

Today I'm going to talk first

about our responsibilities and the role of the DOE. Then I'm going to talk a little bit about some initiatives that we've been doing over the past few months. Then I'll talk about another program that closely relates to the EEOICPA Program, the former Worker Medical Screening Program, and then I'll take questions.

Many of you have seen this before and we are getting close to a break. If I'm going too fast or you have questions, please feel free to stop me.

We have three main responsibilities under the program. We respond to individual records requests from the Department of Labor and NIOSH for employment verification, radiological exposure records, and other exposure records.

We provide support to large-scale records research projects at various facilities. This would be, of course, the Special Exposure Cohort projects, Site Profile

updates, as well as things the Department of Labor does like Site Exposure Matrix.

Then our third responsibility which is somewhat smaller but equally important is to conduct research along with the Department of Labor and NIOSH on issues related to covered facility designations.

So for all three of those things at the Department of Energy we primarily rely on our site point of contact, POCs as we call them. We have one at every Department of Energy facility out there and they are really the backbone of our program.

They coordinate all records research activities with NIOSH, the Advisory Board, and the Department of Labor. They set up site visits and tours, some of which can be extremely complex and can require coordination and participation from many site departments and security and things like that so those can be a little bit tricky.

They work with DOL and NIOSH to

identify subject matter experts and put them in contact with the right person on site that can answer the many complex questions that these researchers seem to have.

Then, of course, they manage our site's response to individual records requests. I'll get to that later but we do close to 20,000 records requests a year which keep these POCs pretty busy.

Then they are also an onsite source of information to current workers, and even former workers if they still have a relationship with the site because many of our POCs have been working on site for 20 or more years. They have contacts within the community, within the site. They often help individuals if they are trying to file or to get to the right agency, whether that's DOL or NIOSH.

Just to give you an example of something that is somewhat outside our scope but it gives you an example of what our POCs

do, recently one of our POCs was attending a local meeting sponsored by the Cold War Patriots, a nonprofit group. She was attending just to provide information on DOE and what we do and how we process records requests.

She started talking to a gentleman who was explaining to her that he planned to file a EEOICPA claim and he had a brain tumor. He was waiting until after he had surgery, which was the next day, just because everything had been crazy with going to doctors and that whole process.

Immediately our POC explained that if he were to file today and he could get in the program because the Department of Labor would be the primary payer if his claim was eventually compensated the payment for the medical care would be retroactively applied to the date where he filed.

Because she was aware of that and familiar with the program, she contacted -- I

don't know if it was the resource center or the local district office had them contact that gentleman that afternoon and got his claim filed. I believe he was compensated but, either way, it's knowledge of the program and things like that that our POCs really provide to both their current and former workers.

So for individual records we respond to about 7,000 employment verifications from the Department of Labor, about 4,000 requests for radiological data from NIOSH, about 7,000 what we call DARs, document acquisition requests, which are requests for other exposure data, IH, medical records, things like that that show what the worker might have been exposed to.

In FY 2010 we responded to about 17,000 records requests, In FY 2011, which goes through October, we anticipate responding to about 18,000 this year.

With our records request we have a

fairly involved process to respond to those. Claimants often worked at multiple DOE sites. They might have worked at multiple divisions, had multiple job titles on site throughout their career.

When we prepare a records package it can be hundreds of pages long and it can consist of medical records, as I've seen before, radiological records, badging, incident and accident reports. It can have a number of different components.

We also have to go to many different sources. One site, as I have on the slide up here, routinely checks about 40 different sources for response of records including hard copy records, microfilm, microfiche, database scan records.

They both consist of different formats in terms of electronic or paper, but they can also depending on the years worked have to go to multiple different sources for the same type of record because some of our

sites change contractors every five to 10 years. They often brought in a brand new system, a brand new database.

For example, if a worker worked from 1970 to 1990, we may have to go to one database for records from '70 to '75, another database from '74 to '82, and so on. It's not just a matter of going to a file cabinet and pulling out an individual's record. We really have to dig and it's more of an investigatory process.

The second main function that we have is to support large-scale records research projects. These can be very challenging for us because we often don't have a lot of heads up. The project will just start. We need to juggle existing funding to make sure that the right site has the right funding to support the project.

It's also difficult to tell how extensive a project is going to be. As you guy know and as Lew was discussing before, the

more you find the more you might need to dig or, at least, that's how it ends up being at some of our sites. We really try to make sure the right funding is in place and we have the right resources available to support the needs of NIOSH and the Advisory Board and the associated contractors.

With the large-scale records research projects we also review not all but many of the records for classification related concerns. We have reviewed millions of pages so far at our various sites. This can be a difficult and time-consuming process.

In addition, this is also an area where a site has a certain available staff or classification of reviews. Typically they have a somewhat constant workload. When the researchers for this program come in, you know, it can be over a period of months or even a year or more.

The volume can go up considerably so if they have a site visit, you know, it can

take the site two, three, four weeks or more just to review the records requested during that one site visit.

Many times by the time they are done reviewing those records, the researchers are back for another visit. We've had to hire subcontractors or even bring back retired classification officers to help review for search capacity.

Here are a few of the projects that we are supporting right now. Some of these are just starting. Some are hopefully wrapping up, we believe. I'll talk a little bit about a few of them.

With Sandia we've supported five visits since August. I believe we have another visit scheduled -- we are starting to schedule it for the July/August time frame. We are also supporting requests for Ross Aviation and Medina and Clarksville with Sandia. Medina and Clarksville are also something that we're supporting at Pantex

because as closure facilities those records were spread throughout a couple locations.

We scheduled a meeting at DOE headquarters back in April to get Members of the Advisory Board, SC&A, NIOSH, and everyone together to review the classified information. Unfortunately, that happened to be scheduled the week after the almost government shutdown.

As Ted knows, we held off until about Friday at 1:00 before we ended up having to cancel that. Of course, they averted the shutdown about 11:55 for thereabouts so I guess if we had held off until Saturday morning, we might have been able to do it.

Unfortunately we had to postpone it and weren't able to reschedule until mid-June but we're going to be supporting that visit in mid-June as well as a site data capture visit which we have heard may be the last one. Of course, you never know but it looks like things are coming to a close there so we are glad to have been able to support to

these visits.

At Savannah River we've supported over 10 different data capture visits over the last year or so. We continue to support these data capture efforts, although they seem to be more targeted toward specific issues now.

Now, with our document reviews all final documents, all final reports that are created by NIOSH, the Advisory Board, SC&A, etc., go through DOE headquarters for a classification review. We believe we've gotten our process pretty much down at this point. We follow our security plan in terms of protocol.

They are sent in to our headquarters and we get them back typically within about eight working days. I guess since February, since the last Board meeting, we've had 61 documents submitted and the average has been eight days. In certain cases we've done them in one or two when necessary.

Actually, back to that last slide.

I will also say we do struggle -- I see Brad over there. We do struggle somewhat with our DOE sites, with headquarters, because it's centralized. Because we work closely with that one office, we are able to make sure that those documents are returned in eight days.

I know at our sites it's certainly not as quick as eight days. But also at our sites they are more reviewing source documents and not reports so whereas the reports might be 10, 20, 30, 40 pages, source documents could be hundreds of pages and could have been created back in the '40s or '50s.

It's both difficult to review and the classification officer may not have the expertise because it's 40 or 50 years old so they may have to refer to the guides quite frequently and go off information that they need to look up.

Again, it's a slower process. We try to get them to return documents as quickly as possible. When SC&A or NIOSH alert us to

problems, we try to resolve those as quickly as possible.

Then with general SEC support we have routine conference calls. We have our site experts participate in Advisory Board Working Groups in conference calls. We facilitate secure classified meetings and discussions like I was just talking about with Pantex.

The third, and final, responsibility the Department of Energy has under the program is facility research. We actually maintain the database of over 300 facilities covered under EEOICPA. That's AWEs, beryllium vendors and DOE facilities. We work closely with DOL and NIOSH to conduct research.

There are facilities where we added years or have taken years away based on new information. We've also added descriptions, or even added new facilities. Any time new information comes to light we

take a look at that, we'll conduct an independent research effort on our part to find new information and try to make the right decision as far as facility coverage.

Our Office of Legacy Management supports us in that. I have a bunch of information on the slide but essentially they are a records management office within DOE so they understand records. They understand where they would be.

They also have experience with the DOE history in understanding how the facility is related, where they might need to go to find the right records to respond to an inquiry.

Now I'm going to talk a little bit about some of the initiatives we've been undertaking in the last few months. We have an ongoing effort to identify any additional records useful for EEOICPA. Just one example. At the Hanford site recently as part of the SEC research there was a collection uncovered.

I believe it had to do with source terms. I'm sure Sam Glover can correct me if I'm wrong.

Anyway, they found this collection and realized the way it was indexed was not as useful as it could be to both NIOSH and for DOE to respond to claims so we are going through with an indexing effort right now. Because they are classified records we had to hire normal employees with Q clearances and we have them on a separate subcontract.

They are actually working weekends for the next few months to index and get this collection into useable form. Of course, we didn't make them work weekends. This is something they wanted to do, extra money.

It ends up being both efficient for us and probably the fastest way to get this collection into useable format. There is always a few things like that going on around the complex. We are just starting one at Kansas City Plant as well.

The Site Exposure Matrix effort. I talked about this a little bit at the last Board meeting. We started the initial review back in, I believe, it was 2009. We started it in early 2010 and finished at the end of 2010. It took about a year. We were able to review the entire database and provide clearance for DOL to put that online, which they have done.

Almost immediately after this was finished in early January we started a second review of the information, the new information that has been submitted since we started our initial review. Of course, when we started our review we cut off the database and made sure it was static because if it's constantly changing, it's going to be extremely difficult for us to review.

Almost immediately after completing the initial review we started the second review. It took about four months for the second as opposed to a year for the first.

Just within the last few weeks we responded to DOL that there were no problems with the database.

I believe they are going to be getting that update up there, if they haven't already, within the next few weeks I would imagine. So outreach. I know Gary mentioned, I think, the outreach efforts that have been going on in coordination with DOL and NIOSH.

The Joint Outreach Task Group was created a few years ago to combine efforts between DOL, NIOSH, the Former Worker Medical Screening Program, the Office of the Ombudsman for DOL and NIOSH with the general idea that all of these groups are trying to reach the same population so with combined efforts we could both create efficiency in terms of the cost for outreach and reach more groups with the same effort.

We think it's been very successful. We had, I guess, about 19 town hall meetings within the last year. The next

meeting is, I think, scheduled for Chicago in early June. If anyone wants more information about that meeting, they can just let me know.

So the Former Worker Medical Screening Program is the other program administered by my office, HS-14. The mission of the Former Worker Screen Program is to identify and notify former workers at risk for occupational diseases. We provide them free medical screening. We do it close to their home. We have established screening programs near the larger DOE communities, Oak Ridge and Savannah River and Hanford, things like that.

But we also have two national programs, the National Supplemental Screening Program which contracts through clinics throughout the country to provide screenings to former production workers, and the Building Trades Medical Group which also contracts with local clinics to provide screenings around the country for former construction and trades workers.

For this area the local screening programs are the National Supplemental, as I mentioned, and the Building Trades Program. There is contact information on the slide. I believe these slides will be up on the NIOSH website eventually once they post the information for the meeting. Of course, anyone can contact my office if they want more information about these programs.

With that, does anyone have any questions?

CHAIRMAN MELIUS: Well, thank you, Greg, for a good update.

Anybody with questions? Your timing is good. You go up against the break and everybody is quiet.

MR. LEWIS: This is a first. You can put me before the break next time.

CHAIRMAN MELIUS: Paul or Mark on the line, do you have questions?

MEMBER ZIEMER: I have no questions.

CHAIRMAN MELIUS: Okay. Thanks. Mark was going to be in and out. Okay. With that then, it's 10:43. Why don't we come back around five after 11:00. Thank you.

(Whereupon, the above-entitled matter went off the record at 10:45 a.m. and resumed at 11:09 a.m.)

CHAIRMAN MELIUS: If everyone could get seated, we'll get started. We'll get started again and welcome Dr. Lockey who has joined us now. He got on his plane this morning and made it after abandoning the airport last night. Tornado watch -- warning.

Ted, you want to check the line?

MR. KATZ: Yes. Can I check to see which Board Members we have on the phone line right now?

MEMBER ZIEMER: Paul Ziemer here.

MR. KATZ: Hi Paul. How about Mark Griffon. Are you with us?

Mike Gibson, are you on with us by any chance? Okay.

CHAIRMAN MELIUS: Okay. As I mentioned earlier, we're going to skip LaVon and go to -- LaVon is a short presentation. We can fit it in maybe 5:00 a.m. tomorrow morning if anybody wants to come. No, we'll find time in some of our Board work time for that.

So we'll have an update now on the HHS proposed rule on CLL, Jim.

DR. NETON: Thank you, Dr. Melius. My formal remarks probably won't last the full hour so depending on the Board discussion, maybe there will be some time to fit Bomber in after all.

It is with great pleasure, I have to say, that I am finally able to get up here and present to you HHS' formal position, or NIOSH's formal position on chronic lymphocytic leukemia and its inclusion as a covered cancer under EEOICPA.

It's been going on for quite some time, as most of you know, and many of you

might suggest probably too long. I would say this is probably one of the most challenging scientific issues that we've had to deal with in this program. Not only from the risk model perspective, which is somewhat complex, but also from the dose reconstruction aspect as well which I'll cover a little bit later in my remarks.

The proposed rulemaking issue was issued in the Federal Register March 11th, a little over a month ago. The comment period is out there and ends officially, I think, June 20th so there's still plenty of time to comment. Most recently I looked at the regulatory docket and I think we have right now only three comments listed in the docket.

Before I do forget, the regulatory docket is out there. I'll have a link to it later in my presentation but it's also reachable from our DCAS website. You can click to get over there. Not only the docket but also the option to make a comment if so

desired.

A little bit about the background that most of you already know. I think I presented pieces and parts of this at various Board meetings. This is the first time I'm able to sort of put it all together. As is well known, CLL is the only cancer that the Probability of Causation is zero under the Probability of Causation rule in 2002.

That decision was a conscious effort on NIOSH based on a couple facts. One was the unavailability of existing epidemiologic studies that demonstrate a link between radiation and CLL. There were studies out there that were suggestive. Many had negative risk coefficients and some have positive but nothing out there that would conclusively link CLL.

In general even among the radiation research bodies that exist and make comments on these risk models, there was pretty much a consensus of opinion in 2002

that CLL should be considered non-radiogenic. To some extent that thought pattern persist in some organizations.

Probably as important is the feasibility of development of quantitative risk model. Even if we determine that CLL was radiogenic, as you know, most of the risk coefficients were generated using the life span study of Hiroshima and Nagasaki survivors.

In the entire cohort the 80,000 or so people in that cohort there were only four cases of chronic lymphocytic leukemia total which is not many to develop a quantitative risk model from.

In fact, I think it was estimated that only maybe one of those were possibly related to radiation exposure out of four but the numbers are so small it's hard to tell. That's due to the fact that CLL is a rare cancer in the Japanese population. Much rarer than it is in the U.S. population. We'll talk

a little bit more about that later.

At the time of the publication of the Probability of Causation rule in 2002, this was listed in the preamble, that NIOSH was committed to revisiting the decision on radiogenicity as new scientific information became available. We kept our ear to the ground and over time evidence started to emerge that made us start to rethink that position.

Continuing on to summary of activities, I just made a couple of brief slides on this because it has been a long process. It started way back in, I think, 2004 when a public meeting was convened by the NIOSH Office of Energy Research Programs to evaluate this radiogenicity issue.

That was using some money that was earmarked by Congress and funded directly to the Office of Energy Research Programs to look at this issue. The meeting was one aspect of it. Also NIOSH at that time engaged in some

additional leukemia-type research of their own.

