Centers for Disease Control
National Institute for Occupational Safety and Health
Advisory Board on Radiation and Worker Health
Tuesday, December 8, 2020

The Work Group convened telephonically at 1:15 p.m. Eastern Time, Rashun Roberts, presiding.

Present:

Rashaun Roberts, Designated Federal Official
Henry Anderson, Member
Josie Beach, Member
Bradley P. Clawson, Member
R. William Field, Member
David Kotelchuck, Member
James E. Lockey, Member
David B. Richardson, Member
Genevieve S. Roessler, Member
Phillip Schofield, Member
Loretta R. Valerio, Member
Paul L. Ziemer, Member

Registered And/Or Public Comment Participants:

Adams, Nancy, NIOSH Contractor
Barrett, Andy, Savannah River Site
Barrie, Terrie, ANWAG
Barton, Bob, SC&A
Blaze, D'lanie, Petitioner
Buchanan, Ron, SC&A
Burgos, Zaida, NIOSH
Calhoun, Grady, NIOSH ORAU
Cardarelli, John, NIOSH ORAU
Crawford, Chris, DOL
Davy, Brad, DOE
Fitzgerald, Joe, SC&A
Frowiss, Albert, Petitioner
Gogliotti, Rose, SC&A
Gorden, Milton, SC&A
Halsey, Roger, ORAU Team
Harrison-maples, Monica, ORAU Team
Hicks, Stephen, Petitioner
Hughes, Lara, DCAS
Lewis, Greg, DOE
Naylor, Jenny, HHS OGC
Nelson, Chuck, NIOSH ORAU
Rutherford, Lavon, NIOSH ORAU
Sisko, Jeannie
Taulbee, Tim, NIOSH ORAU
Vinson, Kathleen

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Proceedings

(1:17 p.m.)

Welcome

Dr. Roberts: So it's about 1:17 p.m., Eastern Time, time to officially open this meeting. Good afternoon and welcome, everyone. I'm Rashaun Roberts. I'm the designated federal official for the Advisory Board on Radiation and Worker Health. And I'd like to welcome you to Board Meeting 137.

So let me get through some preliminaries for this meeting. So like the Board's meeting in August, this is a full Board meeting that was supposed to have occurred face-to-face. But due to concerns related to COVID-19, of course, it's being done virtually.

Today is the first half-day of this virtual meeting. And tomorrow will be its second and final half-day. Like today, tomorrow's session is scheduled to start approximately at 1:15 p.m., Eastern Standard Time.

All of the materials for both days of this meeting, the meeting agenda, presentations, and other documents are posted on the NIOSH website for this program under schedule of meetings for December 2020.

If you'll be participating both days by telephone only, you can go to the website and read all of the materials. You can also follow along with the presentations. The materials that are posted were provided to the Board members and to staff prior to the meeting.

If you look at the agenda on the website, you'll see there's a fair bit to cover. So there's at least one break built into the agenda for today. At the top of the agenda, there is a Skype link which will enable you to watch the presentations through Skype. But

I do want to advise you that you'll only be able to speak to the group and to hear the presentations through your telephone line.

And speaking of telephone lines, in order to keep things running smoothly, and so that everyone speaking can be clearly understood, I ask that each of you please mute your phone, of course, unless you're speaking.

If you don't have a mute button, press *6 to mute. If you need to take yourself off --

(Simultaneous speaking.)

Dr. Roberts: Okay, here's a case in point. So make sure that your phone is on mute. If no mute button, use *6 to mute, *6 to take yourself off mute. And periodically, just check your phone to make sure that somehow you haven't come off mute. Because that sometimes happens.

Also, because we'll be unable to see each other for this meeting, please identify yourself before your comments or questions.

Let me also mention that we have a public comment session that comes at the end of the day today, and it will be between 5:30, it will start at 5:30, Eastern Time. It's scheduled to run until 6:30.

So I would encourage people though to be ready at 5:30, Eastern for public comments. Because at 5:30, we're going to go right to the public comments. And if we run through all of the public comments at the time, we will end. So it may be before 6:30.

We won't conclude before 5:30, but we could conclude at any point after that once everyone in the public who would like to comment has done so. So please join us at the beginning of the public

comment session, again at 5:30, so that you're assured to have your opportunity to speak.

So now we need to address conflict of interest for the Board. We only have one agenda item on today's agenda that relates to a conflict for one member. And that's for the Y-12 Plant at SEC update. And Jim Lockey is conflicted for that.

