CENTERS FOR DISEASE CONTROL

NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY

AND HEALTH ADVISORY BOARD ON RADIATION AND WORKER HEALTH

147TH MEETING

WEDNESDAY, AUGUST 17, 2022

The meeting convened at 1:00 p.m.

EDT via video teleconference,

Dr. Henry Anderson, Chair, presiding.

Vet Reporting

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Members Present:

Henry Anderson, Chair

Josie Beach, Member

Bradley Clawson, Member

R. William Field, Member

David Kotelchuck, Member

James Lockey, Member

David Richardson, Member

Phillip Schofield, Member

Paul L. Ziemer, Member

Loretta Valerio, Member

Registered and/or Public Comment Participants:

Rashaun Roberts, Designated Federal Official

Nancy Adams, NIOSH contractor

Zaida Burgos, NIOSH contractor

Bob Barton, SC&A

Kathy Behling, SC&A

Finn Black

Ron Buchanan

Grady Calhoun, DCAS

John Cardarelli, DCAS

Nancy Chalmers, ORAU Team

Frank "Chris" Crawford, DOL

Denise DeGarmo

Joe Fitzgerald, SC&A

Members Present continued:

Joe Guido, ORAU Team

Donna Hand

Greg Lewis, DOE

Mark Lewis, Subcontractor DCAS

Chuck Nelson, DCAS

Steve Ostrow, SC&A

Stephen Pittman

Michael Rafky, HHS

Registered and/or Public Comment Participants Cont'd:

LaVon Rutherford, DCAS

Mutty Sharfi

S. Siebert

Tim Taulbee, DCAS

Dianne Whitten

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PROCEEDINGS

(1:00 p.m.)

Welcome And Roll Call

DR. ROBERTS: I'm Rashaun Roberts. I am the Designated Federal Official for the Advisory Board on Radiation and Worker Health, and I'd like to welcome you to Board Meeting 147. All of the materials for both days of this meeting, the meeting agenda, the presentations, background -¬ I'm sorry, I can hear someone who's not on mute. Thank you.

The meeting agenda, presentations, and other documents are posted on the NIOSH website for this program under schedule of public meetings. You can go to the August tab for calendar year 2022.

If you are participating by telephone, you can go to the website to access all of the materials, and you can follow along with the presentations. These materials were provided to the Board Members and to staff prior to this meeting. On the website, there's also a Zoom link, which will enable you to hear and watch the presentations through Zoom. If you've chosen to receive audio through Zoom, you should be able to speak to the group and hear the presentation.

If you're not speaking, please, be sure to select and stay on mute by muting the microphone on the lower left-hand corner of your screen. If you have dialed in by telephone, you'll only be able to speak and hear the presentations through your telephone line. Please

make sure that your phone stays muted unless, of course, you need to speak. If you don't have a mute button, press *6 to mute. If you need to take yourself off, press it again, *6.

Also, if you're only participating by telephone -- and actually, for the convenience of the court reporter, whether you're on Zoom or participating by telephone, identify yourself before providing your presentation or your comments just so that we can get the appropriate information about who said what.

So let's go ahead and move into roll call. As Board Members and staff register attendance, please acknowledge sites where you have conflicts of interest, if any. I will note that there may be a vote can -- concerning the Sandia National Lab site today. And those conflicted will be asked to disconnect from the meeting for that agenda item and to rejoin after the break, which is scheduled for 3:15 this afternoon.

So let's start with Board Members in alphabetical order. And that would be starting with our Chair Anderson.

CHAIR ANDERSON: Present. No conflicts.

DR. ROBERTS: Great. Beach.

MEMBER BEACH: I'm here and no conflicts.

DR. ROBERTS: Okay. Clawson.

MEMBER CLAWSON: I'm here. I'm conflicted at the INL and ANL or Argonne West.

DR. ROBERTS: Okay. Field.

MEMBER FIELD: Yes, I'm on. I'm conflicted at LBL, and I'm

trying to get my camera to work but haven't been successful yet today. Sorry.

DR. ROBERTS: Okay. I understand, thank you.

Kotelchuck?

MEMBER KOTELCHUCK: Here. No conflict.

DR. ROBERTS: Lockey.

MEMBER LOCKEY: I'm here. I'm conflicted at Portsmouth, Fernald, and Oak Ridge.

DR. ROBERTS: Okay. Richardson.

MEMBER RICHARDSON: Here, no conflict.

DR. ROBERTS: Roessler?

MEMBER ROESSLER: Here, no conflict.

DR. ROBERTS: Okay. Schofield?

MEMBER SCHOFIELD: I'm here. I'm conflicted on Los Alamos National Lab.

DR. ROBERTS: Okay. Valerio.

MEMBER VALERIO: I'm here, and I am conflicted all DOD sites in New Mexico.

DR. ROBERTS: And would that include Sandia?

MEMBER VALERIO: Yes, ma'am.

DR. ROBERTS: Okay. And Ziemer?

MEMBER ZIEMER: I'm here, and I'm conflicted at Oak Ridge X10.

DR. ROBERTS: Okay. Great, okay. So let's move on to NIOSH, DCAS, ORAU.

MR. CALHOUN: This is Grady Calhoun. I am conflicted at Fernald.

DR. TAULBEE: This is Tim Taulbee, I'm conflicted at Mountain Laboratories.

MR. RUTHERFORD: This is LaVon Rutherford, I am conflicted at Fernald.

MR. NELSON: This is Chuck Nelson. I am conflicted at Fernald also.

DR. CARDARELLI: This is John Cardarelli, and I am conflicted at Fernald.

DR. ROBERTS: Okay. Anyone else for DCAS or ORAU?

MR. GUIDO: Yeah, this is Joe Guido. I'm conflicted at -- this is Joe Guido, I'm conflicted at Brookhaven, Dayton project, Mound, Nevada Test Site, WIP (ph), West Valley, United Nuclear, and Los Alamos.

DR. ROBERTS: Okay. Anyone else with DCAS, ORAU?

MR. LEWIS: This is Mark Lewis, a subcontractor to DCAS. Conflicted at Portsmouth; over.

DR. ROBERTS: All right. Hearing no one else from DCAS, ORAU; SC&A?

MR. BARTON: Bob Barton, SC&A, no conflicts.

UNIDENTIFIED SPEAKER: SC&A, no conflicts.

DR. ROBERTS: I'm sorry, --

MS. BLACK: Finn Black, --

DR. ROBERTS: I'm sorry, I could not hear the person who just

spoke.

MS. BEHLING: Kathy Behling. Can you hear me?

DR. ROBERTS: Okay. Okay. Your -- there's a lot of interference for you. It's very difficult to understand you, just FYI. Okay. And then there was someone else who said something.

MS. BLACK: After Kathy Behling, it was me, Finn Black, SC&A, no conflict.

DR. ROBERTS: Okay. Great, thank you.

MR. BUCHANAN: Ron Buchanan, SC&A, I'm conflicted at Los Alamos National Lab.

MR. FITZGERALD: This is Joe Fitzgerald. I have no substantiated conflicts.

DR. ROBERTS: Okay.

MR. OSTROW: This is Steve Ostrow, SC&A, no conflicts.

DR. ROBERTS: Okay. Anyone else with SC&A? Hearing none, let's move on to HHS and Contractors.

MR. RAFKY: Michael Rafky, HHS, no conflicts.

MS. ADAMS: Nancy Adams, NIOSH contractor, no conflict.

DR. ROBERTS: Okay. How about DOE, DOL, anyone from the departments?

MR. LEWIS: This is Greg Lewis from DOE.

DR. ROBERTS: Okay. DOL, are you here? And finally, if there are any members of the public who would like to register their attendance, you can do so now.

Okay. Hearing none, thank you very much, everyone. Let's go

ahead and move into the agenda. Again, --

MEMBER LOCKEY: Rashaun?

DR. ROBERTS: -- please --

MEMBER LOCKEY: Rashaun, --

DR. ROBERTS: Yes?

MEMBER LOCKEY: Do you have any of the new Board Members that are listening in? I'm just wondering.

DR. ROBERTS: No. Well, they haven't registered their attendance and just FYI, they have not been on-boarded. So --

MEMBER LOCKEY: Okay.

DR. ROBERTS: I do want to make that clear.

MEMBER LOCKEY: Okay.

DR. ROBERTS: Okay, great. So what -- where was I? Let's go ahead and move on. Again, please periodically check Zoom or your phone to ensure that you're on mute. On Zoom, the mute button is at the lower left-hand corner of your screen -- of your screen, and I can hear someone right now.

If you're participating by telephone and you don't have a mute button, press *6. If you need to take yourself off, press *6 again.

And again, to assist the court reporter today, I'm going to ask that if you're presenting or if you'd like to ask a question or make a comment, please, identify yourself by name before you speak.

I do want to let everyone know that there is a public comment period on the agenda today. It's scheduled for 5:00 p.m. Public comment period will stop at 6:00 p.m. or following the final call for

public comment, so whichever comes first. So if you do plan to comment during that period, please, be prepared to comment sharply at 5:00 p.m.

So with that, with no further delay, I will turn the floor over to the Board Chair, Dr. Henry Anderson. Andy.

CHAIR ANDERSON: Thanks a lot -- thanks a lot, Rashaun.

Welcome everybody to Meeting 147 of the Advisory Board on Radiation and Worker Health.

Let's begin with NIOSH's program update. Grady, are you going to be presenting that?

MR. CALHOUN: Yes, sir, I am.

CHAIR ANDERSON: Okay. Take it away.

MR. CALHOUN: Okay. I'm going to assume everybody can hear me okay and let me try to share my screen. Okay, can everybody see that?

CHAIR ANDERSON: Yes.

NIOSH Program Update

MR. CALHOUN: Awesome. Okay. Well, glad to be here. It's a darn shame that we couldn't have everybody here in person, but the COVID has gotten us, so here we go. Let's see. Can I go down? Why can't I go down? Uh-oh, geez o'peez. Okay, here we go.

Contracts and staffing. This is a big one right now since last time we met. We have had four health physicists leave, and we have had our administrative officer who is responsible for hiring people, leave. Two of our health physicists left due to retirement and two of

them took new jobs.

The people that left, if you remember, are Tom Tomes, that was a couple years ago, Dave Allen who was a team leader, a health physicist, and he left. Megan Lobaugh has left and Angelica Gheen has left. Angelica and Megan left for different jobs. Just a little commentary on that is that what we're finding, and what I personally believe is going to be a trend, is that since COVID, everybody has realized that you don't need to be in a physical building to get your job done. So we're having people that are having opportunities to enhance their career financially and from a responsibility standpoint and never have to leave the desk or chair that they were in, in their previous job. I have a feeling that's going to be a trend in the future.

So anyway, we're in the process of hiring four new health physicists. I'd be lying to you if I didn't tell you that this is going to affect us and how we get work done until we have these positions filled. So we're going to have to prioritize things. Of course, those reconstructions are our highest priority and processing SEC petitions are -- is right up there with those reconstructions. So everything else that we do, we'll get to it as we can.

Hopefully, we will get a couple of people on in the next couple of months, few months, to fill those positions. But it's hard, too. There's not a whole lot of health physicists going around out there. With the closing of the nuclear facilities and the closing of the colleges that used to make health physicists, it's just hard to -- hard to get people in. So that's -- that's where we are with -- with that.

I up -- IT update, it's really no change. Everything is pretty much the same as the last time. We're still able to process all of our cases manually. I've told our -- our IT folks here that they're -- they're not under my control, none of them are, -- that, you know, don't let this fool you into thinking everything's good. I keep using the analogy of a beautiful swan on the water; it looks great, but its feet are going a million miles an hour underneath the water. And that's what we're doing right now.

So, you know, the big thing is, is that we're getting cases in, we're -- we're -- we're finishing cases as quickly as we're getting them in, and that's good. But the manual process is difficult. I don't see any significant changes in that coming for probably, I don't know, many, many months, if not a year. So that's -- that's -- that's where we are with that. I wish I had better news, but there's really not a whole lot that I am in control of or that I can do. That's up to our -- our IT department. It is no longer in -- in my control.

We continue to work on data management systems site research data, and -- and -- and the like. And like I mentioned with our last call, please, please, please contact us if you need anything. And we have ways of getting it to you; it may not be as smooth as it was in the past, but we can do it and we will do it, so just let us know.

This has changed since the -- the writing of this slide, workshops, town halls, etc, type-meetings. We had outreach meetings planned in New Mexico and Arizona, and I was going to go

to those. I was really looking forward to that. And they were postponed due to the local COVID leave -- levels.

And then I have here that the in-person outreach meeting was scheduled -- is scheduled for August 30th and 31st in Oak Ridge, Tennessee. And as of yesterday, which is past the time that I wrote this, that too, has been postponed due to COVID levels in that area of the country. So this also seems to be a trend, and neither of these have alternative virtual solutions. So until those are rescheduled, that's -- that's where those stand.

Just our -- our normal slides on record requests for the Department of Energy, 286 total record requests outstanding, but most of those are --¬are -- are within the -- the time allowed to DOE. It's -- it's -- nothing is -- sticks out as something that -- that we're concerned about. Forty-eight of those are between 61 and 120 days, 11 between 121 and 180 days, and 6 more than 180 days.

Case report. We have five -- 54,951 cases to NIOSH from DOL. 52,778 have been returned, 909 of those administratively closed, and there's 1,264 of those currently at NIOSH and -- for dose reconstruction in various statuses. We've got 47,353 submitted to DOL with a dose reconstruction, 1,782 were pulled from dose reconstruction by TIA (ph) DOL. Typically that's because of no claimant available or for some other reason related to employment or diagnosis. 3,643 were pulled for special exposure cohort consideration. That means that those individuals were -- were deemed to be part of the special exposure cohort after they had been

sent to us for dose reconstruction. So they're pulled, and then DOL deals with those from a special exposures cohort standpoint.

Probability and causation summary, pretty much the same; 47,353 sent for final adjudication, about 73 percent of those are less than 50 percent, 20 percent of those are equal to or greater than 50 percent. And that's -- that's how it has run pretty much through the course of the program. It hasn't changed significantly.

Active cases, we've got, as I mentioned before, 1,264 of those at NIOSH for the DR. As of 8/9, 433 of those were in the dose reconstruction process, 315 were with claimants for their review, and then 516, we were in the process of preparing for dose reconstruction, which means it's -- we're in the process of gathering the required documentation to do the dose reconstruction.

Okay, and that's it. That's the end of my status update, and I will gladly take any questions.

MEMBER ZIEMER: This is Paul Ziemer, I have one question on the -- can you hear me okay?

MR. CALHOUN: Yes, sir.

MEMBER ZIEMER: All right. On the -- those few cases that are above 180 days on the DOE request, anything special about those? Are those locations where they haven't been able to get to the records, or?

MR. CALHOUN: No, I can't tell you about those specifically. I probably can gather that information and find -- and find out what that information is. Typically, those are some back and forths that

happen, you know. Like, they'll send us a diagnosis or an employment -- and I'm just making this part up -- but sometimes we do get additional information that -- that shows that the energy employee may have been employed longer than -- or in a different time period than was verified.

So we'll go back to energy and say, hey, we've got this, and it looks like they were employed at this other facility, maybe a visit or something, do you have anything from that facility? And so then they have to have time to go back and review that and find that out. But I can ask -- I can ask ORAU about those.

Unfortunately, I can't look those up myself anymore, but I can ask about those six, and I'll get back to you, Paul, if you'd like.

MR. ZIEMER: I -- I don't know that you necessarily have to do that. I just -- if there was something that had jumped out at you that made those special, otherwise, it made be a routine back and forth.

MR. CALHOUN: Yeah, it kind of is. It's just a routine thing that -- that comes up. And we do communicate quite often and regularly with Greg and -- Greg Lewis of DOE and Gena Griego (ph). And so, if we're -- if we're experiencing or noticing any delays of any specific facility, we tell them about it and they -- they're very responsive, they get right on it, and try and find out what's going on.