At the end of this meeting the participants determined that the current evidence was still inconclusive. They were looking at it from a purely scientific perspective. Although some new information had emerged to possibly make one think that CLL could be radiogenic, there was nothing still conclusive on the table.

Subsequent to that meeting NIOSH, and that is specifically DCAS or OCAS at the time, polled subject matter experts regarding the radiogenicity of CLL from a slightly different perspective. We asked the question is there sufficient evidence to continue to disregard CLL as a radiogenic cancer under EEOICPA compensation program.

If you think about it, that's a slightly different question to be asked. The majority of the reviewers, three out of five reviewers supported the position that CLL

should be considered radiogenic. There's a couple reasons for that.

One is that new epidemiologic information had emerged that even though the risk coefficients were positive but not statistically significant, there were more and more studies out there indicating that, yes, maybe there was a connection between radiation exposure and CLL. A lot of it had to do with the way the data were analyzed as a function of latency period.

Secondly, if one thinks about this from a biological plausibility issue, is it really reasonable to conclude that CLL is the only cancer that could not be caused by radiation given what we know about the way radiation causes cancer and that it specifically damages DNA.

Given that, it was hard to fathom why CLL couldn't at least plausibly be caused by radiation. There's a number of reasons why the epidemiologic data was not informative and

those have been wide reported in the literature. Partly because it's a disease of old age. It takes years to develop.

It's also been misclassified many times. It's a hard one to nail down with a specific ICD-9 code. It's often been considered to be -- it could be misclassified as hairy cell leukemia or small lymphocytic lymphoma. Those sort of things make the epidemiology a little bit less than robust in trying to determine the radiogenicity.

Anyway, bolstered by the -- there were two reviewers that did not support the position. One reviewer was neutral on the subject and basically said the information was still in her opinion inconclusive. There was one reviewer out of the five that concluded that it was not radiogenic CLL.

In fact, that same particular reviewer also felt that lymphomas in general were not -- if they were radiogenic they would be radiogenic themselves. Bolstered by the

three out of the five reviews as a supported position CLL should be considered, we started to conduct some research into appropriate risk model for CLL.

When I say we, we actually engaged the services of SENES Oak Ridge, Inc., our dose risk model contractor. They are the same organization that developed in consort with National Cancer Institute the risk models that currently exist in NIOSH IREP.

They did a detailed look into the molecular biological basis, the epidemiology, and the clinical basis of what was going on with CLL to see if a risk model could be assembled. I'll talk a little bit more about that later.

Concomitant with that effort we also -- these first two bullets should be reversed to get the chronology right. We are also doing research into the dosimetric target organ for chronic lymphocytic leukemia because being a disease or cancer of the lymphocytes

it was not clear to us at that time what target organs should be reconstructed when we did dose reconstructions.

Lymphocytes are present throughout the body so is there one particular organ that we need to consider or is it more diffuse? Well, the answer as it turned out was, in our opinion at that point, that the lymphocytes are diffusely disseminated throughout the body in both the hematopoietic system; that is, the bone marrow and the blood stream, as well as the entire lymph system of the body. That created somewhat of a difficult situation for us to reconstruct doses.

We came up with that concept and Oak Ridge was the main player in this helping us out. We did pull subject matter experts on a draft opinion on this. I think we pulled three subject matter experts and they agreed with us that the etiology of CLL -- the origin of the cancer could be anywhere in the lymphatic or hematopoietic system and we

proceeded to develop a dose model based on that concept.

After the risk model was drafted and dose reconstruction approach completed, it took sometime and it wasn't until actually January of 2010 that both of those pieces were finalized within NIOSH. Shortly thereafter on March 11th of 2011 we issued a Notice of Proposed Rulemaking in the Federal Register.

As I mentioned regarding the CLL risk models, SENES Oak Ridge conducted a comprehensive review of public papers that were out there. There were a lot of epidemiologic papers out there, notably those published by David Richardson, John Boice. There was an entire issue of the British Journal of Hematology that covered CLL that NIOSH researchers including Schubauer-Berigan and Silver contributed to.

We considered all those in context and also compiled sex and age specific incidence rates because the incidence rates in

Japan, as I mentioned, were very low and it would certainly not match those, we didn't expect, in the United States.

The third bullet here, one thing that is probably one of the more significant issues with CLL is the critically evaluated epidemiologic data related to the issue of latency. CLL has been considered a disease of old age. A latency period was considered to be much longer than that of other leukemias, for example.

Certainly of leukemias and actually even longer than those of solid tumors that we consider in NIOSH IREP. There was a lot of effort put into that. In fact, that was one of the larger sources of comments we received when the model was reviewed.

So as a starting point, SENES Oak Ridge used the existing myeloma and lymphoma model as a starting point for the model. One might remember that we have one model that covers non-Hodgkin's lymphoma, lymphoma, and

multiple myeloma.

That model is based on 117 cases that were in the life span study of the Japanese Hiroshima and Nagasaki survivors and those were used. We took that model and then developed an extended latency period tail on that model.

One of the reasons that we thought this was a good starting point is CLL is classified now as a form of non-Hodgkin's lymphoma by the World Health Organization. Given that it's no longer in the leukemia realm.

At least in the World Health Organization's eyes it's a lymphoma, although that is inconsistent with the ICD-9, International Classification of Disease Registry, which still considered it leukemia but we strongly believe that the lymphoma designation is correct.

Again, start with a multiple myeloma lymphoma model and then extend the

latency period. The original draft model had a latency period of 15 plus or minus five years.

As with other risk models, it's not a set value. The risk is very low. It's short latency period and there is an S-shape function that increases over time to confer maximum risk at some point out in time.

As I said, we did have the model reviewed by four subject matter experts. I think two of them were the same ones that we asked the opinion on radiogenicity. We received a number of comments, reviewed those comments, and adjusted the model -- the document as appropriate.

But the major modification was to the risk model. One major modification risk model was the latency period which was shortened from 15 plus or minus five years to 10 plus or minus five years. There was some evidence that there is a fair amount of uncertainty of the latency period with CLL and

that has a lot to do with the way it's diagnosed in the field.

Oftentimes CLL is diagnosed sort of coincidentally to other illnesses when a person goes in for a checkup. It oftentimes has no real clinical symptoms until it's fairly far progressed.

This is just a graph of the latency adjustment. Maybe I should explain this a little bit. The Y-axis here is a latency adjustment which is some fraction of the full excess relative risk per sievert.

If you look at .5, the 50 percent value, that would be 10 years. Then the dotted lines are the uncertainty about that latency adjustment plus or minus five years. At 10 years one gets 50 percent of the excess relative risk per sievert and an uncertainty factor is included in there as a triangular distribution of plus or minus five years.

The lower bound would be five years, the upper bound would be 15 years.

This latency adjustment will be incorporated into the multiple myeloma lymphoma model for the CLL excess relative risk per sievert calculation.

One thing we wanted to do was to sort of do a reasonableness check on the model. Let's quantitatively look at the model and see what kind of Probability of Causations that it generates because this is a brand new model and no one has ever looked at it before.

We evaluated the model under a somewhat restricted exposure scenario and that was recalculated for males exposed between 20 and 40 years of age who were acutely exposed to one sievert of high energy gamma radiation so about 100 rem of gamma radiation exposed earlier in their career between 20 and 40 years of age.

This will give you a sense of what the Probability of Causation results might be for someone exposed externally with a uniform beam of photons. Although the analysis was

restricted to males, the results should be similar for females and that's because the same risk coefficient is used for both.

It turns out in the multiple myeloma and lymphoma in the Japanese survivor data the point estimates for risk in females is negative. It's only positive for males so we've applied the male positive estimates for use in this model.

What we found, I have a table to show this, the PC results were greater than 50 percent for some cases under some circumstances. This slide is a little small and potentially hard to read but what you see here, and I highlighted in yellow on the slide, one reaches greater than 50 percent only under situations of the latency time of greater than 10 years and for early ages at exposure like 20 and 25 years.

You can't get over 50 percent in this graph if you are exposed over 30 years of age to one sievert of external radiation.

Interestingly, I put the 50th percentile on here and none of the 50th percentiles which, of course, we don't use approach the 50 percent value.

There are certain circumstances under 100 rem of external radiation that would be compensated under this specific condition. I would say that 100 rem of external exposure is a fairly significant dose. We rarely see that in current days.

I would think in the very early years in situations where you had a lot of the pitchblende ore processing going on, maybe in the Mallinckrodt era where they were doing a lot of that, you could get to that level. It would be fairly difficult to be compensated. The probability is not zero but you need some fairly substantial external doses to be compensated for CLL under this circumstance.

Let's talk a little bit about the dose reconstruction methodology. I mentioned CLL is a disease that originates from a

population of lymphocytes and specifically of mature B lymphocytes, and more specifically antigen stimulated mature B lymphocytes. I've learned a lot in the research of this program.

We would call those precursor cells, CLL precursor cells these antigen stimulated mature B lymphocytes that can circulate basically throughout the lymphatic and hematopoietic system.

As we learned in our review, and our subject matter experts concur, these lymphocytes could undergo transformation to CLL clones anywhere in the blood forming or lymphatic system. Because of that, a dose reconstruction for a non-homogeneous exposure. The biggest example this, of course, would be internal dose must account for this.

If you inhale plutonium we all know it's going to preferentially accumulate in certain organs once it becomes systemic. Strontium-90 the same way. The dose to the CLL precursors is going to be very different

from an internal perspective depending upon the radionuclide that is inhaled.

Because of that we're proposing to use a probabilistic approach based on the weighted average of the doses to the various irradiated sites. I've got a couple slides that hopefully can give you a feel for how that is going to work.

This is a slide of the distribution of lymphocytes in the body along with their 95 percentile confidence intervals. You can see that about almost 90 percent of the B cells reside in the lymph nodes, the spleen, bone marrow, and the intestine. Nonetheless, there are 12 various sites where these lymphocytes could reside and 13 if you count residential soft tissue component.

The biology is not extremely well known and that's why we put confidence intervals about these values because this represents the range of our knowledge based on the current available science.

If one knows the distribution of lymphocytes and one knows the uncertainty about that distribution, then one could calculate an effective dose to the B lymphocytes in a spreadsheet type calculation. That's what is portrayed here in this example of dose calculation.

Here we have -- it's kind of hard to read, I understand, but I couldn't figure out a way to fit this on a more readable slide. Here you have the various compartments in the first column, the fraction of the pre-CLL cells in that tissue in the second column. There's a column labeled "additional fractions" because that melds this stuff with the ICRP biological models.

In this particular example we've calculated what I would call the effective lymphocytic dose to ingestion of one becquerel of strontium-90.

In the second column from the right you have the dose per unit intake of

strontium-90 in sieverts per becquerel so one merely multiplies that dose coefficient times the fraction of the cells that are radiated in that compartment and you come up with the strontium-90 ingested per unit intake on the weighted dose component issue on the far right.

If you sum that entire column up, you end up with the effective dose to the lymphocytes from an ingestion. In this particular case, strontium-90. The value in the lower right-hand column in yellow is the effective dose input that would go into the NIOSH IREP spreadsheet.

It would also have though the propagated uncertainty of the distributions of all of those various compartments. We have this running in a model basis as a spreadsheet. We are working towards tying this in with our IMBA program right now.

Interestingly, the overall spread of the distribution based on the uncertainty

of the location of all the lymphocytes is much smaller than the overall uncertainty we normally assign to an internal dose because all internal doses that we assign unless they are upper-bound estimates are recorded with a geometric standard deviation of three.

I can't remember exactly now what the overall uncertainty it adds to that GSD of 3 is not insignificant but it's not a major portion of that GSD of 3. We're looking at ways to sort of streamline this a little bit and maybe just include the GSD of 3 for the internal dose and add a component, an additional uncertainty that is likely going to be a standard addition to that uncertainty in each case. That's where we are. It sounds complex but it's easily put into a spreadsheet type format.

In summary our proposed rule would rescind the designation of CLL as being non-radiogenic and added as one of the covered cancers. I want to make sure, though, as

pointed out, we're not talking about making this a presumptive cancer. We're talking about making this a covered cancer so that dose reconstructions can move forward.

A new risk model would be added to allow for calculation of Probability of Causation for CLL and that would be the modified version of the existing lymphoma and multiple myeloma model. The dose reconstruction methodology would use a probabilistic approach to calculate the weighted average dose for the population of the mature lymphocytes in the body.

All the information I just talked about, including the Notice of Proposed Rulemaking, the various reviews, subject matter expert reviews, our responses to their comments, the proposed dosimetry model are all included at this address in the regulatory docket 209.

It's also available as a link from our DCAS website. If you go under Probability

of Causation, you'll find the link there. As I said, it includes all the various information that we could think to put in there including all the relevant references. The public comment period closes June 20th.

That's it. Thank you.

CHAIRMAN MELIUS: Thank you, Jim. I just want to correct one thing for the record. Although it's correct in your slide, I don't think it was clear when you presented it, and that is even though you're using the male risk model, you're applying it to both males and females. You just weren't complete, that's all. I didn't want anybody listening in not seeing the slides not to understand that.

I also would like some clarification because I'm confused. When I first went to the docket, and I still am confused based on what's in the rulemaking, but you have the SENES document which was the proposed risk model. Is there a document that

updates that?

DR. NETON: That proposed risk model was modified and finalized to incorporate the comments that were received from the subject matter experts.

CHAIRMAN MELIUS: And is there a document that states that that is on the docket?

DR. NETON: Yes. There is a document called Responses to the Subject Matter Expert Comments. It's a 20-page document where we listed all the comments we received and our interpretation of those comments and whether we modified the final version or not.

CHAIRMAN MELIUS: But there is no final version?

DR. NETON: Well, it's a final version of the proposed model. This is proposed rulemaking. It's a proposed model. It could be modified based on comments we received. It's our final model but it's a

proposed model until we finalize it based on comments.

CHAIRMAN MELIUS: It's confusing the way it's stated in the rule in the proposed regulations as opposed to what you're telling us now. That's why I'm just trying to understand what the Board is supposed to be responding to.

DR. NETON: The document to review is a proposed risk model that was modified based on public comments and those public comments are there as well.

CHAIRMAN MELIUS: So it's really the two.

DR. NETON: There's a third piece, though, which is the proposed dosimetric approach that is also out there on the regulatory docket which talks about this weighted probabilistic dose reconstruction approach. That took quite a bit of effort. This was really cutting edge science that we were dealing with.

CHAIRMAN MELIUS: I guess I'm having a little trouble finding that on the docket. That's all.

Then let me just clarify so the Board knows, and I know, what we're suppose to do, or expected to do. You are expecting us to comment on the regulation or on the proposed dose model?

DR. NETON: Both.

CHAIRMAN MELIUS: Both.

DR. NETON: They are listed both in the NPRM. The NPRM discusses both pieces. It talks about the risk model. I think the last few paragraphs talk about the proposed dosimetric approach and it references the document that is on the regulatory docket.

CHAIRMAN MELIUS: Because, again, you state on the Notice of Proposed Rulemaking that EEOICPA has required that HHS obtain a technical review by the Advisory Board prior to establishing the Probability of Causation guidelines. That's why I wanted to make sure

it's clear and clarify.

With that as background, does anybody on the Board have comments or questions?

MEMBER ZIEMER: Dr. Melius.

CHAIRMAN MELIUS: Yes, Paul. Go ahead.

MEMBER ZIEMER: Paul Ziemer here. I have two questions. One is procedural and one is technical. On the procedural is there an expectation that the Science Issues Work Group will look specifically at this proposal?

CHAIRMAN MELIUS: Paul, I would say that is one possibility. I think that they are trying to get comments back by June 21st is the close so that's why I was asking what we were expected to review and comment on. There's different possibilities.