So, Jim, if you're on, you'll just need to abstain from the discussion, any tasking matters, et cetera, concerning that site, by disconnecting from the call at about 2:15, Eastern.

So when we get to that agenda item, I will note, Jim, that you're abstaining for the record and remind you to disconnect from the meeting. And when discussion of that agenda item has concluded, we will find some way to get back in contact with you if necessary to rejoin the meeting. There appear to be no other conflicts to address for today's agenda with the Board members.

So I'm hearing some background noise, so again, if you can make sure that your phone is on mute that would be great.

So let's go ahead and move into roll call at this point. I'm going to start with the Board members in alphabetical order.

(Roll call.)

Ms. Adams: Excuse me, Rashaun, this is Nancy Adams. Genevieve, Gen Roessler is on as well as Richardson. They just have to hang up and call in, because they can't hear.

Dr. Roberts: Okay. And you said Richardson is there?

Ms. Adams: Yes.

Member Roessler: Nancy, did you say Genevieve? I'm on.

Dr. Roberts: Yes, I heard Gen. I heard Gen, I did not hear Richardson.

Member Roessler: Okay.

Ms. Adams: We're trying to get in contact with him.

Dr. Roberts: Okay, great. Thanks for letting me know. And we'll deal with his attendance when he actually comes in.

(Roll call.)

Dr. Roberts: All right. So let me just circle back around. Has David Richardson joined yet?

(No audible response.)

Dr. Roberts: Okay. Or Greg Lewis, have you been able to join us by telephone yet?

Mr. Lewis: Yes, I'm on. I was on the wrong line, but I'm here. I believe I'm on the Skype as well.

Dr. Roberts: Okay, thank you so much. Okay. Well, we do have a quorum, so we can go ahead and get into the agenda.

Member Richardson: And this is David Richardson, just got on.

Dr. Roberts: Oh, thank you. Thank you very much. Okay, excellent. So now that we've done that part, let's go ahead and move on into the agenda, again, if you could periodically check the phone and mute it. If you don't have that button, press *6 to mute. And then take yourself off mute by pressing *6 again.

With that, let's go ahead and move into the NIOSH

program update from Mr. Grady Calhoun. Grady?

NIOSH Program Update

Mr. Calhoun: Hi, everybody. It looks like I am not allowed to share my screen. It says the controls are disabled by policy, unless somebody else planned on sharing that.

Ms. Gogliotti: Grady, you have log in through Cisco in order to share.

Mr. Calhoun: From Cisco? Okay. All right, be patient a second.

Dr. Taulbee: Actually, Grady, if you want, I can go ahead and share my screen of your slides. And I can advance them for you if you'd like.

Mr. Calhoun: That would be great.

Ms. Adams: Zaida just gave Grady permission.

Mr. Calhoun: Okay, hold on here then. All right. Very interesting.

Well, this is not coming up. It says I'm progressing, but I'm not. I might have to go through Cisco, or Tim can do it.

Dr. Taulbee: Okay, let me try then. Can everybody see that?

(Simultaneous speaking.)

Dr. Roberts: Yes. Thank you.

Mr. Calhoun: Sorry about that. Okay, this is a typical NIOSH program update. Feel free to start, Tim.

Okay, contracts and staffing, this is something we go over every meeting. And at the last meeting we

hired two health physicists. We're in the process right now of hiring another one, and that is due to a previous retirement. And that's the only contract and staffing news that I have at this time.

Next slide. We've also run into a little bit of a slowdown from at least NIOSH representation in workshops, town halls and outreach meetings, since August of 2020, we have done, that occurred or have been finalized that we are going to participate in. Same with any other outreach or workshop meetings.

Next. Record requests to the Department of Energy, we have 117 outstanding. Outstanding doesn't mean that they're late or anything like that. It's just they haven't been responded to yet. And only 18 of those have exceeded 60 days.

Next. Case report, these are the overall case numbers current as of December 3rd, 2020. We received 52,933 cases we can refer to as from Labor, for dose reconstruction, 51,040 returned.

We currently have 939 for dose reconstruction, 954 have been administratively closed, 45,808 have been submitted to the Department of Labor with dose reconstruction, 1,679 have been pulled by DOL. And 3,553 have been pulled for Special Exposure Cohort reasons.

Next. Probability of Causation summary, overall 45,808 dose reconstructions sent for final adjudication. Of those, 12,454 are greater than 50 percent, 33,354 are less than 50 percent.