MR. LEWIS: And speaking of, Grady -- this is Greg, and I don't know the specifics of those six. But, you know, during my update, there are a few things going on that -- where we've had to change our process a little bit. It is causing us to have a few more that are over

the 60 days than we usually would have. I don't know that that specifically accounts for those six, but if you'd give me those six, I'd be happy to figure out what's going on there. And I -- I will have an update about our over 60-day claims when I -- when I talk, so.

MR. CALHOUN: Okay. And I'm sure --

THE COURT REPORTER: Excuse me.

MR. CALHOUN: -- that the appropriate people are listening in that can shoot me those numbers probably before the end of the meeting.

THE COURT REPORTER: Excuse me. Is there only one Greg?

MR. CALHOUN: That's Greg Lewis.

THE COURT REPORTER: Thank you.

MR. CALHOUN: From DOE.

THE COURT REPORTER: Thank you.

MEMBER LOCKEY: Grady, Jim Lockey.

MR. CALHOUN: Yes, sir.

MEMBER LOCKEY: I was wondering, how long does it normally take you to replace a health physicists, and what's your anticipation with the current hiring status? What do you --

MR. CALHOUN: Well, there's a lot of things in play here. And if you -- if you think about it, Tom Tomes has been gone for two years. And, you know, we've had some difficulties internally with our hiring process, and so that has caused some issues. I'll tell you that -- that sometimes we can get them in and it's never -- it's never sooner than nine months. But in this case, it is taking a little bit longer.

I'll tell you, the status of where we are with replacing Tom is that we've got the -- the applicants in, we had several applicants -- I'm probably not allowed to tell you the number. But anyway, we only found that two of them really were health physicists. Sometimes we have some screening that goes on, and they'll include medical physicists as health -- as health physicists.

They're very smart people. They do dose reconstruction, but they do dose reconstructions typically for known quantities, and they don't deal with stuff like we do. So anyway, we made two offers, one of them flat turned us down, and the other person is -- we're in negotiations with them.

Now, the other two positions that are higher level positions to replace Dave Allen and Megan Lobaugh closed recently, and so we're in the process of looking at those applicants. It appears that we have good applicants for Dave Allen's replacement.

I have not yet seen the replacements for Megan Lobaugh's replacement. And we are very much hoping that we can get those filled before the end of this fiscal year. So by the end of September, I think that we should be able to get those two positions filled. So we may only be down one person before the end of the fiscal year if all goes well.

MEMBER LOCKEY: Okay, good. Thank you.

MR. CALHOUN: Do you see my fingers crossed? Because they're crossed right now.

CHAIR ANDERSON: Any other questions for Grady? If there

are none, thanks a lot Grady. If there's more questions come up, we'll ask at the time.

Next, let's move on to Frank Crawford with the update --

MR. CALHOUN: Hold on. I got -- I got to do his sharing, too, here.

CHAIR ANDERSON: Okay, okay.

MR. CALHOUN: All right. So let me call that up. And so that's going to be the DOL program update. And I am going to go back to here, and I'm going to share my screen. Can you all see that?

CHAIR ANDERSON: Yes.

MEMBER LOCKEY: Yes. I can see it. Jim Lockey. Yes.

MR. CALHOUN: Okay. Chris, you're up. I got your cover sheet up.

MR. CRAWFORD: Well, thanks for doing this Grady, as usual.

Rashaun, I did announce myself earlier in the meeting, but I found out that I was on mute a little too late to correct it.

Grady, let's proceed to slide two.

DOL Program Update

MR. CALHOUN: Here you go. Compensation Page slide.

MR. CRAWFORD: That's it. This is updated slowly and the date, that is through June 30th, as noted at the bottom of the slide, all our stats will be through June. We have paid $7.4 billion in Part B compensation, $6 billion in Part E compensation, and $8.1 billion in medical bills, and total compensation in medical bills paid $21.5 billion with 225,510 cases filed.

Next slide.

MR. CALHOUN: It's there.

MR. CRAWFORD: Here, we see that we have $1.7 billion in dose reconstruction cases paid with 15,990 payees, and we have $182 million approved, cases that have both SEC qualification and a POC of 50 percent or greater. That has 1,403 payees in that category. We show 1,667 cases currently at NIOSH.

Slide, please.

MR. CALHOUN: NIOSH referral case status.

MR. CRAWFORD: We show 55,661 cases referred to NIOSH for a dose reconstruction. 53,994 cases have been returned to DOL from NIOSH, of which 47,251 were with a dose reconstruction. And 6,743 were withdrawn from NIOSH with no dose reconstruction. And we have 1,667 cases currently at NIOSH.

THE COURT REPORTER: No, I can't hear.

MR. CALHOUN: Okay. Part B cases with dose reconstructions.

MR. CRAWFORD: We see that we have 37,315 cases with both the dose reconstruction and a final decision. Of those we have 12,781 final approvals, represents 34 percent of the dose reconstruction cases. Final denials are 24,534, which represents 66 percent of the files.

MEMBER BEACH: This is Josie, can you speak up just a little bit? I don't know if anybody else is having trouble hearing you, but you're fading a little bit.

THE COURT REPORTER: I am, the Court Reporter, and also

whoever M. Findley is, please, mute.

MR. CRAWFORD: Josie, I'll be happy to do that. Is this a little better?

MEMBER BEACH: Yeah, it's a little better. Thank you.

MR. CRAWFORD: Sure. Next slide, Grady?

MR. CALHOUN: You're there.

MR. CRAWFORD: Okay. Part B cases filed. This doesn't change much, as we see. The other category has to do with non-DR cases, beryllium sensitivity, chronic beryllium disease, chronic silicosis. 30 percent of the cases go to NIOSH for dose reconstruction. 13 percent of the cases do not go to NIOSH because they were qualified for SEC without needing to be sent to NIOSH. Further, 12 percent of cases -- cases were sent to NIOSH even though they qualified for SEC, because they had probably non-SEC cancers in addition to the qualifying cancer. And we have seven percent are RECA cases.

Next slide, please.

MR. CALHOUN: Okay, you're there.

MR. CRAWFORD: Okay. Part B cases with final decision. Cases with Part B final decision number 110,193. Part B approvals, 59,160. Part B denials, 51,033, which works out to be 54 percent of all Part B final decisions being approved and 46 percent being denied.

Next slide.

Through our -- our usual work sites, the most populous ones that is, Nevada test site, the Savannah River site, Hanford, and the Y-

12 plant. Slide, Grady.

MR. CALHOUN: You're there.

MR. CRAWFORD: Okay. We're discussing two SEC sites. These -- this slide is broken in two, so I'm going to pursue Argonne National West.

Go to the next slide, and then return to this one, Grady.

MR. CALHOUN: Okay.

MR. CRAWFORD: For Argonne National Laboratory-West, we have 1,316 cases. The 1,869 in parentheses refers to individual claimants.

MR. CALHOUN: We must be on the wrong slide here, Chris. Let me see. Okay. There we are, 1316 and 1,869 --

MR. CRAWFORD: (Indiscernible) --

MR. CALHOUN: SEC slides one of two is what I've got up now.

MR. CRAWFORD: That's it.

MR. CALHOUN: Okay.

MR. CRAWFORD: Talking about Argonne National Laboratory West.

MR. CALHOUN: All right. Got it.

MR. CRAWFORD: In cases returned by NIOSH with a dose reconstruction, we have 435. For final decisions, we have 568. Let's go to the next slide and do just Argonne.

MR. CALHOUN: Okay, I'm there.

MR. CRAWFORD: Okay. We have 197 Part B approvals, and we have 332 Part E approvals. Total compensation and medical bills paid

$100,897,616, and that's at Argonne again.

And let's go back to the prior slide, nine.

MR. CALHOUN: I'm there.

MR. CRAWFORD: And we'll look at the Sandia National Laboratory numbers. There we have 4,550 claims. We have 780 cases returned by NIOSH with a dose reconstruction. We have 2,117 final decisions.

Onto slide 10. We have 1,422, part B approvals, 1,346 Part E approvals. It's a total compensation and medical bills paid of 482,327,117.

Next slide.

MR. CALHOUN: Previous outreach events.

MR. CRAWFORD: So in June, we had the Medical Benefit Authorizations outreach meeting webinar with 282 attendees. (Indiscernible) we had Resource Center Responsibilities and AR Services for 124 attendees. Then, in April, we had overview of the DOE Former Worker Medical Screening Program, and that had 285 attendees.

Slide.

MR. CALHOUN: Upcoming Outreach Events.

MR. CRAWFORD: That's it. On August 17th, which is coincidentally today, we have topics of discussion, overview of site exposure matrices database, that's the SEM, tips on how to search the SEM database, best practices when using SEM data, role of the SEM database in informing causation determinations. Recourse for

Part E cases.

Go to the next slide.

MR. CALHOUN: Okay. Upcoming Outreach Doubletree.

MR. CRAWFORD: Well, you have updated this for me. The Oak Ridge -- Oak Ridge meeting has apparently been postponed, I heard you say, Grady?

MR. CALHOUN: Yes, sir. We were told yesterday.

MR. CRAWFORD: I hadn't been informed. Joint Outreach Task Group Townhall, I assume, is still going on, but I don't know that.

That's the end of the presentation. Any questions?

CHAIR ANDERSON: Just, Chris, a question on -- for Sandia on those that the dose reconstructions you've gotten back, are those for individuals who are not part of the SEC or before the SEC or how do you break it?

MR. CRAWFORD: Well, most of them would be in that case, but some of them may have qualified for the SEC and still gotten the dose reconstruction in order to get medical payment benefits --

CHAIR ANDERSON: Okay.

MR. CRAWFORD: -- for non-qualified cancers.

CHAIR ANDERSON: So that would be the part E group, yeah.

MR. CRAWFORD: Right.

CHAIR ANDERSON: Okay. Thank you.

MR. CRAWFORD: Or Part B with cancers that weren't included in the SEC for some reason.

CHAIR ANDERSON: Right.

MR. CRAWFORD: There'll be some of those, but they would be the minority.

CHAIR ANDERSON: Yeah, yeah.

MEMBER ZIEMER: All right. Chris, this is Paul Ziemer. I have a question on the three outreach meetings that you did have earlier this year. The attendance, those were all virtual, correct, or were they in --

MR. CRAWFORD: That's correct. They're the 26 webinars series.

MEMBER ZIEMER: Webinars. The attendance looked pretty good. Can you -- do you know the nature of the -- or the makeup of the attendees? Like were -- were they, like, the medical -- one relating to medical information, are those -- are those medical people or what -- who -- who attends these is what I'm asking?

MR. CRAWFORD: (Indiscernible) question and I don't have an answer. It may very well be a variety of people, including ARs, attorney's, claimants themselves, and at DOL.

MEMBER ZIEMER: Yeah. I was basically ask -- I'm wondering who -- who are they designed to --¬were they designed, for example, for attorneys or for -- or the workers themselves, or is there a specific target group?

MR. CRAWFORD: Let me get more detail on that. I could make an informed guess, but it would still be a guess. So I will ask -- ask about that, Dr. Ziemer, and bring that information --

MEMBER ZIEMER: And I think --

MR. CRAWFORD: -- for all three groups and send it to you.

MEMBER ZIEMER: Yeah, And -- and it's not urgent that I have the answer, necessarily, but may --maybe when you report next time -- next time we meet, maybe give us a little more information. I'm just curious as to who attends these.

MR. CRAWFORD: I will put that in --

MEMBER ZIEMER: Thank you.

MR. CRAWFORD: -- if they collect that kind of information. Since it's on Zoom, I'm not sure --

MEMBER ZIEMER: Well, they --

MR. CRAWFORD: -- if it's there.

MEMBER ZIEMER: They certainly have a target audience at least.

MR. CRAWFORD: Yes, absolutely.

MEMBER ZIEMER: Yeah, Thank you.

THE COURT REPORTER: May I get the last -- name for the gentleman presenting the last one. Chris who?

MR. CRAWFORD: Chris Crawford.

THE COURT REPORTER: Thank you.

MR. CRAWFORD: C-R-A-W-F-O-R-D.

CHAIR ANDERSON: Thanks, Chris. Let's move on to DOE and Greg Lewis.

MR. LEWIS: Alrighty. Grady, would you be able to -- to get my slides up or --

MR. CALHOUN: Yes, sir. I'm working on that right now.

MR. LEWIS: And actually, while you're doing that, before I got started, I did want to just recognize the Terrie Barrie who -- who passed away last month. I think most of you on the -- on the call or in this meeting, probably either knew her or knew who she was. But for those who didn't, she was a worker advocate who have been involved in the program since the very beginning, or at least since I was, you know -- got involved, and I've been working on the program for close to 20 years. She was really a force. She worked tirelessly for workers and their families. I know, she spoke to the Board and addressed the Board many, many times in the public comment period and, I think, as a petitioner a few times as well.

You know, she was extremely passionate about the program, but she was also extremely smart and capable, you know. She came up with the -- you know, she formed ANWAG, which was the Alliance for Nuclear Advocacy -- Nuclear Worker Advocacy Groups, where she brought together various worker advocates who were kind of operating separately back in the beginning of the program, the early days, and she brought them together. And together, they were able to, you know, effect great change in the program and really work -¬work with DOL, NIOSH, and DOE. So she was really instrumental in establishing that feedback loop with workers and -- and advocates.

You know, I -- I didn't always see eye to eye with her on every issue, but I always had a tremendous amount of respect for her viewpoint, her professionalism, and -- and, you know, how she put her ideas forth. So I -- the program is really going to -- going to miss

Terrie, and my condolences to -- to her family. We will miss her.

MEMBER BEACH: Greg, before you start, this is Josie. Thank you so much. I was wondering if we were going to be able to recognize Terrie, and I couldn't have said it better. I appreciate all your comments. Thank you.

MR. LEWIS: Well, you know, she was really -- she was something. We're -- we're going to miss Terrie.

MEMBER ZIEMER: Paul Ziemer. I think this -- that also reflects, probably, all of the Board Members would endorse what was said there. She certainly was -- she handled things very professionally. And, again, even though we didn't often see eye to eye, she certainly did a great job for what she was doing.

MR. LEWIS: Okay. Well, I guess -- so I've got my slides up.

CHAIR ANDERSON: (Indiscernible) for a long time.

MR. CALHOUN: Can you -- can you see your slides there, Greg?

MR. LEWIS: Yep, yep. I can see my slides, Grady, Thank you. If you want to go to the -- go to the next one.

DOE Program Update

MR. LEWIS: Again, I'm Greg Lewis, with the Department of Energy, Office of Worker Screening and Compensation Support, and we, you know, provide the records to DOL and NIOSH and try to support them in that way. I'm going to just --going to be a pretty quick presentation and then I'll take questions, if there are any.

So DOE basically had three responsibilities under the program: to respond to individual records requests on behalf of -- of claimants,

and we do that for both DOL and NIOSH; we also provide support to DOL, NIOSH, and both Advisory Boards in terms of site research or site characterization projects; and then we also do research into covered facilities, particularly those AWEs and those smaller facilities that were covered back in the '50s and '60s.

Next slide, please.

So the -- the biggest responsibility is the individual worker records. Claimants often worked at multiple sites or for multiple contractors and subcontractors. It's not as simple as going to a file cabinet and pulling out a folder with one worker's records. You typically have to go to many different departments on an active site and then many different records sources, including hard copy paper records, microfilm, microfiche, and different databases, and electronic records sources.

Next slide.

So, you know, the biggest thing that we do for the -- the Advisory Board is to support the -- the records research for both site profile technical base documents and special (indiscernible) cohorts. So I just, this is not an exhaustive list, but I went back through my emails for some of the requests that we've been supporting recently, and we've been working with Pacific Northwest National Lab, DNL.

The DOE Office of Legacy Management, Fermi Lab, the Los Alamos National Lab, and the Savannah River site, you know, ensuring that they're working with NIOSH and the Advisory Board and responding to requests. And then, of course, for today, you know, we

wouldn't have been so recent because it looks -- you know, they're -- they're finishing up, but we've supported also the Sandia and Argonne West research projects as well.