I'm not saying this is what I would prefer but if one could approve the general concept and certainly the addition of the change in the regulation and say that we

need more time to really look at the proposed guidelines and how they are going to do the guidance of dose reconstruction.

Alternatively we could say that we approve both but I think we're really approving based on what's in the docket and what's the presentation that we got today. I don't think it was as straightforward to figure out exactly what we were expected to do when we received this but that certainly is one possibility.

We could refer that part of it if people aren't comfortable approving both or there may be some other options between now and June 21st but we don't have any meetings scheduled in that time period. It would be difficult to even schedule one given some of the notice requirements for the Board.

MEMBER ZIEMER: My second question is technical. Admittedly, I haven't read the details on the reviewer's reports at this point. Maybe Dr. Neton can help me understand

the final column on the weighted dose components and the rationale for adding those up.

I tried to think of an analogy. Let's say, for example, there was an exposure. Just remove it from this and just say some kind of exposure where different organs in the body received different doses. If you wanted to know the total body dose, you wouldn't typically add up those doses.

In fact, if you had a total body dose of 5 rem, each organ in the body would have received that dose so you don't add them up. Or if you took a skin dose to the arm and a skin dose to the leg and so on, you don't typically add those up and get a total skin dose.

I'm having a little difficulty in following the rationale for adding up the components here. I know the weighted part should be accounting for that but I'm missing something here.

DR. NETON: Well, this is very akin to how one does effective dose in the ICRP nomenclature where you have weighting values for each of the tissues that add up to 100 percent and then you --

MEMBER ZIEMER: Okay. So, Jim, it's sort of like if you take the weighted doses from radon and add them up, then you get the 5 rem total even though the lung dose may be much higher. That's what you're saying.

DR. NETON: Correct.

MEMBER ZIEMER: I got you. So, in a sense, it's been accounted for --

DR. NETON: Yes.

MEMBER ZIEMER: -- that particular organs got higher than this weight number.

DR. NETON: Well, it's what fraction of the total --

MEMBER ZIEMER: It's a fraction of the risk really that we're looking at here.

DR. NETON: Exactly.

MEMBER ZIEMER: I got you. Okay.

Thank you. That makes sense.

CHAIRMAN MELIUS: I think our legal counsel would like to comment.

MS. LIN: Obviously not to the technical question. I just want to note that the public comment closes on June 20th so you need to submit your comment by then, not the 21st. However, if the Board decides they need more time to consider the NPRM, then you need to tell the agency.

Additionally, in the NPRM there is a set of questions, right? Three or four questions?

DR. NETON: Yes, at the very beginning.

MS. LIN: Those questions would help guide your review.

CHAIRMAN MELIUS: Thank you for that clarification.

Other Board Members have questions?

I'm sorry, Jim.

MEMBER ROESSLER: Jim, I have a question on the latency adjustment. I assume that is sort of a multiplier that you apply after you do all the other calculations?

DR. NETON: Exactly. You take the excess relative risk based on attained age and age of exposure and you come up with that value. Then you multiply the excess relative risk value times the value in the Y-axis depending on where you are.

MEMBER ROESSLER: Then the uncertainty, you said, is you use a triangular distribution?

DR. NETON: Uncertainty is a triangular distribution about that. The dotted line, plus or minus five years, at 10 years would be a lower bound of a triangular distribution. Five years and an upper bound of 15 years.

MEMBER ROESSLER: So then once you apply that, it could be zero.

DR. NETON: No.

MEMBER ROESSLER: The multiplier will never be zero?

DR. NETON: It approaches zero very asymptotically there as you see but it's never zero.

MEMBER ROESSLER: Never zero. Okay. Thank you.

DR. NETON: Pretty close to zero though, I think. If you're one month after exposure, you're not going to get much conferred risk.

CHAIRMAN MELIUS: Other questions?

Yes, Bill.

MEMBER FIELD: Jim, again I have to congratulate you for taking the lead on this. I think this is really cutting-edge science. I think you put a lot of work into it. I think it's very sound. I guess my question has to do more with not the inclusion but the diagnoses. Is there a set criteria now for diagnoses? It's not like normal cancer where you use pathology. Most of the

time you have to use flow cytometry to make the diagnoses.

DR. NETON: That's a good question and I don't know the answer to that other than we rely on the Department of Labor to provide us the cases and I'm trying to hide behind them. That's just the way the program is set up.

If they present us a case that has an ICD-9 code that says it's chronic lymphocytic leukemia, then that's what we're going to do. That doesn't help, I'm sure, but I understand the issues. I'm well aware of the issues in diagnosing CLL.

MEMBER FIELD: Unlike Japan I think the rates are much higher in Europe versus what we have in the United States. I think part of that different is we have a very hard time making that and tracking that in cancer registries and just patient to patient. I think it's very under-reported.

DR. NETON: I agree.

MEMBER FIELD: Do you have a rate? Is it like around 15,000 estimated per year? Something like that?

DR. NETON: I know it's in the NPRM somewhere.

MEMBER FIELD: That's fine.

DR. NETON: There's a regulatory cost. I can't remember off the top of my head but it's pretty low. We don't expect to have too many cases of CLL come to this program.

We expect a bolus in the beginning because, obviously, Department of Labor had some CLL cases in the very beginning and we worked through those but I don't think the overall number we are expecting to come through is going to be that large.

MS. LIN: I have reviewed the answer and it says $15,273. It says that the agency expects to review 363 reopened cases plus 132 new CLL cases in the first five years.

DR. NETON: So it's a pretty small

number compared to the overall statistics.

CHAIRMAN MELIUS: Okay. I'm going back to one of my original questions. I'm looking through the docket and I do not see any final guidelines. I don't see anything in Responses to Comments and so forth that go back before the SENES report.

The last description I see of any sort of dose reconstruction guidelines and model and so forth that really is the SENES report, plus what's in the Announcement of Proposed Rulemaking.

DR. NETON: There is a Response to Comments. I just printed it out.

CHAIRMAN MELIUS: Well --

DR. NETON: Isn't it called Responses to Comments of the CLL Risk Model. It should say Responses to Comments or something of that nature.

CHAIRMAN MELIUS: There is Response to Review Comments on the draft report --

DR. NETON: That's right.

CHAIRMAN MELIUS: -- dated December 1, 2009.

DR. NETON: Yes. That's it. Then the final --

CHAIRMAN MELIUS: That's before the SENES. I guess my question is is the SENES report the January 2010 model?

DR. NETON: That's the final model.

CHAIRMAN MELIUS: Okay. Okay. That's what I was trying --

DR. NETON: Sorry for the confusion but I didn't want to call it the final model or the model. I just left it as a proposed model because it could change based on additional public comment during the open comment period.

CHAIRMAN MELIUS: Okay.

DR. NETON: What we did was we took the 2009 comments, and they're all listed, and incorporated them or not, based on

our judgment, into that 2010 SENES document.

CHAIRMAN MELIUS: Okay.

DR. NETON: Sorry for the confusion.

CHAIRMAN MELIUS: No, no.

What's the Board's wishes in terms of going forward on this? I suspect we're not ready to take action right now, and we don't have to take action at this moment. We can think about it and come back during one of our work periods to talk about what to do and so forth.

Yes, Wanda.

MEMBER MUNN: Unless we come in individually I see no logical way between now and June 20th that we as a Board could make any comment unless we do as has been implied that we might do have our Work Group take a look at this, bring a recommendation before the Board prior to its next meeting, and make a recommendation at the next meeting.

This, of course, would require our

notification to the agency that we have comment but can't make it by June 20 but it is one path we might follow if we really want to spend the time and effort to look at this as closely as it probably should be looked at given the amount of effort that's gone into it so far.

CHAIRMAN MELIUS: This may surprise you, Wanda, but I tend to agree with that approach. I think that may be feasible. I will say it's not -- if I understand the rulemaking process, while they are in the process of developing the rule and so forth, they really aren't in a position to let us comment so it's not that they sort of kept this from us deliberately. Some of it is just the way the regulatory rules are and so forth.

MEMBER MUNN: We knew they were working on it and asked them to do so.

CHAIRMAN MELIUS: Yes. No, obviously. We talked about this before. It's also gone on for a long period of time.

Any other comments? If not, why don't we think about this over lunch. We'll come back during our work periods and decide what we should do and so forth on that.

Thank you very much, Jim. That was a good presentation and I appreciate it.

With that, why don't we take our break. Actually, we are scheduled to start at 1:30. We'll be talking about the Fernald petition. We will have petitioners, we believe, listening in so we will start directly at 1:30.

(Whereupon, the above-entitled matter went off the record at 11:52 a.m. and resumed at 1:30 p.m.)

A-F-T-E-R-N-O-O-N S-E-S-S-I-O-N

1:32 p.m.

CHAIRMAN MELIUS: We will reconvene now. It's 1:30. The Federal Executive Officer here is giving the Board Chair a hard time.

Ted, you want to check the line and do the housekeeping?

MR. KATZ: Yes. In case we have new people on the line, let me just ask people in general on the line to mute your phones. Use *6 if you don't have a mute button and that will help everyone else on the line here in the proceedings.

Can I check with my Board Members on the line and see who we have.

MEMBER GRIFFON: Mark Griffon.

MR. KATZ: Mark, welcome.

How about Dr. Ziemer or Mr. Gibson?

Okay. I think we'll just carry

on.

CHAIRMAN MELIUS: First thing on our agenda for this afternoon is the Fernald site. This site, and we'll be talking tomorrow about Savannah River, are updates on what's been happening at the site. Both of these are fairly lengthy processes that the Work Groups have gone through. I believe Fernald longer than Savannah River.

I believe that we could very well be taking Board action on both of these sites at the August meeting. We are not planning on doing it at this meeting but the idea of these presentations is to bring the entire Board up to date on what the Work Group has been doing, SC&A and NIOSH and the back and forth and review that is under way.

These are both large sites. They are both complicated. I thought that would be a way that we could at least get information so that if we are going to be ready to take action in August, at least we'll have a

background and understand what's going on. Also it will give an opportunity for Board Members who aren't on the Work Group to raise questions or suggestions they might have for part of these evaluations.

Obviously I don't expect people have read all the documents and gone through everything on these but, again, it will give us hopefully enough initial familiarity with the site and what's going on with the evaluation at that site, the SEC evaluation, that will be helpful for us in August.

I think as you may see from the rest of the agenda here, we have a relatively lighter agenda than normal, at least in terms of voting and dealing with SECs than we did in the last few meetings but August will probably make up for it when we're in Hanford. Hopefully this will help to get us ready. With that, I'll turn it over to Brad to do an introduction and then --

MEMBER CLAWSON: Thank you, Dr.

Melius. I'm Brad Clawson. I'm the Work Group chair for Fernald. What I wanted to make up front is I'm just going to give an overview of what we have done. John Stiver from SC&A is going to go into detail of each one of these items and we'll go from there.

First of all, SC&A submitted a Site Profile review 11/10/06. SC&A submitted an SEC review on 07/02/07. Six particular SEC issues were identified. There were 10 Work Group meetings held from August 2007 to April 2011. Numerous White Papers exchanged from Work Group discussions. SC&A and NIOSH have prepared over 20 White Papers supporting documents during this time.

April 19, 2011 Work Group met. Three SEC issues remain. April 15, 2011 NIOSH submitted 0025 feed material, process center, internal dose topics in response to the Work Group's action item.

April 17, 2011 NIOSH delivered a response to SC&A second RU, recycled uranium,

White Paper.

Outstanding issues. Coworker model for uranium internal exposure. November 10th NIOSH performed an analysis of construction workers. What we got into was were we going to be able to capture the construction workers with the nonconstruction workers on their urinalysis bioassay.

One thing about Fernald is it had a lot of uranium urinalysis data but not much OTIB-78 and delivered a report to the Board no deliverable as of April 19 of this year.

Issue No. 3, recycled uranium, RU. Two SC&A papers, March 2009, February 2011. Topics ongoing discussions since April of 2009, five meetings. No progress until April 19, 2011 at the Work Group. There's a little bit of movement on it but we kind of begged to differ on a few subjects.

Significant SEC issues remain. SC&A prepared responses. We have none at this time. We've kind of come to an impasse and

this is where we're coming to the Board. Something that came out of the April 19th meeting was NIOSH indicated that they had located 450 boxes of site specific records. We don't know what the contents are on those.

Outstanding issues going on. Issue 6B, reconstruction of internal exposure for inhalation of thorium-232 from in vivo chest count data from 1968 to 1988. NIOSH has a White Paper issued in January of 2008. The topic of the Work Group discussion since January 2010, four meetings.

SC&A issued a review of NIOSH's White Paper July 2010. NIOSH responded to SC&A's review at the November 10, 2010 Work Group meeting. NIOSH submitted two memos January 19, 2011 in response to the SC&A review. Issues discussed in detail at the April 2011 meeting.

Issues remaining regarding data accuracy and completeness. This has been brought up by the petitioner. The time that

it would take and the money it would take we never really -- we didn't think that we could go on on that one. We wouldn't even be able to understand if we could get something that was out of it.

To summarize this, we've been at this five years, 10 Work Group discussions. The timeliness issue comes up quite a bit, especially by the petitioners. Two SEC issues resolved with some caveats.

The HIS-20 validation was completed. The thorium-232 daily weighted average there are a few caveats with this but two SECs that we've deemed at our Site Profile is raffinates thorium with Ra-226 and the K-65 silos. They are in the process. We feel that these are going to become Site Profile issues but we haven't come to a conclusion on that.

The uranium coworker model, the construction versus subgroup issue one, still out there. Low progress on two significant issues prior to the April 19th Work Group

meeting. We still have significant ones out there. We have new data that has come in that we haven't been able to review or that we even know what is in there.

The Work Groups work very hard on this, same as NIOSH and SC&A. At the last meeting I asked both sides if you go on to the database, the O: drive, SC&A has combined all of our White Papers and everything that we've done on it and so has NIOSH. They've put them in there so that you will be able to review this.

We're bringing this to the Board because we're kind of at a point where we've kind of at an impasse and it's going to come down to the Board to be able to get involved and be able to review many of these things and be able to help us from there.

That's about it. I'll turn the time over to John Stiver. Is there any questions?

CHAIRMAN MELIUS: First, any

questions for Brad? Okay.

MEMBER CLAWSON: I'll turn it over to John.

CHAIRMAN MELIUS: I actually have one, Brad.

MEMBER CLAWSON: Okay.

CHAIRMAN MELIUS: Maybe John or somebody could -- what is a blunder?

MR. STIVER: This is a term that came out of a paper published in Health Physics by Adam Davis and Dan Strom. It's basically an uncertainty analysis of this whole weighted-air sampling data and its use in dose reconstruction in this program.

The problem there was that these data have been collected since the 1940s and it's pretty much a continuous process through time. It really wasn't intended to be used in the dose reconstruction setting. It was mainly for industrial hygiene purposes.

As a result of that we never really did any kind of an uncertainty analysis

on these data sets. Davis and Strom did this. One of the things they discovered they weren't expecting were a lot of typographical errors, math errors and things of that nature.

They refer to them as blunders. It doesn't imply any degree of stupidity or anything like that. They are just mistakes. It's kind of an odd term. I expected to get that question actually.

MEMBER CLAWSON: Dr. Melius, I'm glad you brought that up because I thought what are we saying here.

CHAIRMAN MELIUS: Is this something you health physicists use commonly? I can't imagine it being a professional term but thanks for the explanation, John.

MR. STIVER: Okay.

MR. MORRIS: This is Robert Morris with ORAU team. I worked on some of that and I can answer your question, Dr. Melius.

CHAIRMAN MELIUS: Okay. Go ahead.