Next. Active cases, we have 939 cases right now that are at or in place for dose construction. Three hundred and seventy of those are in the dose reconstruction process, 169 of those are in the hands of the claimants for their review. And we

have 400 cases that are getting prepped for dose reconstruction.

Next. This is just a little slide I started including in the last couple of Board meetings. It just gives you kind of an idea of the overall update progress of the program. You can see this started in September of '03, at least my reporting of it did.

And you can see that the red line, if you will, are initial cases received from the Department of Labor. And then the blue one is DOL returns. So that means that they requested -- they sent them back to us with the returns for whatever reason. Typically, it's additional cancers or modification in employment.

So the DOL returns have stayed pretty much stagnant with not a whole lot of fluctuation except for that time in March. That's the blue line, March of '07 through March of '08. That's because we had a big glut of returns.

And also what you'll see is a gradual decline in initial cases, really from the beginning of the program. There's that black trend line I put in there.

There's more of a significant decline in the last few months. But that is primarily due to the fact of COVID. And people aren't being able to meet face-to-face with their primary care physicians or whoever to get the referral started. So it's anticipated that these will go up once the COVID issues are resolved a bit.

Next slide. Okay. I'm hearing a buzzing. But this is what we call the age of our cases. We track how long cases are in our shop for dose reconstruction. And as you can see there, six to nine months, that's the one I'm usually most interested in. And that one went up significantly around October of this year.

But it's going down.

Basically our goal is to get all cases done within five months of the last piece of information being received. This graph does not actually reflect that. The numbers are based on the time the case was received initially.

So there's a few months lag time in there that allows for contact of the claimant, looking at their CATI, performing their CATI, getting them to review it, making requests of the Department of Energy for records.

And the Department of Energy has, I think, 30 to 60 days to respond. So I'm glad it's trending back down. But in either case, we have been able to get close to 95 percent of all of our cases to the claimant within five months of the actual last piece of information being received for dose reconstruction. At that point, we can start it.

I think that's it. That is it, any questions for me on those?

Dr. Roberts: Yes, any questions? And if you do have a question or comment, please identify yourself by name first.

Member Richardson: This is David Richardson. What did you do to make that curve turn down?

Mr. Calhoun: The last one?

Member Richardson: Yes.

Mr. Calhoun: Basically, I talked to the people to make sure that we don't have cases sitting around in our queues too long. And I spoke with ORAU about that as well.

Due to the holidays right now, we're a little bit

short-staffed. And we also were short staffed when we lost a few HPs. But overall, that's an indication to me of what's going on.

But the goal that we have our contractor and ourselves work to is to get all the cases in the hands in the claimants within five months of getting the last piece of information. And we're over 95 percent right there.

So I've just got to keep an eye on that to make sure that people aren't getting overwhelmed with working on SEC issues and TBD issues that are brought up, primarily through Board meetings.

So it takes a little time to refocus, but it's something that I'm keenly in tune with, and it's something that's important to me. Because I need to, I like to have that number a lot lower than it is, even right now.

Dr. Roberts: Okay, any other questions from the Board?

Okay, hearing none, thank you, Grady. We're on to the DOL Program Update. So, Chris Crawford, are you still on the line?

DOL Program Update

Mr. Crawford: Yes. The situation is a little different than usual. Normally, I depend on Grady to show these slides. So I don't know in what shape we're in.

(Simultaneous speaking.)

Dr. Taulbee: I don't know if Jim can do that or not. I'm going to re-log in with Cisco here.

(Simultaneous speaking.)

Dr. Taulbee: Give me just a second here. Yes, I'm going try. Give me just a second to make sure. I think it's the DOL update.

Mr. Crawford: That's correct.

Dr. Taulbee: Okay, just a second. Is that viewable now?

Ms. Adams: It's loading, Tim.

Dr. Taulbee: Okay.

Ms. Adams: I can see it now.

Dr. Taulbee: Okay, it seems awfully small, doesn't it? All right. Let's see if I can't make it full screen. Is that better?

Ms. Adams: Yes.

Dr. Taulbee: Okay, go ahead, Chris. Just let me know when to advance.

Member Clawson: Not really, I can't see anything.

Member Beach: Neither can I.

Member Clawson: This is Brad.

Member Beach: This is Josie, I can't, no way.

Mr. Lewis: Yes, this is Greg. I'm seeing a black screen.

(Simultaneous speaking.)

Member Kotelchuck: It says all your windows are minimized.