Next slide.

We do also review NIOSH and -- and Advisory Board reports, as well as source documents that they've requested from DOE. We review them for classification and -- and information security. We try to turn those around very quickly, particularly the reports we're usually able to turn around in about eight workdays, give or take. The source documents that are requested from the site, they -- they could be hundreds or even over 1,000 pages. So they can take a little bit longer to review, but we always try to work with NIOSH and the Advisory Board to come up with a reasonable schedule that meets their needs and is within our ability to -- to review.

Next slide.

And then, of course, we do our facility research. I won't really say too much about that other than, you know, every once in a while, even 20 years into the program, new information comes to light, sometimes through NIOSH research, that suggests that we may not have the facility designation exactly correct, maybe the wrong years or wording, so we do review those, research those, and adjust those as needed.

Next slide.

And then the other -- the other function that my office performs is to fund and support the DOE Former Worker Medical Screening

Program. And Chris had mentioned in his presentation, one of the DOL Joint Outreach Task Group webinar series did feature the Former Worker Program and -- and we've been very active in the Joint Outreach Task Group and reaching out to workers. You know, essentially the folks that are eligible for the screening for the Former Worker Program are also folks that may be eligible for the Compensation Program. So we work together for outreach.

Just for those of you that are unaware, this -- this program is free to the participant. There's six different Former Worker Programs or consortiums. But, you know, without getting into the details of who covers what, the bottom line is, if you are a former DOE federal or contractor worker at a DOE site, you are eligible for this program and can sign up and get screened, so I'd encourage you to do that.

Next -- next slide.

And here's some information about the Former Worker Program, how to get in touch with them.

And then I believe the next slide is questions, Grady.

But before you get into that, I just did want to mention, it -- it came up briefly with the number of claims over 60 days. We are a little bit higher than usual, although I'll say nothing has been usual in the last two years with -- with COVID. We are -- we're coming out of that at about a year ago or six months ago in terms of really getting all of our backlogs down. And then we did have a few months ago an issue where we had to change our procedures with the redaction of some information at sites. And -- and we're -- we're stepping up our

redaction of third-party information.

So I just, you know, for those of you that might have heard about this, we are not redacting any information on a claimant from any -- from any files that we are sending to DOL or NIOSH. What we are looking for a little bit more rigorously is PII (indiscernible), PII, medical information, social security number, date of birth, the combination of those type of information for a third party. So if Bob's PII is somehow in Fred's claim or Fred's information that we're sending the NIOSH or DOL, we're going to redact out the non-claimant information.

So it's just taken us a little bit to, you know -- to work out the logistics on that and administratively figure out how to do that. We've had to hire or bring in additional staff at a few places, which has caused some more responses to go over 60 days than usual. We've got the process worked out at all sites and, like I said, there's a couple of sites that are just working down those backlogs. I would anticipate at our next -- at the next NIOSH Board meeting those over 60-days number should be much lower.

THE COURT REPORTER: Mr. Schofield, --

MR. LEWIS: And of the eight that are over 180 days are concerning, --

THE COURT REPORTER: Excuse me.

MR. LEWIS: -- and I'll look into those.

DR. ROBERTS: Excuse me. Mr. Schofield, I need you to mute, please.

MR. LEWIS: So with that, I -- I believe that -- that's it unless there are questions.

CHAIR ANDERSON: Any questions? Okay, thank you. Next is going to be the SEC 188 Sandia Petition.

Rashaun, if we're -- we're about 10 minutes early. Do we need to wait in case somebody's coming on --

DR. ROBERTS: Yes.

MR. ANDERSON: -- directly.

DR. ROBERTS: Yes.

CHAIR ANDERSON: -- at 2:00, so --

DR. ROBERTS: Yes.

CHAIR ANDERSON: Take a quick --

DR. ROBERTS: Can you -- I'm sorry. I was trying to come off the mute. I was trying to say that yes, we do need to wait until 2:00. So we -- we need to delay. So were you going to take them to break?

CHAIR ANDERSON: Yes.

DR. ROBERTS: Okay. Great. So a quick few-minute break. Actually, come a couple of minutes -- come back a couple of minutes before 2:00 just so that I could do the roll call again prior to that agenda item.

CHAIR ANDERSON: Okay.

MS. VALERIO: Rashaun, this is Loretta.

DR. ROBERTS: Yes.

MS. VALERIO: I'm going to --

DR. ROBERTS: You're going to --

MS. VALERIO: Yeah, I'm going to jump off because I'm conflicted. So if someone can, either call me or text me when we're ready to get back on.

DR. ROBERTS: Sure. Zaida, are you able to do that, or Nancy?

MS. BURGOS: Yes, I can give her a call.

DR. ROBERTS: Okay, great.

MS. VALERIO: Thank you.

DR. ROBERTS: Thank you.

So if you -- if everyone can come back by about 1:58, that would be great. Thank you.

(Whereupon, a break was taken from 1:52 p.m. until 1:58 p.m.)

(Roll call.)

DR. ROBERTS: We do have a quorum because we have seven people, but let me circle back. Has Phil -- have you joined yet, Phil? Okay, how about Richardson and Schofield? Okay, I don't hear them, Andy, but I think you can go ahead.

CHAIR ANDERSON: Okay, thank you, Rashaun. I -- has -- hopefully you-all remember as well as look at the materials that were sent for people to look at. The last Board meeting, the motion by the work group for Sandia National Lab was tabled so people would have a chance to review things. We thought before we would get a motion to take it off the table, we asked Bob Barton to do a quick review through the materials that have been submitted for you to look at.

So, Bob, take it away.

MEMBER KOTELCHUCK: Do you need -- do we need to take the -- any resolutions off the table?

CHAIR ANDERSON: Not yet.

MEMBER KOTELCHUCK: Okay, fine.

MR. BARTON: Okay. Thank you, DR. Anderson. And if it's amenable, how I'd like to start out, I'll be giving me the -- the presentation here, but Joe Fitzgerald, who's on the line, is the lead for this site, and I think it might be beneficial to the Board Members, if he sort of kicks us off before we actually get into the details.

I'm giving the presentation, basically, because it really concentrates on this issue of breathing zone samples and how that's used to, sort of, formulate a framework for assigning dose to unmonitored workers, but I think it might be beneficial if it's, again, amenable to -- to the Board to have Joe Fitzgerald kind of give us the back story and get us started.

CHAIR ANDERSON: That's fine.

UNIDENTIFIED SPEAKER: Go ahead (unintelligible) --

MR. FITZGERALD: Good afternoon. Can you hear me all right? Hello?

MEMBER BEACH: There's an echo.

CHAIR ANDERSON: There's an echo, isn't it?

MEMBER BEACH: Yeah.

MR. BARTON: Yeah, I'm hearing an echo as well.

DR. ROBERTS: Are you on your cell phone, or...?

MR. FITZGERALD: No, no. I'm talking to the computer.

MEMBER BEACH: Yeah, it echo is quite a bit when you talk.

MR. FITZGERALD: Let me switch to my phone. I think -- can you hear me all right now?

MR. BARTON: Yeah, that fixed it. Somebody muted.

SEC-00188 Sandia Petition Addendum 2; 01/01/97-05/21/2011

MR. FITZGERALD: Oh, okay. Thank you. Good afternoon. I'm just -- I'm going to do this very quickly. We did look through this very briefly at the last Board meeting. SC&A reviewed ER Addendum 2. This is the '97 to 2011 and issued its report on December 4, 2020. And if you will recall, this followed the series of 8314s covering the previous years, you know, '49 to '96, that NIOSH had issued. So there was a number of years where that review had gone on, so we finally got a -- the ER Addendum 2 in the -- in late 2020.

At any rate, we proceeded to review that, and there's been a number exchanges of -- of -- of review findings and responses, and this took place in 2021. The work group met on March 3rd of this year, with the review by the Board, of course, in April. So when we did the review that led to the final issues that Bob is going to talk about, we kind of broached four basic questions, four lines of inquiry, as we call them, for Addendum 2. And if you can -- next slide, please. Is someone working the -- ah, there we go.

The first question that we asked that was a fundamental line of inquiry, is the weight of evidence sufficient from a feasibility standpoint for both external and internal dose. And in short, we felt

the answer is yes. Again, this is a weight-of-evidence assessment, so there's number of issues but we felt that the -- in totality, we felt it was a pretty compelling case that those reconstructions could be done feasibly for both.

In saying that, there's a bit of an asterisk, and this is what we're going to spend some time talking about today, that we -- we still have some questions on the external side with how the --what I would call, a gradient of -- of -- of exposure that may have taken place that may or may not have been caught by the dosimetry I at the time. This was at the Sandia Pulse reactor. We felt that was probably the -- one of the key issues on the external side. And, of course, what -- in terms of what Bob is going to be discussing, the question of -- of the completeness of the actual breathing zone data that was used to justify the 100-millirem annual dose assignment.

And in terms of question two, which gets into this question of 100 millirem, that originated with 10 CFR Part 835, which at all DOE sites took effect at the end of '85. And for almost all these sites, in terms of the -- you know, sort of the SEC question of the sufficiency of monitoring, you know, the question is whether, in fact, the monitoring requirements were implemented fully at the site and there was evidence that -- that the -- and particularly with the bioassays and what have you, that one could substantiate the 100-millirem annual dose assignment that was part of the proposal by NIOSH.

And in this case, we spent a great deal of time looking at the implementation of 835 at Sandia. Looking at the assessments that

validated that assessment --

THE COURT REPORTER: Excuse me. Excuse me.

MR. FITZGERALD: -- and in all cases we were able to --

THE COURT REPORTER: Excuse me, Mr. Fitzgerald. You've got to mute --

MR. FITZGERALD: -- do just justification before the 100 millirem.

THE COURT REPORTER: Excuse me, excuse me, Mr. Fitzgerald?

UNIDENTIFIED SPEAKER: What is that?

MR. FITZGERALD: There's a beeping going on.

THE COURT REPORTER: I can't take down with that background noise.

MEMBER BEACH: It looks like it might be coming --

DR. ROBERTS: -- from Phil.

MEMBER BEACH: Phil, I think it's coming from you.

MR. FITZGERALD: Is that better?

CHAIR ANDERSON: That's much better. Yeah.

MR. FITZGERALD: Is that better? Okay.

At any rate, what I was just saying was that we were able to substantiate that the program implementation was established and documented by the end of ninety -- ninety -- I guess by the end of '96.

Okay. The third line of inquiry that we focused on was any limitations or uncertainties related to the use of the BZ sampling, which is -- which is definitely a distinction for Sandia, that they, in

fact, went to the personal air sampling as opposed to a regular bioassay. It was a decision that they made based on the nature of the exposures at this site and the fact that this seemed to be a cost-effective way to do monitoring. But in any case, we wanted to look at that in terms of whether or not there was any limitations to -- to ascribing dose reconstruction for that data. And I think Bob is going to touch on that a bit more, but we didn't see anything that would be a significant problem doing so.

And finally, we -- the work group and NIOSH --spent a considerable time focused on the question of whether the security guards as Sandia were potentially exposed on monitor intakes in excess of the 100-millirems CEDE. And this question was, you know, certainly focused on whether or not the 100-millirem criterion could, in fact, be applied uniformly to the guards, as well as to the other workers. And in this case, the guards weren't defined as RAD workers, and were not bioassayed or BZ sampled. And so the question is whether, in fact, one could substantiate whether or not they would have been potentially exposed to internal intakes that would have given them 100 millirem or not. Next slide.

So in any case, we looked at the documentation and interviews -- and this is with NIOSH and the work group. We looked at interviews from, and conducted interviews, 2011, 2014, 2018, trying to establish what, in fact, was the first-hand experience by the guards in terms of, you know, what kind of duties were performed, where they performed them, what kind of source terms and exposures might

have been present, and to really examine the question of, are there instances where clearly unmonitored intakes may have occurred. We looked at the history of radiological monitoring policies and procedures that applied to the guard force. And there's been certainly a number of evolutions of that practice over the years there.

We looked at as many incident reports as we could locate, as well as enforcement records that would have involved the worker intakes at Sandia, including the guards, and found a number of exposure incidents, a lot of -- you know, certainly contamination ones, ones involving an external exposure. But we did not establish any intakes that would have been approaching the 100-millirem mark. So, again, we -- we wanted to look at that question to see if there's any evidence that the potential may have existed.

In addition, we -- we and the work group and NIOSH -- I think this was right before the pandemic -- actually we went to Sandia and walked down the -- the surveillance locations, guard stations, and facilities and first-hand had a chance to look at these locations to see what the source terms and exposure potentials may have been over time and also had a chance to sit down with the guard force and ask questions and hear pretty much their experience and commentaries. And, again, in the end, I think, on this important question, we just did not see any evidence or history where the 100-millirem criterion would --you know, would not be relevant to the guard force. And I think that's pretty much where we came out on that.

That's all I have on -- on certainly the overview of -- of SC&A's

review of the ER. And I said before, there were some asterisks, meaning some questions that remained from that review that we broached with the work group. We felt they did not rise to the level of -- of undercutting the feasibility of dose reconstruction, but there certainly were issues that -- I think we've called them site profile issues in the past -- but issues that certainly needed to be aired and addressed. And that's pretty much what has been looked at in terms of the work group over the past six to eight months.

So Bob, you want to at least, I guess, sort of --

MR. BARTON: Yeah.

MR. FITZGERALD: -- close.

MR. BARTON: Thanks, Joe. You know, really underpinning this entire -- I call it a framework because it's not really necessarily a co-exposure model in the traditional sense, in which we'd be taking these breathing zones and -- and fitting them to distributions and then coming up with a dosed estimate that way. Really, these breathing zone samples are used as essentially a piece of evidence for the 100 millirem. And I think that's going to be very important to consider when we talk about things like completeness on this slide. It's not exactly the same as we typically have in an SEC investigation, in that you rarely -- you know, if we were using bioassay results you really want to have a fairly complete data set, whereas in this one, it's more scoping just to convince ourselves that, again, that -- that 100-millirem assumption is going to work.

And another thing, I want to emphasize for everybody is that

this will be used for workers who are unmonitored or only partially monitored. There is a bioassay program at Sandia, it's just not everybody participated. However, we wanted to look at this breathing zone data set pretty closely for a number of reasons to see if there are certain areas, locations, timeframes, where we really had concerns that the 100 millirem would not be applicable, again, to the unmonitored worker.

So really, we just had one finding and seven observations. And the finding was related, basically, to the fact that we couldn't determine necessarily how many breathing zone samples should be out there. NIOSH went and captured a whole bunch of them. But, again, we don't have that secondary source, which would be like a health physics report or industrial hygiene, that might list on a monthly or quarterly basis how many breathing zones were actually issued and measured. So that -- that is the sole finding, from our review here is that we really don't know what might be missing out there.

We have a significant data set but, again, we have no way to verify how much of it we have. We don't have a way to verify what percentage of these breathing zones that we're looking at. And, again, this -- this formed at the basis for the 100 millirem, but it's not used directly in any sort of meaningful co-exposure sense in which we'd be trying to fit it, again, to a distribution to come up with, I guess, a more accurate picture of -- of these workers who were doing radiological tasks and were monitored via the breathing zones. But,

again, like I said, there is a -- there is a bio --there was a bioassay program during the period of interest, and we'll get into that a little bit. So that was finding one.

And, again, we just tried to get an idea of, you know, what is the level of incompleteness here. I mean, how many readings might possibly be missing. So the first thing that we did is we came at the problem and said, all right, let's look at it just temporally. And then we actually go into it in Appendix 2 of our report by month down to that level of granularity, and it was pretty apparent, to SC&A, at least, that we don't have a complete data set. You wouldn't imagine that you'd have the same number of breathing zones, you know, for each period. But, you know, when you're missing a couple -- a couple months, couple of weeks here and there, you sort of get the idea that, you know, unless there was some reason for -- for that gap temporally, we probably don't have a complete data set.