MR. MORRIS: Blunders is a technical term in one of the ISO standards on uncertainty.

CHAIRMAN MELIUS: Oh, okay.

MR. MORRIS: And it conveyed the idea of mistakes, typically a rounding error, a typographical error, a transcription error, or a mathematical mistake which you would see quite a few of in the 50s with no calculators handy.

CHAIRMAN MELIUS: Okay. I can see where blunder would sort of fit that.

MEMBER CLAWSON: We were not trying in anyway --

CHAIRMAN MELIUS: Thank you very much.

MEMBER CLAWSON: I didn't understand it either. I know what a blunder is. I get that quite a bit.

MR. KATZ: While John is coming up, I'm remiss to note for the record that Dr. Lockey has recused himself. Thank you.

MR. STIVER: Good afternoon, everybody. My name is John Stiver. I'm the Health Physicist with SC&A. The last couple of years I've been involved pretty heavily in the Fernald SEC issues resolution process. I'm actually fairly close to it.

As Brad mentioned earlier, this is probably one of the SECs that has gone on the longest, about five years in time. I think the main reason for that is there are some very complex technical issues that have involved a lot of discussion. Kind of an iterative process of White Paper exchanges, knowledge being developed, new models being proposed in response and so forth.

So what you're going to see today is really a snapshot in time. This is the state of affairs as of the 10th Work Group meeting, the April 19th meeting. What you're going to see in summary may not make a lot of sense in terms of what you might typically expect for an SEC. Mainly that you would

expect in the early years when there is a poor industrial hygiene process is data collection isn't very good.

You would think that would be always the -- in most cases that would be the time frame we need to be concerned with. Fernald has some kind of unique aspects to it that are going to result in some kind of unusual, not really recommendations but periods during which we feel that there may be issues involved in being able to reconstruct doses.

We can go ahead and get started here. You may have seen this slide not too long ago, or something very similar to it. This basically is just the overview. The six issues that were identified in the SEC Evaluation Report were the coworker model for uranium internal exposures, validation of the electronic database from which the hard copy records were transcribed.

The issue of recycled uranium has

probably been the most complicated of all. There is the use of radon breath data for reconstructing doses from radium and thorium-230 mainly for workers in the refinery who handled raffinates which is a term for the waste product after uranium extraction. It contains high quantities typically of radium and thorium and subsequent U-238 decay progeny.

Associated with that is the review of radon emissions from the K-65 silos which were the principal source of radon exposure to workers at Fernald. Finally, issue 6 is the reconstruction internal inhalation exposures from thorium-232. This is really a two-part issue based on two different time frames.

The first being the use of these daily weighted exposures, weighted air concentrations from about 1954 up through '67. Then in '68 Fernald brought in this mobile in vivo rad monitoring laboratory from Y-12. At that time then the use of the air sampling was

pretty sharply curtailed in favor of doing chest counts. From then on these chest counts were then used to assess intakes of thorium-232.

As we said earlier, there have been 10 Work Group meetings, SC&A's work products and associated summary information. There's a file in there called "Read Me" that kind of gives you a synopsis of each one of these documents and what issue it fits into and kind of how it was developed.

Sort of a CliffsNotes version I guess. Those can be found at the blue highlighted path file name there. As Brad said, after the April 19th meeting, just last month, there were still two main issues outstanding being the recycled uranium and thorium chest count issues.

Let's go ahead and take a look at these issues. I've been very close to this and so if I start going too fast and makes leaps of faith here, please sure to tell me to

slow down the train and I'll do that. Or if there is something, some particular issue that comes up you want to discuss, you can stop me and we'll go through that.

This issue No. 1 is really about the completeness and adequacy of the bioassay data because this is really the cornerstone. Fernald has a lot of problems. What they do have is a lot of bioassay data, a lot of uranium bioassay data all the way back into the 50s.

Really the first step in developing a coworker model was to assess the quality and completeness of this data set. As of the April meeting all these issues have been resolved except for the issue of the coworker model for construction workers.

I'm going to diverge a little bit here. At the Savannah River site we did some work on that site and we found that at least for certain years and certain buildings the construction worker exposures were

statistically significantly higher than those for all workers.

So what we want to do is kind of get a better handle on whether that issue is going to be a problem for Fernald as well. NIOSH is in the process of developing this model as of the April 19th meeting. That report had not yet been completed.

Issue No. 2 is the validation of the HIS-20 database. This is really a two-part issue, the first being the at some point in time NIOSH had done a validation study but stopped short of a complete analysis because they felt they had adequately analyzed the data to the level of significance that was required.

We at SC&A had some issues related to that. As a result of the Work Group meetings NIOSH went ahead and completed that study. It was delivered in December of last year. It resolved all of SC&A's concerns. At the February 8th meeting it was recommended

that Subpart A be closed out. Consequently there are no action items at this time.

Issue 2B. There were concerns raised by the petitioner about the integrity of the hard copy bioassay data; namely, that it may have been tampered with to create the appearance of lower exposures than actually took place.

SC&A prepared a report at the Board's instruction that looked at some strategies that could be used to analyze data sets for corrupt monitoring practices. We came up with three possible approaches to this. One was comparing the urinalysis to in vivo monitoring. Of course, you would be limited there by a subset of workers who really had complete sets in both time frames.

Another was to look at the consistency and reliability of the urinalysis results. Do the results really comport with the known biokinetics. If not, is there some kind of pattern where you have high followed

by several lows that would make sense in terms of excretion rates.

The third approach was to compare the daily weighted exposure data to urinalysis records. There's a couple problems with that. You would have to have detailed knowledge of the workers' locations, job types throughout time, whether respiratory protections were worn and that type of thing.

The Work Group had agreed that such investigations, as Brad also mentioned, would consume considerable resources and would likely be inconclusive. As a result there are no action items at this time.

Now, the next few slides will be devoted to recycled uranium. This is probably the most complex of all the issues and still has some outstanding problems.

Our main concern is, as you know, we've established that Fernald had a comprehensive set of uranium bioassay measurements but not much for some of these

other constituents that would be found in recycled uranium, that being plutonium-239, neptunium-237, fission products such as technetium-99, strontium-90 and so forth.

The concern is really that the proposed defaults of a sort of one-size-fits-all model that NIOSH will use, with what would considered bounding defaults and proportionality to the uranium content, was that there may be certain groups of workers in certain processes and certain time frames for which those values would not be bounding.

Here is an example of the dosimetric significance for the proposed original NIOSH default of 100 parts per billion on a uranium mass basis. The doses for plutonium could be up to five times higher than the uranium dose. Of course, that would scale with higher defaults, higher concentrations.

The period of interest. When we look at the timeline of the uranium receipts,

they were first received in 1953. Between '53 and 1961 I think there is about 45 metric tons. Then receipts really started to ramp up and peaked in the mid-1960s and then again in the mid-1980s for a total of about 18,000 metric tons. There's a table in one of the DOE field office reports that illustrates that quite nicely.

1986 after a long tenure by National Lead of Ohio, the M&O, Westinghouse Materials Company came along and replaced them. This was a result of some DOE investigations as well as an attached report on recycled uranium. A lot of things were kind of coming together in that time frame.

So Westinghouse came in and they really changed up the entire industrial health process. They introduced a comprehensive improvement, monitoring, air sampling, regular bioassay for different subgroups of workers. From 1986 and beyond we are fairly confident that doses from recycled uranium can be

reconstructed.

Prior to 1986 one of the findings in our report was that the Rad-Safe program was probably not adequate to control exposures from these contaminants. Thus, the period of interest is really from 1953 to 1985.

Here is a little history of the different Work Group discussions and what happens to kind of give you a snapshot, a thumbnail sketch, I guess, if you will of what the issues were at various time frames.

All the way back in October of 2008 we were tasked to review the NIOSH White Paper on RU with basically the same goal in mind throughout the entire period which was are these defaults going to be appropriate and bounding for all the workers.

As of January of 2010 we produced our White Paper. We discussed it. NIOSH had not had time to respond to it and agreed to prepare their response for those 11 findings which they indeed did at the November 9th

meeting of last year. The responses were discussed in detail and some action items emerged from that.

This particular meeting really concentrated on the source of data that were used to generate these defaults, mainly these DOE reports that came out around the year 2000, these mass balance reports that really traced quantities of recycled uranium throughout the DOE complex.

In addition to that, there were some site-specific data that we felt indicated that these defaults may not be applicable to actual worker exposures at the site. Our action items produced the second RU report that really focused in on the availability of site-specific data.

Also really look into the veracity of the field office report subgroups. Basically what they did was they came up with 19 different process subgroups for this data. There are about 4,000 plutonium measurements

mostly taken in the 1980s. They used process knowledge experts.

Also the available data to parse this data set down in different processes which would then correlate to various activities that might have taken place in the facilities.

At the February meeting we presented our second RU White Paper. These were some key findings here many of which were unchanged from our first report, one of those being there was a lack of data and limited health physics program integrity during the NLO tenure.

There were limitations associated with the DOE reports, these mass balance reports. Typically variability uncertainty and data completeness issues. The big issue that emerged from our review of the site-specific data was this dolomite problem. This was magnesium fluoride used in the reduction of green salt to uranium medal. This takes

place in Plant 5.

This is a process that concentrates these contaminants. Every time one of these reduction pots is utilized, about 50 percent -- 50 to 60 percent of the plutonium transuranics and other fission products move into the slag.

Then the slag is then re-milled through Plant 1, recycled, and used again so you have this continuous loop. Actually a small part of it is either sent off to be re-extracted if the uranium content is high enough. Another portion is disposed of. About half of it each time around gets reused so you have this concentration loop that's going on. These are the most highly exposed process subgroups in the entire facility.

We found high plutonium and neptunium in concentrations in dust collector samples which also correlate to Plant 5 and Plant 1. We found high concentrations in boundary air samples. I think there were

seven of them, seven different locations. There were well over 200 parts per billion in 1983.

We also looked at subsequent years. You see the spike coming in about 1982 which correlates to this time frame of processing of the most highly contaminated materials. It peaks out about '84 and then drops back down to less than 100.

We also found high concentrations and onsite air samples collected in 1989. We have concerns to some extent about back extrapolating this data from the 1980s to earlier time periods.

This idea of one size fits all model where it's kind of an all or nothing phenomenon you don't have the granularity to look at the subgroups and say, "Okay, for this group of workers and this year and this plant we can't reconstruct the doses but these other guys over here we think we're okay with."

Here you've got one size fits all.

It's either you've got it or you don't. It's very critical that you have bounding yet plausible upper bounds.

NIOSH was tasked then to respond to the second report and provide a response for the next meeting. They did deliver a response. It turned out it was right before the meeting so these next slides are really based on about one-day's review of the response. It's just the way it turned out. We haven't been tasked to continue our work at this point so what you're seeing now are preliminary observations based on what NIOSH provided.

We found some very good things about this new report, couple of things that we'd had troubles with before. Now their acknowledgment of these chemical processes and magnesium fluoride could pose a potential exposure above their previous default levels.

They acknowledge the limitations and the uncertainties in the DOE field office

reports. Previously they had used the arithmetic mean values for these subgroup processes to define their defaults. Those ranges of data were very extreme. Very large spread in the data. We felt that log-normal fit was probably more appropriate based on our analysis in our first RU report.

They proposed using the upper 95th percentage for log-normal distributions for all but the highest process subgroup for the period of 1973 to 1989. This period is when these tower ash and incinerator ash residues from the gaseous diffusion plants were sent to Fernald for extraction of uranium.

This material was significantly more elevated in these contaminants than previous shipments had been. This subgroup represents probably the highest concentration of any amount of material

In the 1980s the most contaminated there were 16 hoppers that this tower ash that came in from Paducah. The term they use for

this is plutonium out of specs, or POOS for short. This POOS material in 1980 really had contributed about 50 percent of the entire plutonium inventory from that point on at Fernald.

The net result was an increase in the default values. Factor of 4 for plutonium. It went up from 100 to 400 parts per billion. They used the subgroup 8 which happened to be the magnesium fluoride data set. A factor of 3 for neptunium and a factor of 2 for technetium-99.

There are still some outstanding problems with it and this is probably -- slide 10 really lays out our position on this at this point based on our preliminary review. NIOSH continues to correlate the increase in worker exposure potential with receipts of this POOS material beginning in 1973.

Remember the new higher defaults are to be applied from '73 on. Prior to 1973, though, they are proposing these very low

continuant concentrations, seven parts per billion uranium, two parts per billion neptunium, and tech-99 is way down there at 19.

However, at the last meeting in our discussions, one thing we weren't really clear about was where in the process does this POOS material get downblended? Is it up front or a subsequent process that might allow a higher fraction of workers to be exposed. It turns out that this material was downblended before it ever went to the refinery.

You have in Plant 1 the sampling plant, milling plant, and also a little bit in Plant 4. This is where this material was downblended. It was downblended to bring it into specifications with uncontaminated uranium oxide before it was fed into the refinery.

From the standpoint of the workers downstream of that initial processing, or initial downblending, the arrival of this

material in 1973 really has no impact on exposures that would have been experienced before. So the magnesium fluoride data, which is significantly farther down the stream from the refinery, is really indicative of conditions that existed in this plant from the get go.

You've got metal production that has not changed from the inception when the plant was first brought on line until when they stopped. They used the same process, green salt reduction. The same types of apparatus. These high values you're seeing don't just apply to '73 and beyond. They apply all the way back to the extent that they apply at all.

From 1973 on, though, '73 to '85, you have this other group of workers who are subjected to the group 10A materials, the most highly contaminated group. We feel that post-downblending are not to be correlated with POOS receipts and the higher defaults may be

applicable. I should have gone to the next slide here. I think I got ahead of myself.

Anyway, in summary we've got -- this is the snapshot of where we stand on RU right now. NIOSH has proposed higher defaults. They considered variability in the DOE field office reports and their uncertainties.

The plutonium defaults were based on the magnesium fluoride data set which is a very robust data set in our opinion. Four hundred data points, site specific. It is limited to the 1980s but the process was unchanged from earlier periods. Back extrapolation is not the kind of issue it might normally be.

It is the highest group except for subgroup 10A. Log-normal fit actually over-predicts the 95th percentile of the data. If you look at the data set, the probability plot actually has kind of a hockey stick shape to it. The 95th percentile fit is above most of

the data points.

The initial POOS feed concentrations in subgroup 10A is where we still have an issue. This may impact the handlers, downblenders, and possibly indirect exposures to nearby workers, bystanders who may also be subjected to these high concentrations.

The data set contained only 39 points. It's extremely variable and uncertain. We have in the DOE a Ohio report. I think it's Appendix F where they have the summary statistics. No, it might be C. I forget. Basically they have all the different data points tabulated for the different groups.

What they have is for this group 10A it's about the only set where you've got measurements taken by two different laboratories at two different locations. You've got measurements taken at Paducah and you also have measurements on the receiving

end at Fernald.

Just an example, one of the most highly contaminated batches, one of the hoppers, there was a variability of almost a factor of 10 based on two measurements from that one hopper. You've got very sparse data set, highly uncertain, high amount of variability.

NIOSH in our meeting claimed that the operators at the plant, at NLO, knew that this material was coming. They used airline respirators, special procedures to protect the workers. From a common sense standpoint that makes perfect sense. However, our review of the historical documentation, the RU Task Force report, kind of cast doubt on the effectiveness of these procedures in time.

We have a potential exposure whose impact has not been quantified or estimated at this time. We feel that it's significant from about '73 to '85, particularly from 1980 to 1986 when the most contaminated ash was

received.

As Brad mentioned, one of the action items from the November meeting for NIOSH to conduct a search for additional documentation, the raw data, and that's where this 450 boxes from Legacy National came from. Any questions about recycled uranium at this point or can I go on? Any questions? Too many questions? Okay. Let's go ahead and move on.