Dr. Taulbee: Okay. I've got to check something here.

Member Lockey: Yes, Jim Lockey, it looks good to

me.

Mr. Rutherford: Yes, this is LaVon Rutherford. I can see it fine.

Member Beach: I'm still not --

Member Kotelchuck: I can't see a thing, Kotelchuck.

Member Beach: But I have the slides up anyway. So I'm good.

Member Kotelchuck: Yes, I am too. And I --

Member Roessler: This is Roessler, I don't see anything.

Dr. Taulbee: How about now, is this better?

Member Beach: No.

Member Anderson: No.

Member Beach: The only thing I see is, there's nothing to see right now. All presenters' windows are minimized, same as Andy.

Member Ziemer: Well, this is Ziemer. I'm seeing it just fine. I haven't touched the screens from the previous presentation. And it looks fine from here. I don't know what's changed for the rest of you.

Dr. Taulbee: I can tell you, the only thing that's different on my end is this is a PDF file versus the other one was a PowerPoint.

(Simultaneous speaking.)

Mr. Calhoun: I see it now, this is Grady. I can see it now.

Member Clawson: This is Brad, I can see it now.

Member Valerio: This is Loretta. I can see it fine.

Dr. Taulbee: Okay.

Member Ziemer: This took longer to work its way out to the West Coast, ha, ha.

Dr. Taulbee: All right. I think you can go ahead, Chris.

Mr. Crawford: Thanks a lot, Tim. I can't see it directly. I'm looking at my own PowerPoint copy just to make it more confusing.

Let's go to the second slide, Tim.

Dr. Taulbee: Okay, you're there.

Mr. Crawford: Okay. This is compensation paid, just an update on that. We now have paid $7.2 billion in Part B compensation, $5.3 billion in Part E compensation, another $6.3 billion in medical bills, and that's a total of $18.8 billion compensation plus medical bills. And we had 216,476 cases filed.

Next slide, please.

Dr. Taulbee: Okay.

Mr. Crawford: This is a small one, compensation NIOSH-related cases, $1.66 billion for dose reconstructed cases of which we have 15,681 payees. And of course, that's probably not the same as the number of cases we're talking about.

Next slide.

Dr. Taulbee: Okay, we're on four.

Mr. Crawford: Right, NIOSH referral case status. Our records show 53,752 cases referred to NIOSH for DR, and 52,148 cases were returned to DOL from NIOSH. Fifty-four thousand, six hundred and

twenty-seven of those were the DR, but another 6,521 withdrawn from NIOSH with no DR.

Also, we show 1,604 cases currently at NIOSH, we're probably using a slightly different end date than NIOSH's slides did, of which 1,071 are initial or original referrals to NIOSH, and 533 are reworks or returns to NIOSH.

Number 5, Tim.

Dr. Taulbee: Okay, we're there.

Mr. Crawford: Part B cases with DR and final a decision, here we see, both graphically and in numbers, we have final approvals of 12,460 cases. And we have final denials of 23,791. And you see the percentages of 35 percent approvals, 65 percent denials.

Next slide.

Dr. Taulbee: Okay.

Mr. Crawford: Part D cases filed, we show, I'll start with NIOSH in the upper right, 31 percent of the cases on the NIOSH side. The other category is defined below in smaller print. But it's beryllium sensitivity cases, CBD, chronic silicosis. That's 38 percent.

As I said, now RECA is seven percent of cases filed. SEC cases that were never sent to NIOSH are 13 percent of the cases filed. And SEC cases referred to NIOSH are 11 percent of the total cases filed.

Next slide, Tim.

Dr. Taulbee: Okay.

Mr. Crawford: Okay, Part B cases with final decisions, here we have 106,247 cases with final

decision under Part B. That includes 56,948 Part B approvals and 50,039 Part B denials which is a 53 percent to 47 percent split. This will, I am sure, include SEC cases.

Next slide.

Dr. Taulbee: Okay.

Mr. Crawford: For this meeting, the top four work sites are Nevada Test Site, Savannah River Site, Hanford Site, and the Y-12 Plant.

Next slide.

Dr. Taulbee: Okay.

Mr. Crawford: These are SEC petition sites, some numbers on those. We had to divide them this time, so we'll see it up here again. At any rate, Y-12 has 22,081 cases. And if you add Part B and E together, it's 33,540 cases, cases returned by NIOSH is 5,393, final decisions, 9,766.