The next thing we did is we looked at the electronic data sources. In this case, it's known as WebDose. And, again, we actually compared NIOSH's, again, captured data set -- these things came, were captured at the site, transcribed from PDF files into a database. We compared it with an alternate database at the site, and we actually found that the WebDose database had less actual reading zone data points in it. So in a sense, the -- the NIOSH compilation is more complete than even that saved database, which there are reasons for that. And it's really because the WebDose was designed to just track those workers who had measurable derived air

concentrations, DAC hours in this case, for the purposes of reporting and making sure that they were in line with the 835.

So we determined that you -- we know that it's incomplete. But we really don't know what level we have. We don't have a percentage that we can say yeah, we have 50 percent of the data that should be out there or 90 percent. We just really don't know. But the real question is, what are going to be the implications in a dose reconstruction feasibility context. You know, what -- what does that data that we might be missing -- what could that possibly say about exposures and how does that reflect on, again, this framework of 100 millirem.

NIOSH response to this was they agreed that the data set is incomplete and to an unknown degree. We just simply don't know what we're missing here. However, there's a couple of things we can do to convince ourselves that what we do have is going to either be representative or bounding so that when we do an exposure analysis based on all these breathing zone data points, that's the 100-millirem assumption, essentially, as a bounding assumption, again, for unmonitored workers, is going to work.

And one of the -- the best comparisons are to use DAC-hour tracking logs, which essentially was the internal dosimetry department, tracking these workers who were doing the higher-exposure jobs, again, just to make sure that they were within the prescribed limits. So that comparison was done, and we were able to do that for about a little over a third of the SEC period. And it was

the early years, up until about 2002, and then we don't have necessarily the DAC-hour logs after that. However, comparing those DAC-hour logs that we do have in-house against the data set that NIOSH has compiled, we found that, you know, almost 99 percent of those workers who, again, were getting tracked because they were in the higher-exposure categories were included in the NIOSH data set.

So what that tells us is that the missing data is not what -- at least based on those years, we can make comparisons is likely not the higher exposure category, which would be the -- you know, if we were missing data you want to know and inform ourselves what that data might possibly tell us and how does it, again, relate back to that 100 millirem. It's, like I said, the -- the comparison was only available for roughly 36 percent of the period, it was -- it was the earlier years, '97 through 2002.

And, again, that comparison to WebDose, which I just mentioned, where the NIOSH data set actually contains more data than what was found in WebDose is, again, part of that weight of evidence argument because that database was designed to track those workers who had measurable DAC-hours based on their, again, breathing zone samples, so those that had the highest workers in it. And we were able to match that up, again, with the DAC-hour logs, the WebDose, and then finding those workers and their results in the NIOSH data set, which is important because, again, if you're talking about data that is incomplete, you want to know what that missing data might represent.

And in this case, it looks like we got the higher-end results included. So if anything, SC&A concluded that the data set that we're using, again, to buttress this assumption of 100 millirem is either representative or possibly even (indiscernible) hot just because we see, again, these workers who are getting tracked included in our raw data.

So SC&A, we agreed with the NIOSH response and their assessment of the DAC-hour logs. This was discussed back in April on the 11th, which was a couple of weeks before the full Board meeting. And the work group agreed that even though there are completeness issues and we don't know that level of incompleteness, it doesn't obviate the DR feasibility in this case. So at that meeting, again, in April, we worked with the work group and elected to close Finding 1, which, again, was the fact that we have no way to verify what's missing from -- from our data set, and also observations two and three, which were all related to completeness.

Now, based on that discussion back in April, there was one follow-up recommendation from the work group that when we start talking about these completeness issues, is there a way that we can, sort of, formalize the approach so that it's consistent across all these sites, because any time we have these SEC discussions, completeness is always a topic of interest. It's always analyzed and debated. So the question was whether there was a way to, again, formalize it. And so it was recommended by the work group that the SEC issues work group, sort of, take that up as a program-wide issue, and,

again, develop that uniform approach.

Observation 1, this moves then to really just how the breathing zone data was recorded in the original evaluation report. And also what we found was that there were actually some -- some duplicate samples. In it -- in the readings on data set. NIOSH provided all of their Excel files where they had transcribed the data. And essentially, what happened is, you'd have two separate PDF files that were not identical looking; however, once you really dug into them, you would find that they represented essentially the same worker doing the same thing on the same day, essentially the same exposure event, as we refer to here.

So there were a couple of duplicates in there.

And the second part of this observation is that it -- it seemed like the totals, the actual number of breathing zone samples that were reported, were in error. And the way this happened was, in some instances, you know, you'd have a breathing zone, and it's measuring alpha, beta gamma, and tritium, and that might be counted as a single breathing zone sample. And in other cases, it was counted as three. So one for alpha, one for beta gamma, one for tritium, so essentially, giving undue weight to those numbers. And so, we just pointed that out. Again, it's an observation.

NIOSH's response was that, well, first of all, the duplicate samples, they went in and remove them and reran the analysis, again, to see what are we talking about as far as exposure potential from these exposure events represented by each breathing zone. And

basically, once removing the duplicate samples, it had really little to no effect on the resulting analysis. But it's important to look at that just in case it was going to unduly bias the numbers that come out in the end.

And then the second part was, like I said, that, sort of, inconsistency in how the breathing zones were being reported. And the resolution to that issue is that once the TBD is revised to reflect this method, the associated triple counting would be taken care of, and a more accurate reflection of the amount of data we actually have would appear there. And so, the work group discussed this, again, back in April, and elected to close Part 1 of the finding, because, again, NIOSH removed the duplicates, and reran the analysis, and it didn't make a difference. And Part 2 would just be held in abeyance as a saved profile issue. Those numbers would be updated when the TBD is updated.

Observation 4 and 5, we want to look at some of the characteristics in the breathing zone data. Who's -- who's getting, you know, monitored and how often because, at -- at the end of the day, we're trying to compare this to 100 millirem. And so, you know, at the median level, you have about one-half a millirem per exposure event. So then it follows along that you would need 200 events to actually broach that 100 millirem for the year that -- that's being proposed to be assigned for, again, unmonitored workers. And so what we found was that a lot of the available breathing zone samples that we have were often just assigned to a few individuals. But even

then, I think, the maximum we observed was about 100 breathing zone events per year for the individual with the most across all years. And that was Observation 4.

But we also found that the workers who appeared most often in these -- the breathing zone data set also had that on bioassay and in-vivo monitoring and -- and non -- non-tritium because really, the driver here is the -- the alpha intakes. So the workers who are most often monitored by breathing zone actually are -- participated in the bioassay program. And so if you think about it, those workers, again, who were most often appearing here, most often by default, doing this kind of radiological work, their dose reconstruction would involve their own bioassay results, wouldn't even be considered really for this 100 millirem. And so NIOSH concurred with the observations and concluded it does not affect feasibility of dose reconstruction. This was discussed, again, back in April, and Observation 4 and 5 were closed at that meeting.

Now, what is the exposure potential actually associated with this breathing zone data. This is where we look at things like, again, by year and, more importantly, by location. One of the Sconcerns would be if you had a location that was significantly different than the rest of the site, and if you're averaging, you know, over aggregated years, that might not be appropriate for a specific location or a specific activity. So we looked at that, and we did find that, of course, as you'd expect, some are above, some are below.

And there are some locations in certain years, that could be a

factor of 7 -- 7, 8, 9, 10 above what the average is for all years in all locations. However, there's several things that went into this exposure analysis that were very conservative -- clear, and favorable, if you will.

One of them was that it was almost always assumed that the -- the activity on the breathing zone was plutonium. Even though oftentimes, the actual radiological work permit, which specified it as fission products or depleted uranium or something like that. And so if we went down to that level of granularity, these dose estimates are going to be lower than what was actually used to justify the 100 millirem.

There was no consideration of respiratory protection, although if you look at all these activities, these RWPs, you find that, based on the year, it could be anywhere from 40 percent to almost over 90 percent or some form of respiratory protection, which, again, now you're talking about a decrease in the actual evaluated dose of a factor of 40 for just your standard mask to, you know, close to 10,000 for -- for bubble suits, which were worn for certain operations. And we just found an unlikely that a single worker would be exposed to 200 events. And, again, the event was characterized at about half a millirem based on his breathing zone data. And, again, the -- the most sampled individual that we could find in the data set was about 100 events. Now, again, that comes with the caveat that we don't necessarily know how complete the data set is.

However, again, those -- those individuals who had significantly

more events, I think, on average, the -- the workers had about 20, so not 200, but 20. And if you -- if you had that many breathing zone samples, like for example, the worker was at 100, you were included into any non-tritium bioassay program. So, again, those workers would be covered by their own radiological monitoring records.

So back in April, this was discussed and the work group concurred and that even though there are fluctuations in that -- that exposure estimate, not -- not the 100 millirem, mind you, but the exposure estimate per event of half a millirem per event, as you'd expect, there be fluctuations, but it does not affect the feasibility conclusion. And so the work group elected to close that observation.

Just moving off of breathing zone for a brief minute. This has to do with the external dose.

And this comes out of previous, say, profile reviews, I believe. And really, what -- what this has to do with is that during certain shutdown conditions, you have workers who were physically underneath the reactor, and sort of doing the work reaching up. And so if you think about it, just the geometry of it, where you're wear -- wearing your -- where your film badge is going to be very different than the exposure that you could be receiving on your hands doing the work or, you know, the head or anything above the location of where the film badge is.

So NIOSH identified that there is extremity monitoring, even including head dosimeters. And so they've committed to developing an appropriate correction factor, which that work had been underway.

I'm not sure of the status of that yet. I don't think we've necessarily seen the end solution to that. However, if the data there and can be used, then we find that that's really a safe profile, again, type -- type of issue. So the work group accepted that path forward, and so that was designated as in progress until we see the -- the correction factor and the data used to -- to reach that conclusion.

So in summary, Finding 1 and Observations 2 and 3 were related to that data completeness issue. Those were closed by the -- the work group. Began with that, sort of, suggestion for the Board that the SEC issues work group try to come up with ways to standardize the way we do these completeness evaluations, if possible. And so I think that's -- that's where the status is on that -- on that issue. Basically, again, looking to standardize it.

Observation 1, which was basically how we're documenting the amount of data we actually have for this evaluation, which is what you're seeing, 100 millirem, again, it's placed in abeyance as -¬as safe profiles. Again, there were just some discrepancies on how things were being reported and then, of course, the other part of that observation was that there were some duplicates. But, again, NIOSH went back, re-evaluated, took out the duplicates, and it had little to no effect, so it wasn't biasing the results in any meaningful way.

Observations 4 and 5, again, were just looking at, you know, who was monitored, how often, and then also comparing those workers who were --had a lot of BZ results against the bioassay data available. And we found that most of them were included already in -

- in the internal monitoring program for bioassay. And so they wouldn't even necessarily use this 100 millirem for those workers who seem to be most often in these radiological areas and doing RAD work in association with the radiological work permits.

And Observation 6 was, again, looking at the actual magnitude of exposures. Are there -- are there areas -- are there years where it just -- the 100 millirem really gives us pause. And while there were certainly fluctuations, as I mentioned, there were several conservative assumptions that went into it, including assuming there's always plutonium, when a lot of times it was depleted uranium, the fact that no respiratory protection was considered, and then, of course, that the characteristics of the data itself, which didn't suggest that 200 events was likely for workers, especially workers who were not already on a non-tritium bioassay program.

And then Observation 7, was that external dose geometry that I just described, which is still in progress. We just need to develop correction factors for that unique configuration where the workers were essentially underneath reactor, and so the source term was above them and they're

reaching up and doing the work. So that correction factor would be warranted there. So at -- again, at that meeting in April, the work group had agreed unanimously that the NIOSH determination that dose reconstruction is feasible, and I think that's where we left it off. We did present this as, sort of, a status update later on in the month of April at the last full Board meeting. At that

time, it was tabled.

So here's some, again -- some -- just my reference slides to provide you all with a lot of the underlying documentation and analysis that was done, and I'd be happy to entertain any questions.

MEMBER BEACH: Henry, can I make the motion to untable this at this time?

CHAIR ANDERSON: Yes, you or Dave, one or the other.

MEMBER BEACH: Okay. So I've made the motion to untable this discussion.

CHAIR ANDERSON: We need a second.

MEMBER KOTELCHUCK: I (indiscernible) second.

CHAIR ANDERSON: Okay. Then we need a vote?

THE COURT REPORTER: Excuse me, who was the second? I need names.

MEMBER KOTELCHUCK: David Kotelchuck. Dave K.

DR. ROBERTS: Hi. Andy, --

CHAIR ANDERSON: Yes.

DR. ROBERTS: You do want to provide -- check and see if the petitioner is present.

CHAIR ANDERSON: Yes, yes.

DR. ROBERTS: -- before you recommend it -- before trying to --

CHAIR ANDERSON: Okay.

DR. ROBERTS: -- bringing this to a vote.

CHAIR ANDERSON: Okay.

MEMBER BEACH: Do we need a vote on untabling it? We have a motion and a second, Rashaun.

MEMBER ZIEMER: You do have to vote.

DR. ROBERTS: Yeah, yeah.

THE COURT REPORTER: Sorry, folks. I need --

CHAIR ANDERSON: (Indiscernible.)

THE COURT REPORTER: -- names every time, please.

MEMBER KOTELCHUCK: Yeah, okay.

CHAIR ANDERSON: Okay. So we need a vote. And then after that untables it, we can have further discussion and we can ask the -- if the petitioner is

on, to comment then, too.

DR. ROBERTS: Can -- can we do -- can we just do a majority vote, Paul, --

MEMBER ZIEMER: Yes.

DR. ROBERTS: -- yays and nays?

MEMBER ZIEMER: Yes, majority vote on untabling.

CHAIR ANDERSON: All in favor of removing it from the table say, aye?

Members: Aye.

CHAIR ANDERSON: Any opposed? So the proposal has been untabled. And just to go through what that is, it's the recommendation by the work group to agree with NIOSH that dose reconstruction is feasible, and therefore not recommend adding this SEC 188 January 1, '97 to May 21, 2011 to the SEC. So that's what

the recommendation is.

Now we can have a further discussion.

MEMBER BEACH: Henry, this is Josie. I -- I know that this was mentioned several times. The overarching discussion on the quantitative/qualitative data, which we all agreed that Genie -- Gen said it very well in our -- in our meeting on -- in April, but we agreed that that needed to go to a further discussion. And I understand you're the chair of the SEC work group that would -- would host that discussion, and that was a big factor in -- in settling Findings 1 and then the Observations 2 and 3 that were added to that. So I just -- I just wanted to point that out.

CHAIR ANDERSON: Yes. So we will -- we will need to put that on the agenda or we -- may be sufficient and we need to have a separate work group meeting specific to that, and we'll have to have NIOSH as well as SC&A talk about that.

MEMBER BEACH: Yeah. And this is Josie again, it's -- I think it's important that we don't lose that in moving forward, so something -- that should be scheduled fairly quickly, I believe.

MEMBER ROESSLER: This is Gen Roessler. Should we have a vote on that, since that's very important to make sure that we follow through on it?

DR. TAULBEE: This is Tim. I -- I won't -- I don't want to influence whether you're going to have a vote or not. I will tell you that we are working on this. And -- and there's a draft -- an initial draft paper on my desk for review right now that we would then be

presenting to the SEC issues work group. So I did want to let you know that we have been working on this since August, and we are continuing to do so. I don't know that it's going to be ready in short order, but it -- we do have an initial draft that we are discussing internally.

MEMBER BEACH: Is there a title for that, Tim?

DR. TAULBEE: Not really. It's data completeness --

MEMBER BEACH: Okay.

DR. TAULBEE: -- across SECs.

MEMBER BEACH: Yeah. I had forgotten that we had asked NIOSH to take the lead on that, so thanks for reminding us.