CHAIRMAN MELIUS: Well, maybe I can ask now since you brought it up again. Do we have any idea on these 450 boxes what they contain?

MR. STIVER: As of the meeting the contents were unknown.

CHAIRMAN MELIUS: Mark.

MR. ROLFES: This is Mark Rolfes. We have samples some of the 450 boxes held at DOE Legacy Management. I think we sampled roughly 25 to 35 of those boxes. They do contain isotopic analyses from the Fernald

site for the various constituents of the recycled uranium that was processed at Fernald.

From my recollection these samples were collected from the '60s, '70s, '80s. There was a lot of focus on the 1980s primarily because that was the time period that the highest transuranic contaminated materials were processed.

We haven't gone through an extensive -- we haven't gone through the entire contents obviously because of the volume of records that are available. I don't know if you have any other questions.

CHAIRMAN MELIUS: No, just trying to get at least a preliminary understanding. Thanks, Mark.

Wanda, you had a question? Then Bob.

MEMBER MUNN: I'm not sure I can even phrase this question properly because I think I missed something on what you were

saying, John, when we were talking about POOS when it went into the process. I didn't quite follow after you said it came into the front end. Therefore, it would not have had any effect on the downstream exposure prior to the time that it arrived or after it arrived. Did I misstate that?

MR. STIVER: Yes. The reason being is the POOS materials were downblended in Plant 1 before they were ever fed into the refinery.

MEMBER MUNN: Right.

MR. STIVER: The concentrations in that material going into the refinery would have been diluted down so it wouldn't have had this big bolus of highly contaminated material going through the refinery and on to subsequent steps. It was downblended and diluted beforehand.

MEMBER MUNN: It was downblended to the point that there was no significant difference between that blend and what the

downstream workers were handling before this process began?

MR. STIVER: I believe they were downblending it not to 10 parts per billion. I don't remember the exact number. I believe it was between 10 and 20. You can see from the magnesium fluoride data sets that has an order of magnitude higher than what's coming in in the feed.

You really have this group of workers who have the highest exposure potential by virtue of this concentration mechanism that is going on. That concentration if you look at the content of the feed materials over time after downblending, if you look at it on a graph, it would pretty much be a flat line.

There might be some little blips here and there. The concentration you're seeing in the 1980s we believe would most likely be applicable to early time periods just based on the process knowledge and the

chemistry that is going on.

MEMBER MUNN: So what you're really saying is the POOS doesn't matter.

MR. STIVER: It matters for this other group. It matters for the handlers and the downblenders.

MEMBER MUNN: Only in Plant 1 only upfront.

MR. STIVER: But do we know who those workers are? That's the point beings that hasn't yet been estimated or quantified so that's why we can still consider that an outstanding issue.

MEMBER MUNN: Okay. My other question dates back prior to a couple of earlier comments. I have the impression that there is no -- you're saying there's no real reliance on any of the bioassay data that's available.

MR. STIVER: Bioassay data that were collected for transurancis and recycled uranium were after 1986 when Westinghouse came

on board.

MEMBER MUNN: There isn't anything for the earlier years?

MR. STIVER: No, there is nothing for the earlier years but you do have a lot of uranium bioassay data. If you can bound the constituents in that uranium, then you can link that after the uranium bioassay result and that's the strategy that's been employed here.

MEMBER MUNN: I guess what I'm really trying to get at is whether there is any question being raised with respect to the bioassay data that does exist for the earlier years.

MR. STIVER: The uranium bioassay data has been validated for issue one about the adequacy of the data.

MEMBER MUNN: That's what I wanted to verify.

MR. STIVER: It was all interrelated. As John Mauro likes to say,

that's the rock we're standing on. That's really the cornerstone.

MEMBER MUNN: Something you said led me to believe that because the existing bioassay data did not have some counter test that it was not being relied upon but I misheard what you were saying then.

MR. STIVER: That might have been.

MEMBER MUNN: All right. Thank you, John.

MEMBER CLAWSON: John, if I could just make a comment, too, for the Board. One thing to remember is that Fernald was run as a heavy metals plant, Lead of Ohio. They ran it like a heavy metals plant. They were doing urinalysis just like you would for lead or anything else like that but they were looking for uranium.

That's what they had. We've got fairly good data on that. I think it's 450 different ones but that's all they did. They ran it like a heavy metals plant until in the

late 1980s and so forth when they were replaced by Dow and so forth. Then they really started -- that's when they started to have a RadCon program for the radionuclides that were out there.

MEMBER MUNN: But I think I hear you saying that since you are not -- you don't have enough confidence in your knowledge of the constituents of what was being handled to be able to extrapolate from the uranium data to other radionuclides. I think that's what I'm hearing. Right?

MR. STIVER: No. The issue is we felt the default values that NIOSH had chosen were not bounding.

MEMBER MUNN: Oh.

MR. STIVER: It's tied back to the uranium bioassay data which we feel is solid. It's just those ratios of the contaminants you're going to add into that and corresponding activity to account for these other materials, are those values bounding.

If it's a one-size-fits-all kind of model, it's critical that those values be bounding for all Classes of workers.

MEMBER MUNN: So it's the bounding that you are questioning.

MR. STIVER: It's really the bounding.

MEMBER MUNN: All right. Okay.

CHAIRMAN MELIUS: Isn't it whether you can set a reasonable bound?

MR. STIVER: Yes, and that's why we think this magnesium fluoride data is so critical to the process.

CHAIRMAN MELIUS: Okay.

Bob.

MEMBER PRESLEY: This is an issue that we've struggled with for a long time and this is a lot of data that's come out. It's not new. We've been discussing this for a while. There's some new stuff that SC&A has brought up here. I would like to know, has HHS had a chance to look at this and see if

they agree with it or what? These issues that we've got now, or what their position is.

CHAIRMAN MELIUS: Well, if I understand this correctly, and I hope the issues that you are referring to is that for whatever reason SC&A and the Work Group received the latest NIOSH report relevant to just before the last Work Group meeting.

MR. STIVER: Right. It's preliminary.

CHAIRMAN MELIUS: So this is a preliminary analysis. SC&A have not even committed to -- have not even been tasked yet with a more complete analysis of that. I think one of the issues -- one of the things going through my mind is we need to get SC&A tasked and then it will be appropriate for either as part of a Work Group session or part of a more formal response for NIOSH to weigh in.

I think to resolve this we need at least a response to the NIOSH report and then

we need another Work Group meeting to hash this out. That would include some response from NIOSH. We're not trying to presume that this is all closed at this point in time.

MR. STIVER: I would agree with you 100 percent on that.

CHAIRMAN MELIUS: Is that fair, Bob? Okay.

MR. STIVER: Should we go ahead to the next --

MEMBER FIELD: Just a quick question. You said earlier on that construction workers had higher exposures?

MR. STIVER: For Savannah River site I did some analysis of their data and for certain years and certain buildings the construction worker values were statistically higher than they were for other workers. Especially when you have a subdistribution.

MEMBER FIELD: Do you know why that would be?

MR. STIVER: I'm really not sure.

There are probably many different factors that could contribute to that. The fact that they are moving among a lot of different buildings. Plus they may not have had the same level of scrutiny and monitoring that the other workers might have had. We have that uncertainty there.

MEMBER FIELD: Okay. Then you mentioned there's a good number of subprocesses that go on?

MR. STIVER: I was talking about in relation to the mass balance reports that DOE put out. What they tried to do was account for the movement of these materials throughout the DOE complex. They did that by assigning these data into a subgroup process based on process type.

MEMBER FIELD: I see. Okay.

MR. STIVER: They came up with 19 different subgroup processes.

MEMBER FIELD: Okay. Are there workers associated with those?

MR. STIVER: That's where you would be able to identify, I would say for this particular one I keep bringing up, the magnesium fluoride, we know that process was involved in metals production which was also the dustiest process. The dirtiest jobs in the entire plant were metals production. Not only the dirtiest but they also have the highest concentrations.

MEMBER FIELD: What I'm wondering is can you like assign workers that match those processes?

MR. STIVER: Do you have the granularity to say --

MEMBER FIELD: Right. He worked in this process.

MR. STIVER: You may on an individual basis. I believe the reason we are going to these -- I don't want to be speaking for NIOSH but it's apparent from my involvement you just don't have the granularity to assign workers into particular

buildings at certain periods of time. A lot of them moved among different buildings. There wasn't always a good record of tracking where they went and when they went and that type of thing.

MEMBER FIELD: Do you have any insights whether or not the bioassay data covered most employees or was there just a lockdown on some employees?

MR. STIVER: That's a little outside my area of expertise. I believe even in the 1950s about 25 percent of workers were covered. Then in the '60s it was up to 90 percent.

MEMBER FIELD: Okay. Thanks.

MR. STIVER: John might be able to weigh in on that. He did the analysis on that issue.

DR. MAURO: Awhile back we looked really carefully at issue No. 1, the completeness and adequacy of the uranium bioassay data which basically was they took

urine samples and measured milligrams per liter of uranium in urine. The data starting in '52 up through '57, 25 percent of all workers had data which is a lot.

They had more than one urine sample in a given year. Then starting in '57 over 90 percent of all the workers had bioassay data of that type where they had more than one urine sample per year. When I say this is the rock you stand on, it means you got really good urine bioassay data.

There still is this question whether the -- there may be a few workers, some workers, who need to use a coworker model but, remember, over 90 percent have the data. Maybe 10 percent you'll have to resort to a coworker model.

The coworker model was developed and this question that came up on construction workers really goes to the question, okay, when you do have to use coworker data, does the distribution that you build with all of

this data apply to all workers or is it possible that construction workers may need some adjustment as was done with Savannah River?

That's the question that is being looked at by NIOSH by looking at that subset because they do have that data. They could break out those workers and ask themselves if one size fits all or do you need an adjustment factor.

SC&A's position is that if there is a difference, it will be apparent once you sort that data and the degree to which you need an adjustment factor will emerge from that. That's why we refer to it as a Site Profile issue more than an SEC issue.

MR. STIVER: Okay. Issue 4. This is for the intakes of radium and thorium-230 by the raffinate workers, the Plant 23 refinery workers who handled these wastes.

Based on our former discussions and exchanges of White Papers, we believe that

the NIOSH OTIB-25 which utilizes radon breath data to ascertain radium and thorium intakes is a sound methodology. We have no issues regarding that with this caveat that the intake ratio of the two radionuclides are known and the worker population be identified.

The remaining issue we had with this is there is a subgroup of workers for which they have potentially high intakes of thorium-230 in these waste streams without a corresponding radium concentration or a significant uranium concentration.

This is what sparked the review of Revision 7 of this White Paper that is listed here under the status of the issue. NIOSH posted their response to our review of their White Paper, this Revision 7 White Paper on Fernald thorium-230 and other associated radionuclides Revision 7 so NIOSH has posted their response to that.

Let me just back up and say what the issue was here. Most of these Q-11 pitch

blend sources of feed materials came in from the early '50s until about 1958. Then after that Fernald went more -- started processing yellowcake produced in the U.S. and Canada.

This material already had the radium extracted from it but not the thorium-230 so you have material going to these three different silos. There's 1 and 2 contain the K-65 materials, a great deal which came from Mallinckrodt in about 20,000 barrels that were then hand dumped into a slurrying device and then fed into the silos. They have radon breath data for that group of workers.

But we're concerned with these people for which uranium bioassay data is going to be below the detection limit and you don't have any radium that could be measured either. How do you get a handle on these potential thorium-230 intakes for these workers?

Well, at our last Work Group meeting -- Mark, correct me if I'm wrong on

this but the way I understood it was what they are going to do they essentially consider that this is going to be an non-exposure situation because this material that was -- this yellowcake, when it was handled, when the raffinates were produced, the material was calcined.

This was from a period about up until 1962. The reason they did that was to recapture the nitric acid because it was valuable. What you are left with here is this fine dispersable dry powder. But NIOSH's position, and what the source documentation indicates, is that this process took place in a closed system.

Calcining mechanism was closed and then it was airlifted over to silo 3. Then they showed in Appendix A of this report a series of air-sampling data that show in the raffinate area you've got basically detection limits, MDL levels of air concentration.

What they are proposing to do is

then they're saying, "Okay. Well, we know this material. If there was any kind of an intake, the uranium content is not zero but it's going to be below the detection limit." It becomes one of these missed dose situations where you take half the detection limit.

Then based on the known ratios for measurements of what was in the silo, you know the ratio of uranium to thorium-230 and then you can make an adjustment factor. It becomes one of these using the uranium data as a surrogate for these other nuclides when the concentration ratios are known.

Mark, is that pretty close to what --

MR. ROLFES: This is Mark. Yes, what you said is essentially correct. The DWE data in the raffinate areas were very low air concentrations right around background essentially.

If, for example, an individual was potentially exposed to silo 3 material, we

could use their urinalysis data and it could be a positive urinalysis data. There is nothing -- you know, even if it's not a positive urinalysis data, we would still use that data to assign ratios of other radionuclides.

MR. STIVER: So there is no intention of using the DWE data for the entire plant to do any kind of bounding doses?

MR. ROLFES: We can certainly do that if we needed to but we're using the urinalysis data.

MR. STIVER: At this point you're not doing that. Okay. All right. I just wanted to be clear on that. Thank you.

The small script down here under the second main bullet really is just a bulleted outline of what we just discussed, how this material was calcined, how it was transferred in a closed system.

We basically agree with this adjustment factor. We think that would be an

adequate way to control these doses which are in all likelihood very small.

We believe it's a tractable Site Profile-type issue and no action items emerged related to Issue 4.

Issue 5. This has a long and storied history. There have been numerous White Paper exchanges. I know SC&A has produced five papers on this particular issue.

In summary, our position on this is that the NIOSH estimate for radon release from the K-65 silos is substantially underestimated. We also believe that their atmospheric dispersion modeling is not scientifically valid for the configuration for the silos that exist.

While it actually results in an overestimate, the overall net effect is still not enough to compensate for the underestimated source term. Lots of back and forth discussions, lots of White Paper reviews. As a practical matter, both DCAS and

SC&A believe this is a tractable problem.

It is not an SEC issue. We have agreed to disagree. They have not accepted our approach and we believe that there are still significant problems with ours. This really is -- we have confidence that this can be bounded based on our own analyses that have been done in these White Paper reviews.

At the April meeting, I believe in the transcript you'll see, that the Board agreed to move this from the SEC list of issues into TBDs.

There were some outstanding action items from February 9th. One was to go back and look at any cases that might have been impacted by these findings. I don't think there was any resolution of that.

I know there was kind of an outstanding item but we thought it would be a very small number if any at all because the lung cancers were basically treated as --

DR. MAURO: In concept though

we've had all these disagreements on how much radon is coming out of the silos, we think it's quite a bit more than their estimate and have the disagreements on how you model the atmospheric dispersion. In the end what you're really saying is how is that going to change your dose reconstruction.

Are there people that where there were dose reconstructions done, would the outcome of those dose reconstructions, which mainly affect the respiratory tract, would any of them be affected by whether we used our approach or we used their approach. I think that was the question that you are referring to.

MR. STIVER: That was the question. I don't know if that had been looked into at this point.

DR. MAURO: I would have to say I think NIOSH did look into that matter but I don't recall the answer.

MR. STIVER: Okay. In any case,

this is no longer considered an SEC issue and it will be discussed in the TBD context.

Issue 6. This is a two-part issue. This regards the reconstruction of exposures from the inhalation of thorium-232. There is a time period for which monitoring is not available from 1954 to 1967. This is Issue 6A, the use of this DWE data.

Basically what you have for the different plants -- let me back up here. Is everybody familiar with what a DWE is? Do you all understand that concept? Basically it's a time weighting of these general air samples and breathing zone samples for a particular job and particular facility.