MEMBER LOCKEY: Tim, this is Jim Lockey. Are you working that in -- in concert with SC&A together or independently?

DR. TAULBEE: Independently at this point.

CHAIR ANDERSON: I think it'll be step-wise that first, there'll be the NIOSH document, which will then have review by SC&A, and then the committee will meet.

MEMBER LOCKEY: Got you. I -- I agree with Josie. This is a very important issue.

MEMBER BEACH: Yeah. And to Jim's point, I don't think we need to vote on it. I think, as Tim just pointed out, I think it's in the works. So glad to hear that.

MEMBER LOCKEY: And -- and I'm convinced it's good to go, too.

MEMBER BEACH: Perfect.

CHAIR ANDERSON: Well, as the Chair, I will -- I made another note about it, we'll keep asking Tim, every -- every meeting how we're doing. So are there other questions people have?

MEMBER BEACH: Yeah, and I read the update on the work in progress. I don't remember if that made that list or not, I'll have to go back and see. But Tim, you probably know if that made the -¬the -- the work for NIOSH.

DR. TAULBEE: Actually, I'm not sure that it did make it on there, but it --

MEMBER BEACH: Yeah.

Mr. Talbee: -- should have. So that was -- that was my mistake. But I will definitely add it to that work group coordination document.

MEMBER BEACH: Oh, perfect. Thank you.

CHAIR ANDERSON: So is the petitioner on? I guess not. So any other questions to SC&A or NIOSH or -- considering it was a lot of documents and kind of an interesting set of issues, especially the 100-millirem one. And I think Bob went over that as an issue quite well. But, again, that's -- that's the focus that's going to be on NIOSH's dose reconstruction issues.

So then, if there aren't any further comments, I guess we can call for a vote or -- on the -- on recommendation to agree with NIOSH that we not add this group to the SEC. That's what the proposal is. So with that, the committee's proposal is the -- the motion that's on the floor, so we can call a question on it and vote on accepting the

committee's recommendation.

MEMBER ROESSLER: This is Gen Roessler. I'm having a hard time hearing you, Henry. But are you saying that we're voting on -- on moving this or -- or to refer this to the SEC issues committee, or are we voting on the motion that we made to deny this petition?

CHAIR ANDERSON: We're voting on the motion to deny or to accept NIOSH's judgment that they can do dose reconstruction. So we would --

UNIDENTIFIFED SPEAKER: (Indiscernible.)

CHAIR ANDERSON: -- not add it today.

MEMBER ROESSLER: And the work group recommended --

CHAIR ANDERSON: Right.

MEMBER ROESSLER: -- supported that. Yes, okay. Thank you.

CHAIR ANDERSON: The -- the secondary issue is really the -- the one that NIOSH is now working on, on data completeness in SECs.

MEMBER LOCKEY: So Andy, do you need a second or we just go ahead and vote or a motion?

MEMBER BEACH: It's already been -- it's already been --

CHAIR ANDERSON: It's already been proposed and seconded and then it was tabled because --

MEMBER BEACH: People wanted to --

CHAIR ANDERSON: -- so I think we can just vote on that.

MEMBER LOCKEY: Right.

CHAIR ANDERSON: So if our Robert's Rules says okay, we'll (indiscernible). Rashaun, why don't we go through as -- by individual

vote?

DR. ROBERTS: Okay. All right. So let's start with, Beach.

MEMBER BEACH: Yes.

DR. ROBERTS: Okay. Clawson.

MEMBER CLAWSON: Yes.

DR. ROBERTS: Field?

MEMBER FIELD: Yes.

DR. ROBERTS: Kotelchuck?

MEMBER KOTELCHUCK: Yes.

DR. ROBERTS: Lockey?

MEMBER LOCKEY: Yes.

DR. ROBERTS: Richardson?

MEMBER RICHARDSON: Yes.

DR. ROBERTS: Roessler?

MEMBER ROESSLER: Yes.

DR. ROBERTS: Schofield? Phil, are you on? He -- he might be having trouble. Ziemer?

MEMBER ZIEMER: Yes.

DR. ROBERTS: Okay. Phil, are you on? Okay. And Anderson?

CHAIR ANDERSON: Yes.

DR. ROBERTS: Okay. So --

MEMBER BEACH: Is Phil conflicted at the --

DR. ROBERTS: -- I want to --

MEMBER BEACH: Rashaun, is Phil conflicted at his site?

DR. ROBERTS: No.

MEMBER BEACH: Okay. I thought he might be. Sorry.

DR. ROBERTS: Valerio. 1, 2, 3, 4, 5, 6, 7, 8, 9. So it looks like there's nine votes to deny the SA -¬SEC, and then I'll have to follow up with Phil to get this vote.

CHAIR ANDERSON: Okay. Well, thank you all. It was a little bit confusing. Partially, that was my fault for the last meeting, but I think we've got it all resolved, and we got a way forward on the rest of it. It was an interesting issue with the change there to the 100 millirem as far as a basis for doing some of the monitoring.

MEMBER ZIEMER: Andy, this Ziemer, I have one question. This, I think, still requires a letter to the secretary --

CHAIR ANDERSON: Oh, yes. I do have --

MEMBER ZIEMER: -- are we -- are we going to do that during this meeting --

CHAIR ANDERSON: I -- I have -- I have a draft letter.

MEMBER ZIEMER: Okay, thank you.

CHAIR ANDERSON: Let me read the draft letter.

Sorry, Cindy. So let me read the -- here's the letter we have. (Reading): Dear Mr. Secretary, The Advisory Board on Radiation and Worker Health, "the Board," has evaluated special exposure cohort SEC petition 00188, concerning workers at the Sandia National Laboratories in Albuquerque, New Mexico, under the statutory requirements established by the Energy Employee Occupational Illness Compensation Program Act 2000, and incorporated into 42 CFR 83.13. The National Institute for Occupational Safety and Health,

"NIOSH," has recommended that individual dose reconstructions are feasible for all personnel that worked in any area at Sandia National Laboratories in Albuquerque, New Mexico for the period from January 1, 1997 through May 21, 2011. NIOSH found that it has access to sufficient exposure monitoring and other information necessary to estimate with sufficient accuracy, the radiation dose received by members of this group, and therefore, a class covering this group should not be added to the SEC. The Board concurs with this determination. Based on these considerations, and the discussion at the June -- or the April 27¬28, 2022, and August 17-18, 2022, Board meetings held by conference call, the Board agrees with the NIOSH recommendation that this class not be added to the SEC. Sincerely, Henry Anderson. Chair.

I hope I read it too fast for Paul to find a technical error.

MEMBER ZIEMER: Sounds good to me, Andy.

CHAIR ANDERSON: Okay. That's -- that -- we had done it for the last meeting and just carried it over here. So we should be good to go then. Any other? I think, pretty well finished up on this one.

Rashaun? So --

DR. ROBERTS: Yeah.

CHAIR ANDERSON: -- we should go to break before Phil and INL discussion, the SEC update?

DR. ROBERTS: We could go ahead and take another break. This is an update. So I don't know that we have to wait until 3:45, I mean, it's up to you.

CHAIR ANDERSON: Well, do we have -- we still have to stay for five o'clock for --

DR. ROBERTS: Right.

CHAIR ANDERSON: -- comments to come in. Are there any public comments? I think we have one requested so far?

DR. ROBERTS: One requested, yeah.

CHAIR ANDERSON: So why don't we go ahead and we can take a little longer break then, if that's okay with everybody? Is Phil in the call?

DR. ROBERTS: Okay. So the next agenda item would start at 3:45. So just if you could make it a couple of minutes before that would be good. Thanks.

CHAIR ANDERSON: Okay.

MEMBER ZIEMER: Well, before we do that, since we have a fair amount of time here, rather than mark our heels, what about doing some of the Board work-session stuff, or is it premature?

CHAIR ANDERSON: Yeah. We're -- Rashaun, do you want to -- yeah, we could certainly do the -- yeah, the meeting schedules. Teleconference is October 20.

And Rashaun, are you there?

DR. ROBERTS: Yes, I am -- actually I was --

CHAIR ANDERSON: Hey, --

DR. ROBERTS: -- planning to -- hello, can you hear me?

CHAIR ANDERSON: Yes.

MEMBER ZIEMER: Yes.

DR. ROBERTS: Okay. There was some information I was planning to prepare for that Board work session, but I think, you know, people want to do the work group report out. If people are prepared to do that, we could perhaps do --- do that and the scheduling of meetings.

CHAIR ANDERSON: Okay, that's fine. So do you have -- the location for the December meeting?

DR. ROBERTS: No. So do you want to start with the scheduling of meetings or the work group report? I was thinking the work group reports first.

CHAIR ANDERSON: Okay, let's do the work groups.

THE COURT REPORTER: Excuse me, does this stay on the -– does this stay on the record?

CHAIR ANDERSON: Yes, I believe so.

DR. ROBERTS: Yes, it -- yes.

CHAIR ANDERSON: So we have a couple of work group meetings coming up, I think? If anyone's talking, you got to go off mute.

MEMBER BEACH: So I'll -- I'll start a little something, Henry. This isn't my work group report, but Lawrence Livermore, there's some work getting -- they're getting ready to -- to go do some interviews. I don't know when, but it sounds like it's in the near future. And we do not have a work group for Lawrence Livermore at this time, so that needs to be established. So that's one thing.

And for me, LANL, the work group is waiting for SC&A to

complete the review for reports 101 and 102. Once we have those reports -- I think the first one is scheduled for the end of this month. And then once we have both of those, oops, sorry -- we'll -- we'll go ahead and schedule another work group meeting for LANL.

Metals and Control, we're in the same boat. We have a document that SC&A produced that is with DOE for -- for certification, clearance, and once we have that in hand and the work group and NIOSH have time to review that, we'll be looking for a work group date also. So probably in the next couple of months there. I expect that any time. I don't know if Joe's heard anything about the release of that, but it should be -- should be -- to be soon.

MR. BARTON: Yeah, Josie. This is Bob Barton, we actually just got word, I believe, yesterday that it's been cleared by DOE, so you should see that pretty shortly.

MEMBER BEACH: Oh, terrific. Okay. So once that is cleared, then we can send around a note and/or an email and see when people are ready to meet for Metals and Control.

And then my last one, Mound, it looks like we're still waiting for the external TBD, I believe in --NIOSH is waiting for a white paper from DCAS or the other way around. But we should see that or at least have an idea of when -- when that will be moving forward. And we may hear more about that later on. But those are mine. Thank you.

MEMBER KOTELCHUCK: The subcommittee for -¬Dave Kotelchuck, subcommittee for dose reconstruction reviews, we do not

have a scheduled meeting. We are awaiting review of set 31 by NIOSH. And as soon as we get word, we will go ahead and schedule.

And people, if I may add -- mention to staff if you can anticipate when you are likely to finish because from the time we get to go ahead, it will take much -- nowadays it will take about three months to get the meeting scheduled. So as you anticipate when it will be completed, we can start the process of scheduling the meeting. Okay.

And then the Rocky Flats Plant, the -- I heard from ABRWH the other day that we actually -- the --¬have the modified evaluation report of per -- it's ready, and so we'll probably be scheduling a meeting about that soon. We'll get to that right after the -- this current Board meeting concludes.

CHAIR ANDERSON: Okay.

MEMBER BEACH: Henry, this is Josie again. I forgot the procedures work subcommittee. You will hear from us tomorrow, we are still in the process of closing out items that are -- are on our -- in our backlog. We are scheduled to meet again on the 29th of September. So we will continue working through the backlog and -- and with anything new that comes our way. Thank you, that's it for me, for sure this time.

CHAIR ANDERSON: Okay.

MEMBER ROESSLER: I could make a report, Henry.

CHAIR ANDERSON: Okay, go ahead.

MEMBER ROESSLER: This is --

(Whereupon, a telephone sounds.)

MEMBER ROESSLER: Gen Roessler. And this is on Oak Ridge National Lab. And I think there's some interference.

THE COURT REPORTER: Yes. You -- guys, you got to mute. Everybody who's not speaking, please.

MEMBER BEACH: It's a telephone ringing.

MR. NELSON: It's the one with 806 area code.

(Whereupon, a telephone message recording played aloud.)

MEMBER ROESSLER: Okay. Let's give it a try now.

MEMBER BEACH: Sounds like the public.

MS. BURGOS: Which one is it so I can unmute it? I mean, mute it.

MEMBER BEACH: It's the 806 telephone.

MR. NELSON: It also ends in 206, the last three digits.

MEMBER ROESSLER: Okay. I think they're off now.

Board Work Session

MEMBER ROESSLER: So I will read -- for ORNL, I'll read the -- our update from Dr. Hughes. The last work group meeting was held in June 2021. Three of the seven findings remained open for NIOSH to address. Of six observations, four were closed and two remained for NIOSH to address. NIOSH is working on addressing the remaining issues by developing a co-exposure approach for exotic radionuclides and revising the dose reconstruction approach presented for iodine, federal ORNL. The iodine approach has been removed from ORAUT Report-90 and will be moved to the co-exposure effort, and is being

worked on by doing additional data review.

ORAUT Report-90 is currently in the final stages of being revised for clarification of various issues raised by SC&A. The report is undergoing some revision of the reference used to make it sources more clear, which is a time-consuming effort. And that's the end of that report.

CHAIR ANDERSON: Are there other -- other committee groups?

MEMBER ROESSLER: Is Dr. Field on the phone? If not, I could make a report on the Y-12 work group. He's the chairman, I'm the -- on the work group, and I have a report here from Dr. Hughes, if that's okay.

DR. FIELD: Well, Gen, I'm on. Yeah, go ahead.

MEMBER ROESSLER: No, you go ahead. As long as you're on.

DR. FIELD: I don't -- I don't have the report, so maybe it's better you give the update.

MEMBER ROESSLER: Oh, okay. So I'll -- I'll go ahead and read her report them. So Dr. Hughes says (reading): This is an update on the NIOSH effort on Y-12. NIOSH issued the OCC 2050 ER addendum in July 2021 and presented it to the Board in August 2021. There has been no further development on this effort from NIOSH since then. SC&A was tasked with a review of SEC 2050 addendum. NIOSH is assisting SC&E -- SC&A with access to files as the current IT restrictions allow. Aside from the SEC efforts, NIOSH is revisiting outstanding issues of the older Y-12 issues matrix to be incorporated into a revision of the Y-12 technical basis documents. Also, NIOSH is

working on revising the Y-12 external co-exposure model based on the new co-exposure implementation guidelines. That's it.

DR. FIELD: Thanks, Gen. So we've been waiting for -- this is Bill Field. We've been waiting for SC&A for a while to finish up a review there. Dianne, if we can get any updates on the review?

MR. BARTON: Yeah. Hi, Dr. Field. This is Bob Barton. I can tell you that the -- the review itself is -- is pretty far along, I mean, I don't want to say 80 percent complete. We did have, obviously, some hurdles to get through in just getting access to certain files and as Dr. Hughes indicated, NIOSH has been very responsive in -- in making sure that we -- we get the actual data that we need to be able to finalize it. And that process is ongoing. So it's just been delayed with these cybersecurity updates and just a lack of an SRDB and that sort of thing.

DR. FIELD: Thanks, Bob.

MEMBER CLAWSON: Andy, I can give an update, --

CHAIR ANDERSON: Go ahead.

MEMBER CLAWSON: -- if you'd like.

CHAIR ANDERSON: Go ahead, Brad.

MEMBER CLAWSON: Okay. So on Argonne East, we haven't had any actions for quite a while. I believe with Pantex we -- it's just site profile issues, but they're updating the site profile. I -- I guess I'd asked that -- Tim if we have any update on that, and he can answer in a little while there. With Savannah River, I believe SC&A has given us the -- the latter years and an evaluation, and I do

believe Tim enlist -- that it's in NIOSH's court at this time for the latter years. That correct?

DR. TAULBEE: Yes. At this time, we're responding to SC&A's comments on Report 92.

MEMBER CLAWSON: Correct. What about -- what about Pantex? I know, it's just a site profile, they're just finishing up the site -- the whole site profile, implementing everything through the whole work group, but I thought we were getting pretty close to that?

DR. TAULBEE: Oh, I'm -- I'm sorry, Brad. I'm going to have to get back to you on that because I'm not sure --

MEMBER CLAWSON: Okay. Well, --

DR. TAULBEE: -- on the status of that one. So --

MEMBER CLAWSON: Okay. If --

DR. TAULBEE: I'm sorry, we'll get back to you on that.

MEMBER CLAWSON: Yeah, just if --

MR. RUTHERFORD: It's actually -- this is LaVon Rutherford. I know that we have been conferring with Pantex staff -- ORAU conferred with Pantex staff regarding the DORMS database and for the years 2010 to present. And so we've been working with them in Y-12 on that issue, I don't really have a date or anything on when that will be completed.

MEMBER CLAWSON: Okay. I just -- I just -- I haven't had much of an update and stuff like that. So I appreciate that.

MR. RUTHERFORD: I'll get -- Brad, I'll get Mark Rawfus (ph) to send you -- shoot you an email with some specifics on that. How's

that?

MEMBER CLAWSON: That sounds great, I appreciate that. That -- that should wrap me, Andy.

CHAIR ANDERSON: Okay. My SEC work group are waiting for -- I don't -- I don't think we have any other open issues to the SEC work group other than the Sandia ones. Since I just took it over, I am looking through my files, I don't see much.

Rashaun, do we have other things for us to -- our group to work on?

DR. ROBERTS: Sure. We can go over some issues related to scheduling meetings since we -- we have a few minutes left until the break. So okay.

So our next teleconference is set for October 20th. And we also scheduled the next in person, which would be December 7th and 8th. And I will circle back around to talk a little bit about the location. Well, actually, we can talk about it now. So I am assuming that we actually will have this meeting face-to-face. As I indicated to the Board via email, we do have some new members that are coming on board, we have not completed the official on-boarding process. So until that's completed, you know, they really won't be participating in Board business until that's the case. But I do anticipate -- well, I'm cautiously optimistic that we will have them on board at some time in the fall, which means that they would be able to attend the face-to-face or would have the option of attending that.

But I think we need to kind of nail down where that meeting

would be. And I know that a number of different options were on the table. I know Pinellas was a possibility for doing that meeting, but there may be other thoughts at this point. So I would just open it up for suggestions and thoughts.

MEMBER CLAWSON: Rashaun, this is Brad. You know, where we're dealing with Savannah River, that's always an option. And you guys know that you're always welcome to come to Idaho in the middle of the winter.

CHAIR ANDERSON: Sure thing, Brad.

DR. ROBERTS: Can I ask -- can I just check in with SC&A really quickly on the work that you're doing with the Pinellas? How -- how are things going with that?

MR. BARTON: Yes, DR. Roberts. It's in a very similar location as the Y-12 SEC review. We were tasked with that, again, back in this previous December with the caveat that, you know, without a searchable SRDB or even the ability to necessarily look through claim files, which is a really valuable source of information, just from the claimant interview -- interview file.

So it's in a very similar -- similar place to Y-12, and we typically wouldn't -- we -- we can wrap up the review where it is, as it stands now, but I would have to say, it would be incomplete and that we hadn't, again, been able to -- to actually look through what the claimant's state about their work during that period. So it's -- it's essentially the same status as Y-12. We're trying to get it in a place where it's as complete as we can make it until we can get access to

some of the modules. For example, NOCTS really, is what's holding us up on that one.

DR. ROBERTS: Okay. Thank you for that update.

MEMBER BEACH: Rashaun, I wanted to --

DR. ROBERTS: Okay. So --

MEMBER BEACH: Rashaun, this is Josie.

DR. ROBERTS: Go ahead.

MEMBER BEACH: Sorry. I do agree with Pinellas, if we're ready for Pinellas. I think we may be ready for Metals and Control, if we could meet in their location, that might be an option.

DR. ROBERTS: And I'm sorry, what location is that?

MEMBER BEACH: They're in Attleboro, Massachusetts. We went there a couple of years -- oh, probably five years ago now. But I know the petitioners have been very active for Metals and Control, so I'd like that on the list if possible.

MR. RUTHERFORD: Josie, this is LaVon. The -- I have no idea what the paper that's going to come out from SC&A, so we're going to have to have time to review -- review that paper. I just want to bring that up because I --

MEMBER BEACH: Okay.

MR. RUTHERFORD: -- I wasn't aware of -- of any paper coming out from them.

MEMBER BEACH: Okay. Yeah, I thought we had talked about it, LaVon. But -- and I'm not sure how much time you'll need, so that's a good point. Okay. Thanks.

MEMBER ZIEMER: Wasn't the Attle -- the M&C meeting in Providence?

MEMBER BEACH: Oh, you know, you're right. It --we did have it at Providence, which is --

MEMBER ZIEMER: With the --

MEMBER BEACH: -- close. Yeah.

MEMBER ZIEMER: -- easy access.

MEMBER BEACH: Yes.

MEMBER ZIEMER: Would be -- it would be nice to have it there. That would certainly be -- and I think it doesn't get too snowed in, in the winter given it's a coastal town.

MEMBER BEACH: Yeah, that's a consideration for sure.

DR. ROBERTS: Any other nominees for where?

MEMBER LOCKEY: Do we have anything relating to Y-12? Oak Ridge wouldn't be too bad that time of year. I'd be a little concerned about Providence or Boston or the Northeast in December.

MEMBER BEACH: Yeah. That's not a bad idea.

MEMBER LOCKEY: Although anymore even Tennessee can be bad in that time of year. The snow falls are going further and further out.

MEMBER KOTELCHUCK: Right, right. And you're skipping us in the Northeast.

MEMBER LOCKEY: Right.

MEMBER KOTELCHUCK: Snow is -- we have less snow in New York these days --

MEMBER LOCKEY: Yeah.

MEMBER KOTELCHUCK: -- than we had when I was a kid.

CHAIR ANDERSON: Pinellas is a good choice for not having to worry about snow.

MEMBER KOTELCHUCK: Right, right.

MEMBER BEACH: Well, and even if we are at Pinellas, it's always a good time for public comment so -- and we haven't been there for many years.

MEMBER ZIEMER: Even if we're not ready to --

MEMBER BEACH: Okay. Agreed.

MEMBER ZIEMER: Even if we're not ready to take specific action on anything, update and -- and public input is always useful.

MEMBER KOTELCHUCK: Yes. Yes.

DR. ROBERTS: Okay. All right. So we're going to go for Pinellas unless someone has an objection to that?

MEMBER ZIEMER: So what -- what's the closest reasonable town to the plant as far as a --

DR. TAULBEE: Tampa.

MEMBER KOTELCHUCK: It's Tampa, Paul.

MEMBER ZIEMER: You think it's the best?

MEMBER CLAWSON: Yeah. Pinellas is just outside Tampa.

MEMBER KOTELCHUCK: Tampa/St. Pete.

DR. ROBERTS: Okay, great. Well, we are about a minute before break, so we can return to the meeting schedule tomorrow for the work session and cover the other business items under that. So,

Andy, are -- do you want people to get a break in right now?

CHAIR ANDERSON: Sure.

DR. ROBERTS: Okay. And we are set to come back at 3:45.

CHAIR ANDERSON: Okay. Have we -- have we let Loretta know that we're back?

MEMBER BEACH: Yeah, she's back. She's back.

CHAIR ANDERSON: Okay.

MEMBER VALERIO: I am back, --

MEMBER CLAWSON: I forgot about her.

MEMBER VALERIO: -- thank you.

DR. ROBERTS: Okay, great. All right. Well, okay, so 3:45, and I will take attendance at that time.

CHAIR ANDERSON: Okay.

(Whereupon, a break was taken from 3:15 p.m. until 3:45 p.m.)

DR. ROBERTS: Sorry for the delay. Let me go ahead and take a quick roll call starting with Anderson.

CHAIR ANDERSON: Present.

DR. ROBERTS: Well, let me back up, I'm sorry. Has the court reporter rejoined?

THE COURT REPORTER: I'm here.

DR. ROBERTS: Okay, thank you. Okay. Anderson, you're here. Beach?

MEMBER BEACH: I'm here.

DR. ROBERTS: Clawson?

MEMBER CLAWSON: I'm here.

DR. ROBERTS: Field?

MEMBER FIELD: Here.

DR. ROBERTS: Kotelchuck?

MEMBER KOTELCHUCK: Here.

DR. ROBERTS: Lockey?

MEMBER LOCKEY: Here.

DR. ROBERTS: Richardson? Okay. Roessler?

MEMBER ROESSLER: Here.

DR. ROBERTS: Schofield? Schofield? He's been having some audio difficulty today. Valerio are you back?

MEMBER VALERIO: Yes, I am.

DR. ROBERTS: And Ziemer? Ziemer? Okay. Let's circle back and see if Richardson is on. Schofield?

CHAIR ANDERSON: Rashaun, did you -- I saw -- I got an email from Phil that -- that he had voted, but he wasn't able to get on so that he voted yes. Did you see that?

DR. ROBERTS: I did see that, yeah.

CHAIR ANDERSON: Okay, good.

DR. ROBERTS: So let me just finish the roll call. So has Lock -- has Richardson joined or Schofield or Ziemer? Okay. Well, we do have a quorum, so I think that -- you know, that we can resume the meeting. And as Andy alluded to, there was a vote from Phil and he voted yes to the deny -- to deny the addition of the -- of the SEC for Sandia, and so the vote is anonymous (sic). And so, Andy over to

you.

DR. CARDARELLI: I think he's on mute.

DR. ROBERTS: Andy, are you there?

CHAIR ANDERSON: Oop, sorry, I was on mute. I'll turn it over to John.

DR. CARDARELLI: Oh, okay. Thank you, sir. Well, for the next I guess 30 --

MEMBER CLAWSON: John?

DR. CARDARELLI: Yes.

MEMBER CLAWSON: John, hold on one minute.

Rashaun, do I need to recuse myself in this?

DR. ROBERTS: I think probably just not for the discussion piece.

MEMBER CLAWSON: Okay. I'll just -- I'll just mute and just stay in the background, then.

DR. ROBERTS: Yes, that's fine.

MEMBER ZIEMER: Did you -- did you take roll call? I missed it if you did.

DR. ROBERTS: Yes, I did.

MEMBER ZIEMER: I'm here.

DR. ROBERTS: Okay.

MEMBER ZIEMER: This is Paul Ziemer.

DR. ROBERTS: Okay, great. I've got that noted now. Thank you.

DR. CARDARELLI: I'm assuming it's good to go right now,

correct?

DR. ROBERTS: Yes, --

CHAIR ANDERSON: Yes.

DR. ROBERTS: -- I think so.

Idaho National Laboratory SEC-00219 Update

DR. CARDARELLI: Okay. All right. Well, thanks, everybody, for this opportunity to present an update, which is really just a brief summary of where we are with the Idaho National Laboratory SEC 219. And then I'll do a quick follow-up on the progress that we're making for the SEC 224, which is Argonne National Lab West.

One of the things I just wanted to point out is, I'm getting brought up to speed on this. This was Megan Lobaugh's site, and she has moved on to greater things. Congratulations to her. And congratulations to me for assuming this new role. So I'll do my best to kind of bring us up to speed real quick and really want to --

(Whereupon, Mr. Schofield joined the meeting.)

DR. CARDARELLI: -- we want to focus on our current activities.

Okay, so the overview. I'm going to briefly talk about the petition information --

THE COURT REPORTER: Excuse me, no, no. Mr. Schofield needs to mute.

DR. ROBERTS: Phil, can you mute?

DR. CARDARELLI: Okay. So we'll do the petition information. I'll do a facility background and feasibility determination of how we -- I think Mr. Schofield still needs to be muted.

DR. ROBERTS: Phil if you can hear, you will need to mute your Zoom or mute the phone.

DR. CARDARELLI: I -- I will continue on. I will stop.

DR. ROBERTS: Okay. Phil, are you both on Zoom and the phone, because both would need to be muted.

MEMBER SCHOFIELD: Yeah, of course, the phone. I'm trying to get it to mute again.

DR. ROBERTS: Okay.

DR. CARDARELLI: Testing. Testing. It sounds like it's working. No feedback. Okay, let's move forward.

And then we'll go into the various tasks that are currently ongoing with this particular site and the SEC. Okay. This is just the petition information, I wanted to put a big picture of the graph just to remind folks. I know that you've all been exposed to this already and are very familiar with it, but the -- the key message here is this is a very large site. It has multiple individual areas within the reservation itself. And we'll be talking about a few of these as we go throughout this presentation.

But since the program started, there's been three SEC's that have been proposed that the Board has dealt with. SEC 172 ultimately did not qualify, and I won't go into any details on that. That's unnecessary history at this point. For SEC 219, which is really focused on the Chemical Processing Plant workers from 1963 to '74, we will discuss this and SEC 238, which, again, focuses on the Chemical Processing Plant who wore at least one film badge between

the time periods ‘75 and ‘80. And the subtlety of this is simply driven by the dosimetry monitoring practices at the site varied over time, which actually has resulted in these two separate SECs.

So SEC 219 was originally received in 2014. And they were wanting us to look at 1949 through 1970. Ultimately, the petition qualified for these time periods. And the evaluation report was sent to the Board back in 2015, and by 2017, the evaluation was completed with -- with three areas that were reserved; the test area North, the ARA, which I believe used to be the Army Research Area, but it's now, I think, the Auxiliary Research Area, and then the interim drum retrieval at the Burial Ground.

And to date, there's been no revisions to the class definition, which is presented on this particular slide. It's really -- I'm not going to read it -- read it word for word, but it's all the employees at the Idaho National Engineering Lab who were monitored at the Chemical Processing Plant at least one time using a film badge or TLD dosimeter from 1963 to ‘70. And I think that's an important note to make here. This is at one area in the entire reservation, it's not the -- all areas, it's just the Chemical Processing Plant. And that'll come up later as well.

In addition to that, you'll notice that Part B of this definition is any worker who worked at the entire reservation between 1970 to 1974. And that's because the monitoring practices and how they did monitoring changed in 1970 and then returned back to one site, one badge in 1975. So that's a subtlety. It's main -- mostly associated

with the Chemical Processing Plant except for the time periods in the early to mid-1970's.

And SEC 238, that petition was received in 2007. It's gone through its evaluation through 2017, and a new class definition was identified. And, again, it's those Chemical Processing Plant workers who were monitored at least one time, between 1975 and 1980. And, of course, all of the other boilerplate language associated with 250 workdays, and things of that nature apply, I'm simply just covering history at this point.

So site background and feasibility determination. The Chemical Processing Plant, you may see on this particular slide, I'm -- it's ICPP, right here (indicating). It's this small area there (indicating),

but I just thought I'd bring that out. The reservation itself has six very large areas that we will focus on as part of this overall picture. I'm not going to -- Test Area North, the Idaho Chemical Processing Plant, the Test Area North, which is up in this area here (indicating), some very miscellaneous reactor areas, central facilities will come up later in our discussion so I wanted to bring that to your attention here in this blue box. And, of course, the Burial Grounds, which is the lower left-hand part of this particular image.

I think this is the most important slide. It kind of summarizes everything in one fell swoop, it identifies the six areas that we just talked about, and the years of which we believe and which has been determined through the feasibility studies that -- where we can do dose reconstructions and where we feel that we cannot.

As you can see, in the Chemical Processing Plant row, it started in 1963, those boxes are red with the "I" indicator, which means it's infeasible, that is where the SEC lies all the way up through 1974. This did not extend out through 1990 at the time. Where you see the light green, which is the "C," that's the dose reconstructions that we believe are feasible by use of a co-exposure worker model. And then, of course, as you see on, it's not necessary because that would be outside the areas where the operations were ongoing for the other particular areas. So this is a good visual of where we are working on the co-exposure models, where we can do dosimetry, and where we have an SEC.