What they do by doing time motion studies for particular work, a particular type of worker is known to do a certain number of tasks throughout the day. They know the time it takes to produce these tasks, what the tasks entail. What they do is they monitor.

They set up samplers, little

lapel-type breathing zone sampler, to really capture what this worker might be exposed to based on the air concentrations during the course of the day. Anywhere from about -- I've seen any number of about three to 22 different types of tasks associated with a given job. For each one of these tasks there's replicate measurements taken.

There's a high degree of variability, particularly in the general air sample for the fixed samplers. There are changes in airflow patterns, there are changes in the particular size distribution, and a lot of other factors that can come to play here that result in a lot of variation and when you look at the source data you see that.

What we have then is NIOSH's proposed response to our White Paper. First of all, this is such a complicated issue it's hard to frame it sometimes. Back in March of 2009 NIOSH put out a White Paper where they laid out a methodology for using this DWE data

to bound thorium intakes, or to assess thorium intakes.

We were tasked to review that and we produced a White Paper response that July. In that response we had 20 findings. Eight of those were related to the data adequacy and validity. The others were related to the modeling mechanisms.

Basically our problem with the data validity had to do with the fact that the DWE, which was instituted by the Health and Safety Laboratory back in the 1940s, it was really intended just to monitor work place conditions. It was not ever intended to be used for dose assessment.

They would collect these data. It's obviously a snapshot in time. It's representative of what that particular worker was exposed to during that sampling period for that day in that facility.

They compiled these things and they looked at them and they said, "Okay.

We've got people that are above the maximum allowable concentrations in this particular part of the building doing this particular operation. How can we modify that to bring these values down?" So it was basically an index to exposure but not used directly for dose assessment.

What they did not do was perform any kind of an uncertainty analysis on these data. Really what you have is you've got a whole distribution of DWEs but you only have one average. Basically these reports will show you a high value and a low value and an average and it will tell you the number of samples that were taken.

In some cases the raw data exist. In other cases we haven't located that data. As a result of this issue it's common within the EEOICPA program. Adam Davis and Dan Strom in 2008 published an uncertainty analysis where they looked at five different facilities that used DWEs from 1948 to 1955.

There were approximately 165 workers, 63 job categories, about 430 air samples. They used Monte Carlo methods and they looked at the different -- they basically looked at the variability in the data set. The fundamental unit of measure here was this task air concentration measurement for which there were typically replicates.

I've seen up to 15 or 20 samples for one given task. They would take this and look at it two different ways. They looked at a discrete distribution where using Monte Carlo methods they would go through. For each run they would pick at random one task value for each of those, multiply by the time weighting and there's one outcome.

They would do that 10,000 times and build an output distribution. For the discrete data it's very spiky. It doesn't really seem to comport with any type of statistical distribution.

They also looked at log-normal fit

of this data. They took the data set and constructed a log-normal -- assumed that it followed log-normal statistics. They did a fit and then they would go through and do the same Monte Carlo methods. Go through and pick off one of these values, 10,000 iterations or whatever, and produce a nice output distribution.

When you overlay those two the discrete, which is based on the actual data, and then the log-normal fit you see that the log-normal always has a tail that extends far beyond the highest actual measurement. That's one of the advantages of using the log-normal is because it accounts for the potential for values that were not measured.

In actuality I believe the standard deviations were about one-and-a-half to two-and-a-half times higher for the log fits than they were for the discrete fits. This is important because one of the problems we've always had with this DWE concept is that

you've got types of admissions or events that might take place over a short period of time, or sometimes chronic events like some of these fugitive emissions from ball mills and things like that.

The historic record is just rife with these descriptions of how dirty these operations were. But, you know, as a general air sample is it in the right place for a particular day to measure the dust that is coming off of that fugitive emission. We have these uncertainties in data that weren't measured. The log-normal gives you a way to at least account for that.

Davis and Strom went through and they analyzed all these data and they produced geometric standard deviations, GSDs for these data sets, and they came up with a 95th percentile GSD of about 4 and the 99th percentile ranged up to about 7 or 8.

The GSD of 5 is probably pretty good for DWE data so you have kind of a

recommendation, and it's not really an endorsement or policy statement or anything, but they recommend that a GSD of 5 is probably going to be adequate to bound DWE data for particular jobs.

And NIOSH came back after our review in July actually in response to -- we found out about this through Weldon Spring because they had the same kind of problem at the Weldon Spring site. It turns out NIOSH had issued a new revision to their method that had abandoned the previous approach in favor of this Davis and Strom method.

It's really kind of a shortcut method because -- actually I can show you. Okay, here we go. My eyes aren't as good as they used to be. You can really distill this down to four recommendations. NIOSH has taken the Davis and Strom methodology and applied it to their particular situation here and this is what emerged.

They are going to assign the DWE

for the job description with the highest DWE in the facility where thorium was handled for a particular year to every worker in that plant with a GSD of 5.

Just think about what this means. You've got, say, a guy in Plant 9 where they did the metals production for thorium. You've got a whole range of workers in there. You've got supervisors. You've got people who really don't handle the metal so much. And you've got the guys like the laborers and helpers who've got their heads down in these reduction pots scrubbing them out.

Maybe they had respiratory protection and maybe they didn't. You've got that guy who is doing that job in Plant 9 in 1955, has a DWE of 685 MAC. MAC is the maximum allowable concentration. This guy is getting huge intake.

It's a very dusty environment. You're looking at that guy and say, "We're going to take him. Everybody in this plant is

going to get this DWE. Not only that, we're going to assign a GSD of 5 for the uncertainty to account for what we may have missed." You might look at that and say is that really plausible?

Yes, it is because you actually have the data. You have an average concentration of 685 MAC for this category of worker and there is uncertainty involved in that. Now, did every single worker in that plant do that job? No, but some of them did but you don't know who they are. We believe that is a reasonable approach to take.

The next step. If you don't have air sampling data or you don't have DWEs at all, what you can do is take a high DWE from an adjacent year. If you are missing one or two years but you have information for the previous year and later years and you know the processes hadn't been altered during that time, you can be reasonably sure that you can use the data from another year.

It's a pretty common practice. I've seen it done a lot in dose reconstruction. Again, assign a GSD of 5. If you don't have DWE, if you don't have time waiting, what they are proposing to do is use the 95th percentile of year sampling data. Basically you just take all this data.

For the guy whose got the 685 MAC, he's got one job that took 15 minutes to do, scrubbing out the pots. The concentration in that particular job was like a million DPM per cubic meter. It's so dusty you couldn't breathe it for any length of time at all.

If you're using the 95th percentile, Davis and Strom showed that if you do this you are going to capture every DWE but it may not be physiologically realistic. That's not always going to be the case. You may have another plant somewhere, say the pilot plant, or the refinery where you've got low concentrations. You take the 95th percentile and it's physiological possible.

Davis and Strom aren't really -- they don't really come down with any particular recommendation on this. They do seem to be believe that the average of the unweighted air concentrations is adequately claimant-favorable.

However, they showed that it bracketed 60 of the 63 job categories so you still have three jobs for which it didn't apply. This is still kind of an area that is open here.

CHAIRMAN MELIUS: John, can we try to move this along a little bit because we're running up against --

MR. STIVER: I'm sorry. I'm too far into the details.

CHAIRMAN MELIUS: We have to have questions and so forth.

MR. STIVER: So basically one of the other things Davis Strom found is that this idea of what they call blunders in the ISO document, they found those could result

and they did take place on the average of about a factor of 200 underestimate all the way up to a factor of 10 underestimate.

We believe that NIOSH should undertake a review of the raw data to just get some kind of a bound on the frequency and magnitude of these blunders. We also believe that this issue of the 95th percentile needs to be reviewed.

At this point there really are no action items regarding Fernald. I know NIOSH is developing a method for looking at blunders for Weldon Spring which would evidently be used for these other sites as well.

Issue 6B. This is the later period from 1968 to 1988. NIOSH used chest count data from the mobile laboratory from Y-12. Again, lots of White Papers going back and forth. There's no DWE data after '68 so the ability to reconstruct these doses is completely dependent on the integrity of this chest count data.

We have two issues, data adequacy, data completeness. Regarding data adequacy, from the early decade 1968 to '78, the data reported in milligrams of thorium. However, we have no information on the calibration. We don't know which decay daughter product was used, whether it was actinium or lead-212.

We have highly variable and uncertain data that doesn't comport well with biokinetics during this period of time and an MDL which appears to be not supported by the data set or by the references. The subgroups are easily distinguishable below the detection levels which we don't feel should be possible.

From '79 to '88 they reported nanocuries of thorium based on lead-212. Once again, the MDA appears high, in 85 percent of the data or below the detection limit. This equilibrium factor, this is a factor to account for this equilibrium once thorium is separated. In theory it would reach a low of about .4 several years after separation and

build back in to one.

I know NIOSH posted a new document yesterday and one of the things they did was revise their estimate of this equilibrium factor down. We still have issues on that regarding some of the experimental data that shows it could be a factor of 10 to 100 lower based on the solubility type.

Data completeness. At the last meeting NIOSH indicated that they thought that their distribution was broad enough to account for all the workers and thorium workers would probably be -- if you couldn't identify them, then the chemical workers would be a reasonable surrogate.

Our position is we looked at that and we found that, first of all, you only got thorium workers for 1968. There's like 60 people who are identified as thorium workers. We took a look at their distributions compared to chemical workers and this is what we find. The thorium workers have

significantly higher intakes throughout the entire portion of that curve compared to chemical operators who were non-thorium chemical operators.

You also see that in all this data you are below 6 milligrams for almost all of it, yet you can still discern these subgroup differences which gets back to the MDA issue. Here is all chemical operators and all workers. They are basically the same.

Action items that emerged. NIOSH is going to post about 300 pages of calibration information from the Y-12 lab. SC&A will prepare a formal White Paper report on this thorium worker subgroup issue.

So, in summary, this is the last slide Brad showed you, we've got the issue 1, the construction worker subgroup analysis. Issue 3, still SEC issue, we believe, regarding recycled uranium for these front-end workers that handle the most highly contaminated materials.

Issue 6B. I think there's SEC and TBD components. The SEC component being that the milligram thorium data adequate for dose reconstruction for that first 10-year period. Also more of a TBD issue given that the data are adequate and what kind of adjustment factor would be needed to account for the thorium worker subpopulation.

That's it. I am certainly willing to entertain questions at this point.

CHAIRMAN MELIUS: Thank you, John. Questions? I have a couple. Just out of curiosity the Davis and Strom paper, is that something that was done for this program or is that something independent?

MR. STIVER: It wasn't done under the aegis of EEOICPA but it was done to address this issue that has come up in this program. I don't know if it was funded through DCAS or what organization did that. It was published in Health Physics literature.

CHAIRMAN MELIUS: Okay. I would

just be curious to understand that. It certainly seems to have been something for this program. It's certainly relevant to it.

My second question is on your summary. Maybe I misunderstood the item issue No. 1, the coworker model. It seems to me, at least one of the messages I got from you, it wasn't even clear to me that a coworker model was feasible partly because people were moving around so much and so forth and whether you would have enough data to do that.

MR. STIVER: That construction worker sub-issue.

CHAIRMAN MELIUS: I guess we'll see with the report but to me it still appears to be potentially an SEC issue.

MR. STIVER: It's what kind of adjustment would it take. We figure they use about 10 percent of the values to determine the kind of adjustment to ensure bounding.

CHAIRMAN MELIUS: Okay.

Anybody else have questions?

Okay.

Brad, do you want to say anything just to finish up here?

MEMBER CLAWSON: We never tasked SC&A with the final report for NIOSH's response.

MR. STIVER: For the RU issue?

MEMBER CLAWSON: For the RU. I'm wondering if we need to address that.

MR. STIVER: Go ahead and do that? It will be an action item?

CHAIRMAN MELIUS: Yes, but let's -- Josie.

MEMBER BEACH: I have a question. The additional 450 boxes has come up several times. Both SC&A mentioned it and NIOSH. Is there going to be some tasking for SC&A based on that or -- I'm just curious what's going to happen with the boxes or what is the forward path.

CHAIRMAN MELIUS: You know, I think to me going forward certainly SC&A --

the Work Group needs to meet again, I think, between now and August.

Secondly, the SC&A needs to be tasked to review the NIOSH report that came out just before the last Work Group meeting and they need to have some -- then NIOSH probably needs some time to also build into that to review and at least be familiar with the SC&A report.

We need to bring that to closure. I would also think NIOSH needs to sort of figure out what the schedule is for dealing with those 450 boxes because I think it's a question of what's feasible.

I don't think we are even at a point of having SC&A review them as much as the question is are they relevant enough that some judgment be made that they are going to affect the outcome and what is the time frame for that. I assume eventually they will get inventory but whether that's two months, six months, five years, I don't know.

I don't think it's fair given resource issues related to that to give an answer right here but I think at some point the Work Group needs to understand that. We certainly need to understand that by our August meeting.

Are there any other sort of action items that people see? Henry.

MEMBER ANDERSON: Just the issue of the boxes. From worker interviews and any other -- I mean, is there a claim somewhere that there's missing data as far as biomonitoring, things like that, that this could represent versus, you know, there's a lot of records that are just records that wouldn't deal with this.

CHAIRMAN MELIUS: I think based on -- Mark, why don't you go to the mic? You can correct me. These might be relevant but it's the question of what time frame they were collected in or what's in those boxes in terms of what time frame may determine how relevant

they are. It may be difficult to tell without going through all 450 to determine that. Then the question is what time period and how relevant they are. Is that a fair statement?

MR. ROLFES: I was going to say -- this is Mark Rolfes. Some of the information that we've seen in the boxes that we've sampled have, for example, each uranium ingot that was produced by the Fernald site.

Each of the uranium ingots that was produced at the Fernald site would have been sampled. They would have taken a little bit of the uranium metal that was produced. Those are the types of records that we've seen primarily in this 450 boxes of records.

These are not worker bioassay results or air monitoring results which would be directly used in dose reconstruction. These are essentially the raw data which I suspect were compiled by the Department of Energy for the recycled uranium Ohio field office report in 2000.

CHAIRMAN MELIUS: Any other items that people -- can we at least formally task SC&A? I guess since we are meeting as a Board, we should do it as a Board.

Brad, want to make a motion?

MEMBER CLAWSON: I would like to make a motion that we task SC&A to review NIOSH's recycled uranium paper.

MEMBER BEACH: I'll second that.

CHAIRMAN MELIUS: All in favor, say aye.

(Chorus of ayes.)

CHAIRMAN MELIUS: Opposed? Okay. So tasked.

Brad, as Work Group chair, if you can sort of organize the follow-up meetings and do some of this coordination. Thank you.

Thank you, John, for a very thorough and helpful review. Obviously a lot of work has been done but it's been a long time also. Hopefully we get resolution, or at least I would like to aim for resolution on

this for August. If not, at least a lot of progress trying to narrow down what needs to be done here. It's been five years, Brad? Yes. Do that.

Did Jim rejoin us? Let's try to plan on doing some of our work session until 3:30 and then we'll take a break and come back at 4:00. Is that satisfactory? I think we have enough time in our schedule.

MR. KINMAN: I apologize. Can I just interrupt? Ted, I'm not sure if you spoke to the petitioner but I believe that she was expecting to possibly address the Board.

MR. KATZ: I'm sorry. The sheet I have indicates that you didn't get a hold of her.

MR. KINMAN: I apologize that you may not have the most updated information.

MS. BALDRIDGE: This is Sandra.

MR. KINMAN: She's on. Okay.

CHAIRMAN MELIUS: Okay. Go ahead.