So what are our current tasks? Three of them, basically, are classified here. One is looking at the Idaho and the Argonne National Lab West reactor evaluations, and I'll go in detail on that. The second one is the Burial Ground, or which is now called the Radioactive Waste Management Complex. And the third one is the co-exposure models that we just mentioned.

So looking at the Idaho National Lab reactor evaluations in 2015 and 2016, we did the -- the SEC review -- the SEC, I'm sorry. SC&A performed preliminary assessments as to whether the OTIB-54 approach -- and that was presented back in July of 2020. And just for folks to remember, this was looking at the particular reactor burn-ups and estimating what the potential exposures would be by two indicator radionuclides, that would be cesium 137 for potential gamma exposures and strontium 90 with an indicator for beta

exposures or electron exposures. And we were trying to estimate potential exposures based on that approach. It's a very complex approach. Bob Burns presented that, and I would refer folks to go read that transcript if they want very -- more details on that particular OTIB.

So this site was of primary interest because Idaho had 52 unique reactors, and some were actually tested all the way to the point of destruction. So reactors are categorized by NIOSH and SCA as high, medium, and low priority based on the potential for underestimating the worker doses. So we really want to know what type of reactor. We cannot evaluate all 52, but we classified the 52 into groups. And the high-potential groups are the ones where we are most concerned that we would underestimate a worker's exposure. So we evaluate that category and determine whether or not the approach and OTIB-54 adequately bounds those workers' exposure.

So this -- this particular slide defines OTIB-54 and the radionuclides specific intakes for mixed fission products -- mixed fission and activation products --¬that's that MFAP -- for use and dose reconstruction. The assignment of the radionuclide dose intakes were based on those indicator radionuclides I just mentioned, strontium 90 for gross beta, and cesium 137 for gross gamma. These would typically be gross counts associated with the bioassay data.

So in looking at these reactor evaluations, we developed Report-99, which, again, was EBR-II and BORAX. These were two that were selected to look at with regard to whether or not they are at

high risk of underestimating worker exposures. There were very -- there were a lot of reasons why we went into that, and I give the hyperlinks so if folks want to know why EBR-II and BORAX were chosen, I would refer them to those particular documents that we see there.

It's important to note SC&A also concurred with this selection in early January 2021. So the conclusion of that assessment and Report-99 was that this approach in OTIB-54 did bound those burn-up cycles and the reactor, the high-risk reactors, for underestimated worker exposures. They were bounded by that approach, which is good news. Which means all other medium and low-type reactors would also be bounded.

Then we looked at report -- developing Report-100, which looked at using the cesium 137 intakes based upon a whole-body count rather than a bioassay or a urine data.

And can we use the whole-body count data that would bound the workers' dose at Idaho National Engineering Lab and Argonne National Lass --Labs. The purpose of the report is to present the results from an evaluation of the whole-body count detection capabilities against the mixed fission and activation products calculated using the OTIB-54 methodology for reactor -- different reactor cases and the MTR Phoenix plutonium core case. So that report, Report-100, is currently under review by our group.

Moving on to item number two of the three, the Burial Grounds, or Radioactive Waste Management Complex. So during the 2020

meeting with the work group back in July, the tele -- questions about the airborne concentrations of transuranic radionuclides were -- were raised. And were -- we were questioning whether or not workers may have been exposed. So data requests was initiated to try to get a better understanding of what kind of environmental monitoring data would be helpful beyond just maybe worker dosimetry or bioassay data, because we know that they did do air monitoring out at the burial site at various times throughout history there.

So we did a search on the electronic data management system, the EDMS, and used various keywords, but the results came back with tens of thousands of hits, which made things a little bit more challenging for us to process. So -- by the way, that request was made to the facility. They conducted the search and gave the results back. That effort resulted in so many documents that we asked can we have our own access to this database so we can do our own refinement of the search to save time. That effort turned out to be not as simple and as efficient as we had hoped.

In this particular slide, you can see that since July of 2020, all the way up, frankly, to the present, we are still having some challenges getting access to EDMS. There are small successes. I think we have one or two folks who now have access to it. This request was also made for the SC&A folks, the work group members, I believe, and, of course, NIOSH. I mean, I'm sorry, NIOSH Oak Ridge contractors supporting us and SC&A members.

I'm actually going through the training right now to get access

since I'm now taking over the site. So I don't have this access yet, but I'm getting much closer. So this has been a challenge, which has delayed our effort to really, kind of, assess what's going on in the Burial Grounds over time. The last item that I wanted to at least let you know we're working on is the co-exposure models.

So as you saw on the previous slides, there are six co-exposure models that are currently in development. This helps us estimate doses to workers who were likely exposed, but were not monitored. And it was largely -- some of these were based upon the mixed fission products and based on the fact that there was a change in the monitoring protocols over time, which allowed us to use new sets of data, like the in-vivo counting came into play in 1967.

So we developed guidelines on these co-exposure models, and as the Board is very familiar, the Savannah River site and -- as well as Idaho were identified as test cases to demonstrate the methodology of the co-exposure models. I believe that that implementation guide has since been approved, and we have now been moving forward to complete these co-exposure models that I mentioned earlier. So there's a major effort to create the in-vitro, which -- which would be the bioassay data. And then the in-vivo, which would be the whole-body counting data from Idaho, up to 1999. And we're doing this through hard copy, as well as electronic records from the BADGER database.

These are the six co-exposure models that are currently under development. The beta base depend -- gross beta, that is, result

from urine results from 1953 to 1960. We're using the cesium 137 index as a whole-body count from '61 to 1995. We're looking at total uranium in urine for all facilities from '53 to 1962. And then total uranium in urine for the SMC at the Test Area North from 1987 and 1995. And the isotopic uranium in urine and isotopic plutonium in urine from 1981 to 1995, respectively.

So there's a lot of active work going on, on these various models. So initially, the co-exposure document was an OTIB, or a technical information bulletin, but we are and have been converting it to a technical basis chapter. This is a major shift since the implementation guide has been kind of accepted. We're moving this co-exposure concept into a new chapter in our technical basis documents. That will be now chapter seven, which is internal dosimetry. And in the future, you will see a chapter eight if there's a co-exposure model associated with external radiation. This chapter seven of these co-exposure models for internal dosimetry only is currently going under internal review at NIOSH.

So that was a brief overview of where we are on the Idaho National Engineering Lab, and I'm happy to open questions, and I will also let the folks know that the two key players on this are Brian Gleckler from Oak Ridge and Mitch Findley from Oak Ridge as well -- Oak Ridge Associated Universities.

Any questions?

MEMBER BEACH: Yeah. Hi, John, it's Josie here. Hey, you -- back on slide 18 you talked about the EDMS system. And you said NI

-- SC&A has access to that; is that correct?

DR. CARDARELLI: Yes. I know, when Megan was on her maternity leave, I acted as a backup to her and was trying to put the -- I guess, the balls in motion to get them access to it. And I will ask Bob or --

MR. BARTON: Hello.

DR. CARDARELLI: -- I think it was Steve, to speak up here.

MR. BARTON: Well, this is -- this is Bob Barton, John's correct. I mean, we've been trying, and as he said, it's sort of been a struggle. I think a number of our team members who would be directly related to this -- these INL queries, we're sort of waiting to see what's produced before really pushing. But it has been a bit of a struggle to go through all the trainings and get our S numbers and -- as John described. But yes, then we've been working with NIOSH and the site, so that, hopefully, we're ready when these -- these work products fall.

MEMBER BEACH: Okay. That was my concern that you would -- we would be waiting for you guys to get access. So it sounds like you're on top of it. Thank you.

MR. BARTON: Thank you.

MEMBER ROESSLER: John, I have a question. This is Gen Roessler.

DR. CARDARELLI: Hello, Gen.

MEMBER ROESSLER: And you weren't with the group when we did this, but I'm on this work group. And -- and back a few years, we

did a lot of interviews with workers from the site, a lot of information that we got from those interviews. And at one time, I think we had a work group meeting where we discussed the interviews, and I was wondering if anything further was going to come out of that.

DR. CARDARELLI: I do remember this, because it was brought up in the meeting in July of 2020, where there was a discussion about the practices at the Burial Grounds. And I believe you may have asked the question, you know, are we looking at all of what the commenters were having with regard to the Burial Grounds. And we -- we actually did go -- and there is a PDF document. I was looking for it to bring it up on the screen, but I don't have it handy. I may do it between meetings.

But there was like almost 30 different interviews done. And we identified those workers who mentioned anything about the Burial Ground so that the Board could actually remind themselves okay, what did this person say about it. And I remember the discussion with our OGC counselor had been about whether or not -- are we relying too much on one or two individuals or are we doing an equitable distribution and looking at all of the interviewee's responses on Burial Grounds. So that document does -- is there, and I -- if I find it, I will bring it up on the screen.

MEMBER ROESSLER: Okay.

DR. CARDARELLI: Actually, I think I found it. Hold on.

MEMBER ROESSLER: You're on the ball.

DR. TAULBEE: John, I'm not sure you can share that right there

because it's --

DR. CARDARELLI: Okay, --

DR. TAULBEE: -- got names.

DR. CARDARELLI: -- sorry. I will take that off. Sorry, thanks Tim.

MEMBER BEACH: Is that something you can put in the Board files for INL so that we can have access to it?

DR. CARDARELLI: I --

DR. TAULBEE: Yes, that is something we can put --

MEMBER BEACH: I mean, we probably --

DR. TAULBEE: -- (indiscernible), that's correct.

MEMBER BEACH: -- have some of that but since -- yeah, since things aren't available. Yeah. That would be great, thank you.

MEMBER ROESSLER: Or if you can't, I maybe don't have access to the Board files, but could it be sent to me on my CDC email address?

DR. CARDARELLI: I don't see a reason why not. It does have --

DR. TAULBEE: Yes, we should be able to do that. DR. CARDARELLI: -- personal identifying information.

MEMBER ROESSLER: I may have it, but it seems like that was a long time ago, and I just can't remember what we concluded from it.

DR. TAULBEE: Yes. I believe, DR. Roessler, that we can provide that to your CDC account.

MEMBER ROESSLER: Okay. Thanks, Tim.

DR. CARDARELLI: Any other questions? Okay.

MEMBER KOTELCHUCK: I'm Dave Kotelchuck. I don't have a question, but thank you, that was a very clear report, and we focus so much on the Chemical Processing Plant that it's helpful to have of the larger picture. And I think you did a -- did a good job, if I may say.

DR. CARDARELLI: Thank you, sir. So shall I move on to Argonne National Lab?

MEMBER BEACH: Yes.

Argonne National Laboratory West SEC-00224 Update

DR. CARDARELLI: Okay. So Argonne National Lab even though it's a separate SEC, it -- it has facilities that are on the Idaho National Engineering Lab's reservation, as we talked about, in the past presentation. Same overview format is going to be presented here, petition information, the background and the feasibility of -- that justified the SEC, and what are the current tasks that we are currently working on.

Again, here's the picture of the reservation, and there are two locations, the Argonne National Lab on the west -- or on the eastern side of the reservation, and then there's one very close to the burial site, the -- I think that's the EBR-II or I reactor.

Historically, there was another petition that was requested, and I think it was 243. It did not qualify, and if memory serves from my reading on this, it basically was requested to be changed by the petitioner, but I'm not 100 percent sure, so I shouldn't speak to that. But it did not qualify.

But SEC petition 224 did qualify, and it was based on -- the last from 2005 and it wanted a separate evaluation. So we received it in 2014, and they were looking at the inadequate monitoring for plutonium, neptunium, and fission products during that time period of January '49 -- January 1, 1949 through 1995.

The petition did qualify for a class in 2015, and the dates were slightly changed to April 1st -- or I'm sorry, April 10, 1951 through December 31, 1979 based upon the inadequate monitoring. An evaluation report was sent to the Board in 2016. So this is the class definition, which basically says all workers and their contractors and subcontractors who worked at Argonne, from 1951, roughly, through 1957 for a number of workdays aggregated at least 250 days, so this is the generic definition that's out there. The dates are a little bit different here, and I'm going to have to verify that. So I'm going to ask folks to -- on the phone here to double-check, because I was -¬I had two different dates associated with that SEC.

DR. TAULBEE: This is Tim. I can speak to that, John.

DR. CARDARELLI: Okay.

DR. TAULBEE: The first one is the class that we identified to -- to evaluate. And the second slide that you have there is the class that we recommended to the Board be designated as an SEC, and that was approved by the Board for that April 1951 through December 31, 1957. The remainder of the time period, we've determined that the site we -- that dose reconstruction is feasible for Argonne National Laboratory West.

DR. TAULBEE: Thank you, Tim.

DR. CARDARELLI: Okay. So slight background of 1949 through 2005. It was operated by the University of Chicago and eventually came under the operations with -- at the Idaho National Engineering Lab in 2005 and have remained there. I think it's to -- collectively named the Materials and Fuels Complex today. And again, the purpose for this was similar to Idaho, which was reactor testing, including breeder reactor theory and experimental measurements.

So this is the location. It has the two primary areas I mentioned earlier, one on the east and one on the west side of the reservation. And there are at least four separate type of breeder -- or reactors in EBR-I complex. And the EBR-I complex, if we go -- I'm trying to go back a slide -¬is the area that you see here (indicating) on the lower left-hand side closest to the Burial Grounds, and the EBR-II complex is the one on the right-hand side. So EBR-I complex has the breeder reactors, your power reactor, boiling water reactor, and Argonne fast-source reactors. These are all part of that OTIB-54 analysis I mentioned earlier as well.

And the EBR-II complex, on the separate side of the reservation, has up to nine other types of activities, not all reactors, like the Fuel Cycle Facility, storage buildings, Inspection Testing Facility, more auxiliary-type activities associated with their work.

So the feasibility summary that was done looked at whether or not we can do the dose reconstructions, and you can see here for uranium, plutonium, thorium, and mixed fission products, which was

the basis for the request and what Tim clarified, we determined, and the Board agreed, that you could not do dose reconstructions from 1951 April 10 to December 31, 1957, but we could do dose reconstructions from 1958 up through 1979, which was, I believe, the time period that was within the request.

For external exposures, the same type of decisions has been made for the same dates. For beta and gamma and neutron exposures, we could not reconstruct those doses. But after 1950 -- including 1958 going forward, we could. And certainly with their medical occupational programs at the site, we can -- we can estimate the medical X-ray contribution to the workers' exposures if they were involved in that process.

So what are we actively doing on this current task? It's a big issue. And this is what we talked about earlier today, which was using general area sampling data to assess unmonitored actinide exposures. And that's really exposures to the uranium, neptunium, plutonium, americium, curium, and all those other lovely isotopes that are very challenging and that we deal with for whole-body counting and bioassay data.

So the SEC 224 evaluation determined that there was inactive -- inadequate bioassays for some workers that were potentially exposed to these isotopes, and they were present -- present in areas with mixed fission products where they were present. So the potential internal exposures could be accounted for by assessing the unmonitored intakes based upon the available general area air

sampling data.

This is a little bit different. So now, instead of characterizing exposures based upon a person's bioassay or whole-body count data from --another way we can account for potential exposures is looking at other forms of characterization. General area sampling is one of those other ways that we could help bound one's exposure using this type of information.

Other alternatives rather than individual data could be things like knowledge of process data and things of that nature. So this is consistent with options available to NIOSH to help bound certain exposures. So workers at the EBR-I complex, they could have been exposed to uranium without the mixed fission products present, and workers at EBR-II complex could have been exposed to thorium, uranium, and plutonium without the mixed fission products present. So what other ways could we try to account for that? And that's where the general area sampling would be helpful to this.

So during the review, in the evaluation report, concerns were raised about the proposed method for accounting for the unmonitored actinide intakes using this sample data. So the concerns raised by SC&A were very reasonable, and they were about whether or not can we use general area air samplers with low airflow. Can one use the air sampling that might be diluted because they didn't operate 24/7 or they only are operated during operational periods, and also operated during non-operational periods, which would tend to dilute or reduce the overall exposure potential if one were to make assumptions that

you are in a consistent, airborne environment.

The general lack of parity between the air concentrations measured by the general air samplers and the lapel samplers, which is the breathing zone samplers, were not always consistent, and that -- that's reasonable in many aspects from the industrial hygiene world. And a lapel sampler would be something that we would consider to be a personal sample to the worker, the general area could be something that is in a room or within the general facility -- or vicinity of several workers.

And usually, in an ideal world, we would like the two to be correlated with the air sampling information. In the real world, that does not happen and there are justifiable reasons for it. And that was a general concern that was raised, so we began to ask ourselves how do we deal with that.

So we started working on Report-89, which did an evaluation of the issues of the general area air sampling for Argonne. And during the development of this, where we were trying to understand it, it was determined that the general topical report of the concentration ratios between the breathing zone samples, which are the lapel samples, and the general area air samples in small new -- in small rooms, or small areas, was needed. And what I mean by small areas in the report, it's generally room sizes between 200 square feet to maybe 1,000 square feet, generally.

It's -- so that's the studies that we looked at, kind of, ranged within that area. These are fairly small rooms. So work was

suspended and then we start asking ourselves, what kind of correction to the general area air concentration needs to be made, if any, in a small work room based upon -- for a breathing zone. So if they don't correlate, but we have the general area air concentration and you're in a small room, what would likely be your breathing zone.

Do we just apply the general area or do we correct it to make it something a little bit more personal to the breathing zone. That's kind of the concept of why we postponed Report-89 and then pursued Report-97, which is to understand this ratio.

So it's the value of a -- the relationship between the general area and the breathing zone concentrations for the small work group, and determine if adjustments to those general area of concentrations are necessary to make them equivalent to the breathing zone air concentrations in a small work room. Why; because we would like individual-type assessments for dose reconstruction rather than making wider adjustments based upon a general area. So if we can improve it, we will. So the air sampling data from five air sample studies were evaluated in great detail and a study that is -- the PDF of that is provided here.

So the use of the general air sampling data to assess the unmonitored actinide exposures Report-97 is -- is really intended for the small rooms, but we really hope for this method to be a complex-wide report. So although we've developed it under the work associated with the Argonne National Lab SEC, the scientific method and principles behind it are something that we hope to extend to the

entire DOE complex so that if we come into similar situations, that's a method that we can apply now if general area samples are provided. Currently, the SC&A is reviewing this report, which they just received back in February of this year.

So in the spring of 2021, after we've developed Report-97, we resumed our work report on 89, and we've completed it. It was issued earlier this year in April, and we hope to present that report to the INL work group during our next meeting. And the key part is the acceptance of that report really depends on the acceptance of the Report-97, which is currently in review by SC&A. So these two reports are heavily dependent. So if we have problems with one, we're going to have problems with the other, and we'll have to work those issues moving forward.

And that completes the brief summary for Argonne National Lab. Are there any questions?

MEMBER VALERIO: This is the Loretta. I have a question.

DR. CARDARELLI: Sure.

MEMBER VALERIO: Can you go back, I believe it was slide seven?

DR. CARDARELLI: Okay. At slide seven, so let me --there's slide eight.

MEMBER VALERIO: No, it was seven.

DR. CARDARELLI: Okay. Maybe --

MEMBER VALERIO: Where the map is.

DR. CARDARELLI: Oh, where the map is, okay.

MEMBER VALERIO: Yes, sorry. So the -- the area that's circled in red down on the left-hand corner, that's ANL West. That's an ANL West facility, but it's -- am I understanding this correctly, it's close to the INL burial site?

DR. CARDARELLI: Yes. The RWMC is the Radioactive Waste Management Center, and it's also historically been called the Burial Grounds.

MEMBER VALERIO: Okay. So did the -- did that facility utilize that Burial Ground as well as INL?

DR. CARDARELLI: I'm not sure. I will rely on Mitch Findley to step in here.

DR. TAULBEE: This is Tim, I -- I can answer that as well.

DR. CARDARELLI: Okay.

DR. TAULBEE: Yes, ANL did send waste to the RWMC complex. But I mean, there wasn't any operation of ANL West workers at RWMC. They --they did send waste there, but there was not any of their workers operating down at the RWMC.

MEMBER VALERIO: Okay. That's what I was looking to clarify. Thank you, Tim.

DR. CARDARELLI: Thanks, Tim. Other comments? Questions? Okay, Rashaun, I -- I will turn this back over to you.

DR. ROBERTS: Thank you. So Andy, we are about 30 minutes out from the public comment session. I want to just stop and see what you want to do. I can move forward with scheduling meeting dates --

MEMBER BEACH: Can we --

DR. ROBERTS: -- if -- if you want to do that. What's your preference?

MEMBER BEACH: Can I interrupt because I have a question on -- on the last topic.

CHAIR ANDERSON: Sure, go ahead.

MEMBER BEACH: And I didn't --

DR. ROBERTS: Go ahead.

MEMBER BEACH: Henry, I didn't know if SC&A was going to chime in or not. Can -- can we get an update on the reports that John mentioned? I believe it was the 89 and what the time frame of -¬of that is for SC&A to be completed with that?

MR. BARTON: Yeah, hi, Josie. This is --

MEMBER BEACH: Hi, --

MR. BARTON: -- Bob --

MEMBER BEACH: -- thanks, Bob.

MR. BARTON: -- -- Barton.

MEMBER BEACH: Sorry.

MR. BARTON: No, no problem at all. We definitely have report 97 in our shop. We have our subject-matter expert working on it. Like most things in the past year or two, there were some hurdles to get access to the appropriate computers and clearances and everything, but we are progressing with that. I don't know if Kathy Behling's on the line, if there's any -- anything else to add to that. But I do know that work is progressing, and I don't think we have any

necessarily big hindrances left. I know we have certain document requests in to NIOSH, but we're working through that. So we have been tasked since February, and we are working through it. But like I said, to get our subject-matter expert, Dr. Saed Veen (ph), the appropriate access and controls to the -- the Edge computing platform took a little while.

MEMBER BEACH: Okay.

MR. BARTON: These are just things that we couldn't control.

MS. BEHLING: Yeah, and this is Kathy Behling. I have nothing to add.

MEMBER BEACH: So no actual time frame, but soon?

MR. BARTON: Well, I think we're hoping for end of September. I don't think people's --

MEMBER BEACH: Okay. That's -- that's great, thank you.

CHAIR ANDERSON: Okay. Let's finish off the dates.

Board Work Session

DR. ROBERTS: Okay. So I think we -- we came to a conclusion about where to have the December 7th and 8th meeting. I mentioned that we have a teleconference scheduled for October 20th. Beyond the face-to-face in December, I have us down for a teleconference February 15th of 2023. I have a meeting face-to-face, and I think we've already determined these dates, for April 19th to the 20, 2023. And because we want to stay about a year planned out for these meetings, I just need the dates for the teleconference that would follow the April face-to-face meeting next year in June. And

that meeting would be a teleconference.

So if you guys have your calendars ready, that will help us select a date. In fact, let me open my calendar. So typically, we do a Wednesday or Thursday. So I assume people want to keep with that general pattern. Let's see. About mid-month could work, the 14th or the 15th, if that's doable?

CHAIR ANDERSON: Well, it's good for me.

MS. BEHLING: 14th is good for me or the 15th.

MEMBER CLAWSON: What date? I'm sorry, I didn't get the month.

DR. ROBERTS: This would be June of 2023, the 14th or the 15th for a teleconference.

MEMBER LOCKEY: Either day is good for Jim Lockey.

MEMBER ZIEMER: Either okay for Ziemer. MEMBER CLAWSON: I'm good with it. This is Brad.

MEMBER RICHARDSON: I think that's fine for me, for Richardson.

DR. ROBERTS: Okay. Does anyone --

UNIDENTIFIED SPEAKER: (Indiscernible) --

DR. ROBERTS: I'm sorry?

MEMBER VALERIO: This is Loretta, I'm good with either date.

DR. ROBERTS: Is that -- is anyone not available for, say, the 14th?

CHAIR ANDERSON: What's the time? Is it usual morning?

MEMBER BEACH: Yeah.

DR. ROBERTS: Yeah, usually, 11:00 a.m. Eastern. Okay. Well, assuming that will work, we will tentatively schedule for June 14th starting roughly at 11:00 a.m. Eastern for the teleconference.

So to get us to a complete year out, we have to identify the dates in August of 2023. We could roughly do the same timing, go for mid-month, if that's workable for people, it could also be early or later. If we were to do it about mid-month, that would be August 16th and 17th.

MEMBER ROESSLER: That works for me. DR. ROBERTS: Okay.

MEMBER ZIEMER: Okay for me, Ziemer.

UNIDENTIFIED SPEAKER: (Indiscernible.) MEMBER BEACH: Okay with me.

CHAIR ANDERSON: I got a fishing trip with Brad then, so I suppose that's when we're going to --

MEMBER BEACH: We'll just go to Idaho for you guys.

MEMBER VALERIO: This is Loretta. Those work --those dates work for me as well.

DR. ROBERTS: Okay, excellent, excellent. Anyone for whom that doesn't work well? Okay. Then I think we got it. Let me just make sure I got it written down. Excellent. So I think we are set for that.

Let's see. I wanted to check in -- I know Phil has been having some issues with speaking today. But the one -- let me check in with him because I think, you know, there's an announcement that he would like to make.

Phil, are you able to communicate? No? No. Okay, guess not. We also have an opportunity to hear from him tomorrow at the Board work session.

At any rate, that's really all I have for now. Andy, if you want to give people another break, with people getting here about five minutes before 5:00, will that work?

CHAIR ANDERSON: Sure, or --

MEMBER BEACH: Yeah.

CHAIR ANDERSON: -- we could almost finish out our work session now. Okay. No, let's -- let's just take a break till 5:00 -- five to 5:00. Okay, we stand adjourned until five to 5:00.

(Whereupon, a break was taken from 4:39 p.m. until 4:55 p.m.)

DR. ROBERTS: Okay. So it looks like we're a couple of minutes of -- and Andy, I was doing the last-minute check to see if I had gotten any more people who wanted to -- who said that they'd like to comment aside -- aside from the one, and I didn't see any. But let me go ahead and do the roll call. So starting with you, Andy?

CHAIR ANDERSON: Present.

DR. ROBERTS: Beach?

MEMBER BEACH: I'm here.

DR. ROBERTS: Clawson?

MEMBER CLAWSON: Here.

DR. ROBERTS: Field?

MEMBER FIELD: Present.

DR. ROBERTS: Kotelchuck?

MEMBER KOTELCHUCK: Here.

DR. ROBERTS: Lockey? Okay. I do not hear Lockey.

Richardson? Okay. Roessler? Roessler?

MEMBER ROESSLER: (Gesturing.)

CHAIR ANDERSON: You're on -- on mute, Gen.

MEMBER LOCKEY: Jim Lockey's here.

DR. ROBERTS: Oh, okay, great. Thanks, Jim. Richardson, did you join? Roessler? Yeah, may --

CHAIR ANDERSON: Rashaun, Roessler is here, I -- I just think she's not unmuting. She was on the screen.

DR. ROBERTS: Yeah, I thought I heard a squeaking. Okay. I think she's trying to indicate that. Is Schofield here? Okay. Valerio?

MEMBER VALERIO: I'm here.

DR. ROBERTS: And Ziemer? Paul, are you there? All right. Well, it's 5:00 p.m. Eastern, and we do have a quorum.

So Andy, let me hand it over to you for the public comment session.

Public Comment Session

CHAIR ANDERSON: Okay. We're open for public comments. I think we had several. Denise DeGarmo. And I just want to remind -- I don't know how many others may wish to speak -- that this is not a question and answer back and forth, that you make a statement that you then share with us and if you have written material, just send it on to Rashaun, it'll be part of the record. But our job is to listen and respond amongst ourselves at a later date. Denise, I don't -- is Denise on?

MS. DEGARMO: I am on. Can you hear me okay?

CHAIR ANDERSON: Now I can hear you. Yes, go ahead.

MS. DEGARMO: Okay. Good afternoon, everybody. And thank you, again, for the opportunity to make a quick statement on behalf of the Pinellas Plant SEC petition, Petition No. 256. As you already know, my name is DR. Denise DeGarmo, and I am the author and authorized petition representative. It is my understanding that there has not been much headway made on this petition as the Board is still waiting for the results of a review being conducted by SC&A. While we're in this state of pause, if you will, the petitioners want you to know that we're continuing to work diligently within imposed restrictions to find information and data relevant for your consideration.

On behalf of the petitioners, I wanted to remind you once again, that you made a commitment to visit Pinellas in the near future, and we do hope that you will honor that commitment, because the

petitioners and former workers really look forward to your visit. And we're more than happy to help with any arrangements that you might find necessary. We would also like to request a formal response from the Board regarding this matter. Thank you for your time and consideration. We appreciate all that you are doing on behalf of the workers. And I look forward to receiving your response. Thank you.

CHAIR ANDERSON: Okay. Are there any other individuals who wish to make comments? I see a number of phone numbers, but I assume those are people listening or others. So if you're trying to speak, be sure you're no longer muted.

So Rashaun, I'm not sure, I think that may be the only comment for today.

DR. ROBERTS: Okay, that's perfectly fine.

CHAIR ANDERSON: Thank you, Denise for your comments.

MS. DEGARMO: And thank you for allow --

MS. HAND: Can you hear me? Hello.

CHAIR ANDERSON: Hello.

MS. HAND: Hello, can you hear me?

CHAIR ANDERSON: Yes.

MS. HAND: Okay, this is Donna Hand.

CHAIR ANDERSON: Okay, Donna. Yes, go ahead.

MS. HAND: Thank you -- thank you very much.

And, again, I have issues with not only the Pinellas Plant, but issues to where I sent in a email to the Board, but it's Grady Calhoun that addresses it. And he -- the issues that I have is for the Board's

duty to look at. And this is twice that this has happened that Grady Calhoun or Stu Hitafield (ph) answered for the Board whenever it was the Board that the issues were brought to. And I wanted the Board as a whole Board to look into it and address. Such as the metal tripeptides dose, as well as the skin absorption dose has not being put into the internal dose calculation.

The internal dose is supposed to have the inhalation, ingestion, and -- and transporter absorption. And there is no -- 50 percent of the inhalation is the skin absorption. And that's not being addressed at all in any of the claimants that I have no matter where they worked at.

They also have with the metal tripeptide dose, that's a longer -- you know, in the lungs before it goes into the different organs. And so why aren't you using the respiratory, gastrointestinal, and the transport or blood, when you're calculating the metal tripeptide dose to that specific organ?

In that -- you know, so, again, you have not addressed any of the neutron doses to the neutron workers. And you admit in their SEC evaluation, that there was plutonium bioassays, but yet none of the workers got plutonium, you know, calculations. And so there's -- there's the big issues that I have been trying to get to the Board, but somehow it has stopped and not getting to the Board, and it's getting you addressed by NIOSH. So I appreciate if you have a separate website or email that we can send things to that'll go to the Board. Thank you.

UNIDENTIFIED SPEAKER: Donna Hand.

CHAIR ANDERSON: Okay. Donna, you need to know that all the materials that you send go to Rashaun and will get distributed to the Board and will then be discussed with the various work groups along with the other, but it's still very early in the renewed Pinellas site. But I thank you for your comments.

Rashaun, do you have anything further?

DR. ROBERTS: No, nothing further -- nothing further from me.

CHAIR ANDERSON: Any other comments people have? Any other public comments? If not, we'll adjourn for today and get back together tomorrow at 1:00 p.m. It's going to be a relatively short afternoon session, as we've covered quite a bit of the Board work. Thanks, everybody.

(Whereupon, the meeting was adjourned at 5:07 p.m. EDT.)