MS. BALDRIDGE: I've been

listening to the discussion and made a couple notes, especially since I still have concerns about the data quality. When it was mentioned about the HIS-20 data, that was examined for transcription errors and the transcription was sound and was confirmed to be accurate. It wasn't examined, to my knowledge, for accuracy in the data itself but only for transcription.

National Lead of Ohio acknowledged in their historical documents that were included in the petition that there were deficiency in the work records to the point that they often didn't have knowledge of the jobs or the tasks that the individual workers would perform.

Now, dose reconstruction requires knowledge of what workers were exposed to based on where they were working. The individual data was never compared to the high air monitoring MAC, the general air count. The urinalysis were never compared to that to see if there was a correlation between what

the urinalysis was showing or the dosimetry was showing to see if they were actually assigned the right job task for dosing or even the right job location, plant location.

That is part of my concern. There have been assumptions made in dose reconstruction based on where they think people were working and they, therefore, assigned those doses when, in fact, the individual was not working at that job assignment and did not receive the doses assigned that corresponded with that job.

Now, it was recommended probably three, three-and-a-half years ago, that they take a look to see if some of the individuals that were suppose to have been working in areas with extremely high general air level MACs, I mean, in some cases we're talking thousands over months and months and years, and whether those individuals' records showed that.

Now, it should have been a

relatively simple task if they knew who was working at what job and who actually was receiving those exposures but nothing was ever pursued to see if there was a correlation that could confirm that the job assignments were, in fact, the correct ones. That is still an issue that hasn't been addressed.

At this point we have finished five years. We are into the sixth year. The petition was submitted in '05. We are in '11. By August we will almost have completed five-and-a-half years of evaluating documents and data. I really think enough is enough.

There are answers that we are never going to have. This could be an ongoing project, as was mentioned, to go through 450 boxes of documents. Why were they just now received? When this petition was presented NIOSH didn't even know that there had been any storing processing done in Plant 6.

The Technical Basis Document stated that data has been destroyed so they

proceeded to reconstruct data which absolutely did not reflect the work place or the exposure. Those people who worked in those conditions had their dose reconstructions done based on it being a strictly uranium process and no allowance was made to those workers for thorium exposure.

Now, that Technical Basis Document has never been corrected and those dose reconstructions have never been reexamined or redone. That's kind of where I stand, I think. The process I found has deficiencies, at least in my point of view. I just hope things get straightened out and the people who gave their lives are compensated, their families.

CHAIRMAN MELIUS: Okay.

MS. BALDRIDGE: That's it. Thank you.

CHAIRMAN MELIUS: Thank you. Also, Dr. Ziemer, are you on the line? I don't know if you had questions. I neglected

to also ask if you had questions.

MEMBER ZIEMER: No, I have none.

CHAIRMAN MELIUS: Okay. Thank you.

Yes, Brad.

MEMBER CLAWSON: You know, Sandra brought up something that we neglected. Fernald actually became the national repository for thorium and we're not talking small amounts. We're talking train cars. I found some documents in Hanford that this was being set up because in the later years they were trying to control all this and it basically became the repository for it.

MS. BALDRIDGE: Could I add something to that? The Technical Basis Document acknowledged that it became the repository in the '70s when, in fact, the petition has a document where they are asked to start stockpiling back in the late '50s so there is a considerable time span between the acknowledgment of it being the repository and

when they actually started stockpiling them and storing them on site.

CHAIRMAN MELIUS: Okay. Thank you.

For our Board work time I guess one of the issues is that -- we have the comments from the November Board meeting, public comments that Ted has provided us. This is one that took some time. Right? So it's a little distance.

I don't know if others have had a chance to go through it. It looks like a formidable document but it actually isn't. I did go through it and I actually thought the responses were appropriate except I have questions on one which is on page 90 of the document.

LaVon is not here. There he is. Okay. LaVon. This was a comment from Antoinette Bonsignore about Linde. It was a question about failure to meet the time limit requirements and evaluating the SEC petition.

As it summarizes here, LaVon's response was it's always the intent to try and achieve -- I believe there is also correspondence that she had with the Board, and I thought also with NIOSH that the Office of General Counsel had responded to which I don't believe we have ever seen a copy of.

I think it would be useful just to reflect that in the response because I think there has been a more formal response. I think you were actually aware of it, LaVon, and so forth. I think that should be reflected in this document.

I would also serve that as a reminder if Office of General Counsel could share their response to that issue with us because it keeps coming up at other meetings. That was the only comment I had. I don't know if anybody else has had a chance to go through this or had responses. I thought otherwise it was fine as I recall.

MEMBER BEACH: I would like to say

that it's well done and I like that addition of the meeting minutes. That was very helpful in reviewing this. Thank you.

CHAIRMAN MELIUS: When I went to look at it and saw how many pages, I said, "Oh, no." Then you see, since I have to review the transcripts anyway.

Henry.

MEMBER ANDERSON: I was just going to say I did look at it. When you first open it and you see all the pages, but it really was organized well so you should read it but you didn't have to read. The comments were easy to find and I thought they were understandable and succinct which was helpful.

CHAIRMAN MELIUS: I'm not sure if I understand what the categories are, the category numbers.

Do we need to take formal action on this, Ted?

MR. KATZ: No, you don't.

CHAIRMAN MELIUS: Then I think we

can consider that closed -- archived. Anybody have any thoughts on the CLL issue or do you want more time until tomorrow to consider that? Or reaction to Wanda's suggestion? I'm asking if people want more time or just get it done. Wanda's suggestion was that we ask for an extension in the comment period from June 20th until after our next Board conference call.

I would ask, Ted, what is the procedure for doing that? Do we need to just adopt a motion here to that effect or correspondence?

MR. KATZ: I'm not even sure you need a formal motion. I mean, clearly it's your intent if that's what you want. If you all say that's what you want, then I think we communicate that to HHS.

CHAIRMAN MELIUS: I think we should do that through a motion.

MR. KATZ: That's fine. I think you can just do a voice vote.

CHAIRMAN MELIUS: Do we have the date? I don't have the date with me for the next conference call.

MR. KATZ: Let me tell you. It is July 11th.

CHAIRMAN MELIUS: Okay. Then we would -- I'm trying to pull up dates. That's what day of the week? Do you know? So the comment period could be open until Friday of that week. That would give us time to adopt a letter or set of comments at the conference call and then give some time to submit that in case there is some redrafting or something that has to be done before we send it in.

I think the motion would be to -- let me make sure I get the dates right -- leave the comment period open until July 15th in order for us to be able to have our Scientific Issues Work Group review report back to the Board at our July call and then for us to assemble or review those comments and submit them to the docket. Can someone so

move?

MEMBER CLAWSON: So moved.

CHAIRMAN MELIUS: The meeting is the 11th. I just wanted to give time. If we have a set of comments, we need to make some changes to those or if there are additional comments that come out of the Board meeting, that would give us to the end of the week.

We are going to have to adopt those comments at the Board meeting. We're not going to have time for another Board meeting or call but it would give us a chance just to re-graph those and get those into the docket.

MEMBER LEMEN: And that presumes that somebody is going to call a meeting of the Scientific Issues Work Group.

CHAIRMAN MELIUS: Correct, to review it. We also have one sort of logistical issue there. David Richardson, who is the chair of that Work Group, has a conflict on this particular issue because of

previous involvement with it. We are going to need a new chair, someone other than David to chair. There are lots of people on that Work Group so I don't think that will be a problem. I will identify someone and make sure that occurs.

MEMBER CLAWSON: I would say Dick Lemen but it's up to you. You need a motion to move?

CHAIRMAN MELIUS: Yes.

MEMBER CLAWSON: I so move.

CHAIRMAN MELIUS: A second to the so move?

MEMBER BEACH: I will second it.

CHAIRMAN MELIUS: Okay. All in favor say aye.

(Chorus of aye.)

CHAIRMAN MELIUS: Opposed? Abstain? Okay. Good. See, we move along.

MEMBER ANDERSON: Now you are committed to having comments.

CHAIRMAN MELIUS: But I actually

think if the comment is that these are acceptable -- I mean, these are good, I think it behooves us to go into more detail than we have been able to go through and more than what's in the proposed rulemaking submissions, the other document and so forth.

MEMBER LEMEN: I would just say it's going to be hard to get the scientific group together. It's only a month and a week to do that and there are a lot of people on that group.

CHAIRMAN MELIUS: It will be by conference call and it's going to have to be who is available for a conference call. I don't think it necessarily needs to be long. I think the preparation for it is probably more of an issue.

We are getting into summer time so maybe some vacation issues but I don't think it has to be an in-person meeting. I don't think it would necessarily has to -- are you worried we are going to make you chair and do

all the work? Do I hear another motion? I guess we should say for the record Brad Clawson had to leave to return home.

His son is graduating tomorrow. I think he'll be with us on the phone at least tomorrow morning. We are expecting Mark Griffon to arrive tomorrow morning weather permitting. He's got a flight from Boston.

MR. KATZ: Related to Mark coming in tomorrow morning, we are actually -- I think folks at DCAS are going to try to get in touch or may have already got in touch with some of the petitioners. For SRS we are actually going to move the time to allow for Mark to participate that.

Savannah River right now is on the agenda for 8:30 to 9:30 but we are going to move it to 11:00 a.m. which is within the Board working session so that we can have Mark participate. Like I said, we are trying to get in touch with the petitioners directly but I'm also saying this for the record now and

I'll probably mention it again so that we can get the word out on that.

CHAIRMAN MELIUS: At least on your annotated agendas one of the other issues we wanted to work on are dates for our 2012 meetings. Let's get on the right calendars, everybody, because I certainly didn't start out that way when I saw these dates.

MEMBER LEMEN: When is the December meeting?

MR. KATZ: One sec.

CHAIRMAN MELIUS: 7th, 8th, and 9th.

MR. KATZ: Right, 7th through 9th.

MEMBER PRESLEY: Tampa?

MR. KATZ: Yes.

CHAIRMAN MELIUS: And so the week that Ted has suggest for our teleconference is the weeks of January 17th through 20th, 2012, or the following week, the 23rd through the 27th. Anybody have preferences or major conflicts that they are aware of? Bring your

cell phone.

MEMBER MUNN: Which day?

CHAIRMAN MELIUS: The 17th through 20th or the 23rd through the 27th.

MEMBER MUNN: Since we're having a December meeting, perhaps the second -- perhaps the later time would be better served for our purposes.

MR. KATZ: So the 25th would be Wednesday if you like to stick with Wednesdays. Does that work for everyone?

Dr. Ziemer, Paul, does that work for you?

MEMBER ZIEMER: Yes, that's good.

MR. KATZ: 11:00 a.m. is the normal.

CHAIRMAN MELIUS: Our west coast Members need their beauty sleep. January 25th, 11:00. Then for a meeting Ted is proposing the last week in February starting with the 27th or the first week in March.

MEMBER MUNN: I would request that

you avoid March simply because I won't be there. The last week in February. I will be gone from the 1st of March for two weeks.

CHAIRMAN MELIUS: How about other people?

MEMBER ZIEMER: I would prefer the end of February. Ziemer.

CHAIRMAN MELIUS: Thank you, Paul.

MEMBER ANDERSON: So you're saying the week of the 21st?

CHAIRMAN MELIUS: The 27th.

MEMBER ANDERSON: So that would run us through --

MR. KATZ: The 27th is a Monday. It would be the 27th, 28th, 29th.

CHAIRMAN MELIUS: We could do the 27th, 28th, 29th.

MR. KATZ: We could do that. That would be preferable.

CHAIRMAN MELIUS: Wanda would at least have to miss the last day and depending on where we're located, it could be more.

MEMBER MUNN: Honolulu.

CHAIRMAN MELIUS: Well, we could meet in Honolulu.

MEMBER MUNN: You are welcome to join the Society of Women Engineers there. We're chartering a new section.

CHAIRMAN MELIUS: I'll join anyone there. We could start Monday depending on location. I guess that's hard for anybody. It depends on where we are. We could travel Monday morning and start 1:00 or 2:00 in the afternoon but it really is going to depend on location. We could start on Tuesday.

It's also a location making sure that Wanda can make it back so she can go on vacation and not have to miss two days of the meeting. Why don't we keep open the 27th through March 1st. Then as we get closer and start to talk about locations, we can pin this down more.

MEMBER MUNN: It isn't actually a vacation. It really and truly is a

professional meeting that starts on the 1st.

CHAIRMAN MELIUS: And goes for two weeks?

MEMBER MUNN: No. The vacation comes after the professional meeting.

CHAIRMAN MELIUS: We can work that out then. Okay.

MR. KATZ: Okay. So we're going to block off the 27th through the 1st for the present.

CHAIRMAN MELIUS: Yes.

MR. KATZ: And think about location. Just suggestions for thinking about location. The end of February you probably want to stay relatively south for that so we've got Georgia, New Mexico, Texas, California. We'll have been in Florida in December.

CHAIRMAN MELIUS: Notice how well we did in the spring here.

MR. KATZ: Indeed.

CHAIRMAN MELIUS: I'm not sure

there is ever a good time.

MEMBER ZIEMER: Where do we stand on the Santa Susana issues? Is it time to go back out to California?

CHAIRMAN MELIUS: It's possible. I think we've got a few meetings in between that we haven't located yet. We have Florida/Tampa in December. Have we done beyond?

MR. KATZ: No. This would be the next one.

CHAIRMAN MELIUS: The next meeting. Okay.

MR. KATZ: We have a number of sites in New Mexico that are still live.

CHAIRMAN MELIUS: Santa Susana.

MR. KATZ: And Santa Susana.

MEMBER ZIEMER: We've just been to New Mexico.

MEMBER PRESLEY: Tennessee.

MR. KATZ: I mean, Tennessee late February is really asking for trouble it seems

like with weather.

MEMBER ANDERSON: We all want to get there.

MR. KATZ: We have wanted to go to Nashville, that's true.

CHAIRMAN MELIUS: Other suggestions for that?

MR. KATZ: We've been to Augusta but there's --

CHAIRMAN MELIUS: We've been there very recently.

MEMBER BEACH: I think we should put Nashville on the list. Santa Susana, I know Mike is the Work Group chair and we haven't met for some time. I believe we have some documents coming out towards the end of this year.

MR. KATZ: Okay. Why don't we ponder. We don't have to settle it here.

CHAIRMAN MELIUS: We can follow up tomorrow. Let's look at the document list. It's almost coming on 3:30. We will take a

break.

MEMBER ANDERSON: We are just scheduled through March?

CHAIRMAN MELIUS: Correct.

MEMBER ANDERSON: Okay.

CHAIRMAN MELIUS: We haven't got a place for the 2012 meeting. The Board will be back here at 4:00. We have an administrative session, Board Members only, conflict of interest procedures. Those tend to go longer than expected but hopefully less than an hour. Maybe even half hour. I don't know. Then we will reconvene as a Board in open session at 6:00 in this room again for those of you who don't have to attend our sort of private meeting here.

MEMBER ZIEMER: Dr. Melius.

CHAIRMAN MELIUS: Yes.

MEMBER ZIEMER: Paul Ziemer here. On that closed session is there a separate call in number that I should be calling in and, if so, somebody will need to email that

to me.

MR. KATZ: Paul, yes. I sent it to the people I expected not to be here. I'm sorry. We will email that to you.

MEMBER ZIEMER: Okay.

CHAIRMAN MELIUS: Thank you for asking, Paul.

Okay. We'll break until 4:00 back here.

(Whereupon, the above-entitled matter went off the record at 3:30 p.m. and resumed at 6:00 p.m.)

E-V-E-N-I-N-G S-E-S-S-I-O-N

6:01 p.m.

CHAIRMAN MELIUS: Well, you're addressing the people on the phone.

Welcome. This is the public comment period for the Advisory Board on Radiation and Worker Health for those of you phoning in. We will be starting our public comment period. We have the Congressional Office scheduled for 6:00 but, before we do that, I'll let Ted do the introductions.

MR. KATZ: Right. Welcome everybody on the line. In the room so far it looks like it's mostly staff here. I'm not sure if there are any members of the public who are going to be addressing us in the room. No one has signed up from here locally, although we have one person signed up to address us by phone.

In case there are others on the phone, though, let me just very quickly run through sort of the guidelines about public

address and the Board with it's transcripts. These public comment sessions are transcribed verbatim so your comments are captured in full word for word.

Any information you give about yourself personally will be in the transcript and published on the Board's webpage. Any information, though, you might give about a third party would be redacted to the extent to protect their privacy. That's the basic ground rules.

If there is someone on the line planning to comment, you can have sort of the full ground rules by looking at the NIOSH website. Under the Board section there is something called a Redaction Policy and that will tell you exactly how this works. That concludes my introductory remarks.

CHAIRMAN MELIUS: And our first public comment period is going to be a letter from Representative Costello. I believe we have on the line his Chief of Staff David

Gillies and another staff member Robert Stephan.

I believe, Robert, you were going to read the letter into the record?

MR. STEPHAN: Yes. Thank you, Dr. Melius. I'm on the line. Is David on the line? I believe David has already called in as well. He may have his phone muted.

CHAIRMAN MELIUS: Okay. Go ahead, Robert.

MR. STEPHAN: Thank you, Dr. Melius. Congressman Costello could not be with you tonight because the Congress is in session but he has drafted a letter with respect to General Steel Industries that he has asked me to read into the record. We also have provided a hard copy that we hope will be submitted as well if it's needed.

Chairman Melius and Members of the Board, I write you on behalf of many of my constituents who work at the former General Steel Industries in Granite City, Illinois.

In the past I have advocated to you on behalf of former nuclear weapons workers at Dow Chemical and Allied Chemical. Thankfully, significant progress has been made by all those involved on behalf of these workers for which I want to express my gratitude.

I am equally thankful for those GSI claimants that have been approved for compensation through the dose reconstruction process. However, as I believe we all would agree, significant work remains with respect to compensating the remaining GSI workers.

Indeed, the Board has numerous issues before it related to GSI that currently rest with the TBD-6000 Work Group. It is my understanding the Work Group anticipates receiving from NIOSH two White Papers in July and December of 2011 which will provide guidance on the outstanding issues originally proposed in NIOSH's GSI October 2010 Path Forward document.

I also understand from reading transcripts of recent TBD-6000 Work Group meetings the Work Group Members share my sentiment that the outstanding GSI issues need to be resolved as quickly as possible for which I remain appreciative.

However, despite the hard work and dedication by all involved, I am concerned GSI workers would be facing an additional six months, and possibly much longer, until the TBD-6000 Work Group is finished with their GSI issues and determinations have been made based on the information provided.

It should not be the policy of the Advisory Board that Work Groups have unlimited time to conclude their work. I respectfully request the full Board monitor closely the TBD-6000 Work Group progress and not hesitate to vote on the GSI SEC if TBD-6000 progress does not conclude soon.

In closing, I thank you for your service and dedication to our nation's Cold

War heroes and look forward to concluding the work necessary to bring closure for former workers of General Steel Industries.

Sincerely, Jerry F. Costello, Member of Congress.

CHAIRMAN MELIUS: Okay. Thank you, Robert. Thank the Representative on our behalf. We will have a report from that TBD-6000 Work Group probably at tomorrow's meeting and can update us on their progress. We will certainly do our best to get this done as expeditiously as possible.

MR. STEPHAN: Thank you, Dr. Melius.

CHAIRMAN MELIUS: The other public comment person that signed up for public comment was Terrie Barrie.

Terrie, are you on the line?

MS. BARRIE: Yes, Dr., I am.

CHAIRMAN MELIUS: Okay. Go ahead.

MS. BARRIE: Thank you again for allowing me to call in these comments.

Good evening, everyone. I have two issues that I would like to address tonight. The obvious one is Rocky Flats. The other is the Federal Agency's response to a Freedom of Information Act request. In case I go a little bit longer, you can cut me off anytime and I'll be happy to send my comments to be entered into the transcript.

In February, Dr. Melius, you reactivated the Rocky Flats Work Group. Unfortunately, in the past three months no meeting has been scheduled to review the concerns with the emails I have slated or with the Site Profile issues that remain after the vote on the SEC petition.

I fear that because of this lack of action that some Rocky Flats claimants may be having their dose underestimated. For instance, a Rocky Flats claimant contacted me to help him with his objection to his denial of Part B.

I reviewed the NIOSH report and

among other issues I noted that there was no mention of his work at the stacker/retriever. You may remember that one email dated August 1, 2006, states that a person who empties the americium bird cages in the stacker/retriever would have been exposed to radiation levels as much as, and I quote, "a couple of hundred millirems per hour."

The claimant estimated that he worked as a stacker/retriever for approximately 54 hours. It appears that he would have received a pretty hefty dose. Yet, this is not considered in his dose reconstruction.

NIOSH's report for this claimant still remains difficult to understand. He worked in buildings where thorium strikes happened, or may have happened, where he was, or may have been, exposed to tritium. Yet, I could not find where OTIB-28 or OTIB-66 was used to reconstruct dose. Nor could I locate that the dose reconstructor utilized OTIB-10

for glove box workers' exposure.

This claimant was a machinist in the Rocky Flats hot buildings and he would have used a glove box during his employment. I don't understand why a meeting hasn't been scheduled. I hope it is not because the Rocky Flats Work Group is waiting for SC&A's report to the Worker Outreach Work Group concerning the public comments.

These are two separate albeit related issues. However, because it may be possible that the dose being reconstructed for Rocky Flats claimants may be underestimated. The Rocky Flats Work Group needs to resolve these outstanding Site Profiles and other issues.

The second issue I wish to bring to your attention tonight is the agency's response to the Freedom of Information Act request. Perhaps I should rephrase that to be the lack of response. Honestly, I am not trying to be sarcastic here but the excuses I

have seen for delaying or denying a FOIA request honestly makes me wonder if the agencies have read President Obama's Executive Order.

I won't get into the details with my ongoing discussions with the Department of Labor on documents I've requested, but perhaps this battle resulted in the frustration I will air tonight concerning NIOSH and the Department of Energy.

In February of this year I requested a copy of the DOE document entitled "Thorium Use at Rocky Flat." This document was reviewed by NIOSH in its investigation for the SEC petition. It was also cited in the NIOSH-ORAU article published in the Health Physics Journal, I believe, in July of 2008.

I received a letter last week from the Department of Energy denying the release of those documents because the document they located, and I quote, "is marked as a draft copy." They decided they will withhold this

document in its entirety because it's a draft document, and I quote, "By their very nature are typically predecisional and deliberative."

Therefore, the Department of Energy has determined that this document can be withheld under FOIA Exemption No. 5. I ask you, is that fair? NIOSH reviewed it and incorporated this document in their methods. DOE did not cite any kind of national security interest in withholding this document but, as a result, the Rocky Flats claimants are denied access to this report. Again, I ask you, is this fair? Is this claimant-friendly?

I also checked with [identifying information redacted], the SEC petitioner, for National Bureau of Standards and I have permission to speak on her behalf. A travesty happened with that petition.

In order to understand the workings of the government agencies, she FOIA'ed from NIOSH in February again all emails related to her SEC petition. So far

all she has received is an acknowledgment of the FOIA request. This FOIA request is now over 100 days old which is a little bit past the 20-day time limit required by law.

In conclusion, I respectfully ask that the Rocky Flats Work Group immediately schedule its first meeting to resolve the outstanding Site Profile issues and other issues related to the FOIA email.

An update on SC&A's report to the Work Group, or do the Worker Outreach Work Group, on its audit of NIOSH's response to public comment. That the document titled "Thorium Use at Rocky Flats" be released either directly to me to circulate or posted to DCAS' website.

That all draft White Papers developed by DCAS, ORAU, or SC&A be posted to DCAS' website immediately after review for national security and privacy issues.

DOL, NIOSH, and DOE must abide by the spirit and the letter of the FOIA

legislation, especially with President Obama's Executive Order. The agencies must release documents within the time frame designated by law and in the format requested.

The delay in releasing the requested documents, the agency's unreasonable request for clarification, or the misuse of FOIA exemptions goes against the concept that the U.S. Government bureaucracy operates with openness and worthy of examination by the public.

I also want to add that I am very happy to hear that stage one of the 10-year review has been completed and I look forward to learning more about how the recommendations are going to be implemented.

Again, I thank you for the opportunity to bring these concerns to your attention. Thank you.

CHAIRMAN MELIUS: Thank you, Terrie. Mark Griffon will be here tomorrow. He was delayed by weather. A number of people

had difficulty getting out here. I will talk to him and we will work together to try to get that Rocky Flats group going again to address some of these issues.

There were some other issues we were waiting on. That group is not waiting for the Worker Outreach. That, as you say, is separate and so forth. We were discussing today and believe that the Worker Outreach group will meet again shortly to take up and follow up on their work including their work involving Rocky Flats.

Greg Lewis is here and hopefully can at least make a note and follow up. You don't need to say anything unless you have information but we'll be able to follow up on that issue on the FOIA request. It may just be a matter of communications.

If it ended up as a draft document, I don't know -- I can see where that would get turned down. That's sort of standard policy for Freedom of Information but

maybe that can be resolved in some way.

I may have missed it but the National Bureau of Standards, that was a request to NIOSH?

MS. BARRIE: Yes. Ms. Virginia Bond requested emails to NIOSH -- from NIOSH.

CHAIRMAN MELIUS: Okay. We'll ask Stu Hinnefeld or someone from NIOSH to follow up and at least find out that that didn't get somehow misplaced or whatever. It is long enough and they should have gotten the communication on that.

I will say that we are working and continuing to work to get the White Papers and other documents available. I think we're making progress. It may not be complete yet but that is something that we're working on to make them both sort of accessible not only for the public but also for other Board Members. That's been an issue we've raised before.

Ted.

MR. KATZ: I can just give an

update on that while we're on that topic. So we are making progress, Terrie. What we're doing now is trying to start with getting up everything that has already been PA cleared. There is more than PA clearance. There is also what's called 508 compliance.

Anyway, it's making documents compliant for people that are visually impaired. It actually takes a lot of resources to do this so we are dealing with the ones that are already ready to be put up first. We will eventually get through everything.

I could just tell you if inundated Office of General Counsel and the other parties who have to do this work with all the White Papers that would have to be cleared, it just couldn't happen very quickly. We are trying to do this sort of stepwise fashion.

MS. BARRIE: I appreciate that.

CHAIRMAN MELIUS: Terrie, I will get back to you personally on the Rocky Flats

Work Group issue after the meeting, after I've talked to Mark.

MS. BARRIE: Okay. Thank you so much.

CHAIRMAN MELIUS: Thank you.

Is there anybody else on the phone that would like to make public comments?

MS. VLIEGER: This is Faye Vlieger from Washington. I had let Dr. Melius know that I wanted to make comments.

CHAIRMAN MELIUS: Okay. Go ahead.

MS. VLIEGER: Over the past few months I've been communicating with Dr. Melius concerning the unusual fines during the mediation process at the Hanford site.

My initial request was whether or not the Board was being kept apprized of these unusual fines of contamination and different radionuclides in places they hadn't discovered them, if the Board was being kept aware -- made aware that the old contamination being found was now exposing new people to things

that were unexpected.

To my surprise the Board was not being kept apprized by DOE of these fines. Fortunately, at the end of March SC&A did come and discuss with a number of former workers the discovery that was found in Building 324. I am happy that happened.

I am concerned that the Hanford SEC that is being petitioned and considered right now is not receiving the information about this contamination that is unexpectedly found, and the surprises that they are finding during remediation not only under buildings but at the old landfill and that where that contamination came from is not being advised to the Board.

What I would really like to see, because the Hanford meeting is coming up here in August, is to ensure that all of the surveys and the information from the remediation project is being made available to the Board in as much of a real-time basis as

possible because it will affect the outcome of the SEC consideration.

CHAIRMAN MELIUS: Okay. Thank you. We'll follow up on that. It's a little hard to guarantee that we keep absolutely current on all information. We will hear tomorrow about the evaluation of the most recent petition.

We will be having, as I've told you, a Work Group meeting for the Hanford Work Group between now and August so we'll be able to report on that by the August meeting.

MS. VLIEGER: In the meantime dose reconstructions that are being done for Hanford workers, is any consideration being given to the fines in Building 324 and the 300 area in general or is that all on hold until after the SC&A report is turned in?

CHAIRMAN MELIUS: The Board currently is focusing on the SEC petitions which really cover, I think, mostly an earlier time period. I can't tell you off the top of

my head. Stu Hinnefeld is at the microphone and will try to address it.

MR. HINNEFELD: Stu Hinnefeld from DCAS, from NIOSH. I know that we have heard about the unexpected findings during remediation work at Hanford.

Our most knowledgeable Hanford person isn't here tonight and I'm not able to ask him exactly. I know he keeps pretty up to date with what's being learned out there and we'll do this.

As to the specific question whether dose reconstructions today have taken it into account, I would say that is probably not likely because we are going to have to have some sort of understanding about historically how does this discovery today affect things historically and what can we know about that.

What can we know about what that says about our interpretation of the historical doses compared to what we already

knew. I'm not 100 percent sure that I can give a satisfactory answer on that today. It's unlikely that dose reconstructions being done today have overtly taken that into account.

It's also not inconceivable that dose reconstructions being done today just because of the data available from that time period have taken it into account.

If it's an external exposure situation, for instance, the film badges theoretically would read the external exposure even though there's material found under this building that no one thought was there.

Internal exposure would be a little different question. It's a fairly difficult question to answer and it will be a difficult question to answer, not something we can do very quickly but it will be something that we will have to investigate as we learn more about it.

CHAIRMAN MELIUS: This is Dr.

Melius again. We'll be able to report back to you more on that, both from the Work Group meeting and the time we're at Hanford in August.

MS. VLIEGER: Do you have a report that is going to be generated from the interviews that were done here in March? Is there a time frame for when that report is going to be done?

DR. MAKHIJANI: Arjun Makhijani from SC&A. Two things. As you know, we've done the interviews. The interviews have been reviewed for classification. They have gone to the interviewees back so they can approve and correct the interview record.

So far as the SEC review is concerned, we are examining the implications of the 324 building findings for the period up to 1990 but we're not examining any implications for the period for which there is no SEC to my knowledge. There is no SEC that SC&A is reviewing.

I don't know that we will have all the interviews for you by the August meeting because there is an elaborate process of hearing back from the workers and I have no guarantee as to when they are going to get back.

I know a few have gotten back but not all have gotten back to us. We will have a summary and our conclusions for the SEC process in the report that we are preparing. In fact, you know, I'm going through that during this meeting and shortly after this meeting.

MS. VLIEGER: I've been asking for a list of the references that are being called from DOE concerning this find in the ground under Building 324. At one point I was told by another advocate that there was a report generated by DOE when they knew that that floor drain had ruptured and that they cemented it over and that there was a DOE report that was generated.

I have not been able to find that report. I know you can't tell me if it's a national security report but have you queried DOE about some sort of report that they did? I was told it was 20 years ago that they knew that floor drain had ruptured and they just cemented it over.

CHAIRMAN MELIUS: I think we will have to follow up on that. Sam Glover is not here and I think he'd be most knowledgeable about that, at least to the people who are directly involved at this point in time. We will follow up on it. We understand the concern. Thank you.

Is there anybody else on the line that wishes to make public comments? Okay. If not, then we'll close our public comment period and we'll see everybody tomorrow morning at 8:15.

(Whereupon, the above-entitled matter went off the record at 6:25 p.m.)