For Savannah River we have 20,441 cases under Part B only. We have 6,165 cases with dose reconstruction and 8,681 cases with final decisions under Part B.

Now Area IV, Santa Susana Field Laboratory, we have 1,110 cases under Part B. Two hundred and seventy-five cases have been returned by NIOSH with a dose reconstruction, 551 cases have final decisions.

Let's go to the next slide.

Dr. Taulbee: Okay.

Mr. Crawford: So here's the rest of the site information. With Y-12 Site we have Part B approvals, 6,014, Part E approvals, 6,754, total

compensation and medical bills paid, $2.35 billion.

Savannah River Site, we have for approvals 3,726 Part E approvals, the former was Part B approvals only, Part E is 4,384, total compensation and medical, $1.5 billion.

And now Area IV, Santa Susana Field Laboratory, we had Part B approvals, 268, Part E approvals, 256, $78 million in compensation and medical bills.

And on to the next slide, Tim.

Dr. Taulbee: All right, we're on 11.

Mr. Crawford: Right. This is our usual boiler plate for this. We're now doing, of course, these virtual webinars, and quarterly medical conference calls and AR workshops. COVID has slowed this work down, I'm sure.

Let's go to the next slide.

Dr. Taulbee: All right.

Mr. Crawford: And we all know this one, this is the Joint Outreach Task Group for this outreach. And I won't go through the individual members. We do have monthly conference calls with all members. And we do conduct town hall meetings when that's possible. I think they're done virtually in most cases now.

Next slide, Tim.

Dr. Taulbee: All right.

Mr. Crawford: The upcoming outreach event, the next one is December 9th which is coming right along tomorrow. That'll be from 2:00 to 3:30 p.m. And, make sure here, yes, the registration information is there on the slide.

Let's go to the next slide.

Dr. Taulbee: All right.

Mr. Crawford: Now, this is labeled past outreach event in the virtual webinar series. They give you a topics list including a new website tour, how-to guides, policy directives, program guidance, and resources. They also tell you about DOE records search, request types, site points of conflict, contact, sorry, and search process. And this was held on November 12th, 2020.

Next one, Tim.

Dr. Taulbee: Okay.

Mr. Crawford: Okay. This virtual webinar series was held on October 14th, 2020. And the topics included the resource center responsibilities, including operating status, claimant and AR assistance, outreach, provider assistance, occupational history, questionnaire interviews, and customer service.

Next slide.

Dr. Taulbee: All right.

Mr. Crawford: And the rest are just handout slides which are duplicated for every meeting, so we won't go into that.

Are there any questions?

Member Beach: Chris, this is Josie. Back on your Slide 11, I know you mentioned it on several slides, the virtual webinars and different meetings. Do you have any feedback on how those are going and how the attendance is?

Mr. Crawford: Unfortunately, I do not. And the attendance question is actually, of course, an

important one. Josie, I'll get that and send it to you.

Member Beach: Okay, thank you.

Mr. Crawford: Yes.

Member Ziemer: This is Ziemer. Can you share that with the full board?

Mr. Crawford: Of course.

Member Ziemer: Yes. This is Ziemer again ---

Mr. Crawford: I'll send it to Dr. Roberts, and perhaps she can post it.

Member Ziemer: Sure.

Dr. Roberts: Yes, if you would send it to me, I can distribute it.

Member Beach: Well, the other question I would have if there's any comments from attendees, if they have any suggestions unless everything's going great, just a curiosity of how that's working. Because we may be doing that for a while to come.

Mr. Crawford: Will do.

Member Beach: Thanks.

Mr. Crawford: We'll comment on both of those things.

Member Ziemer: This is Ziemer again. I have another question. I'm wondering on the medical compensation for a successful claimant, and I know going forward the medical is covered. But the question that occurred to me is some of the claimants; their claim is not approved until way into the process in terms of their medical bills. Are prior medical bills covered by the program --

Mr. Crawford: As far as I know --

Member Ziemer: -- prior to their being awarded a successful claim?

Mr. Crawford: That I couldn't answer for sure. I rather doubt that. If it's an SEC case, and it's a quick approval, then the SEC accepted cancer will certainly have the medical bills paid.

If it involves a Part B case, of course, I don't think a non-SEC Part B case that is eventually approved pays until approval. I could look into that a bit further.

Member Ziemer: I suppose, in many cases, if a person had medical bills, they probably would have been covered either through their own insurance program if they have insurance coverage, medical insurance to their employer or, if they're already retired, perhaps under Medicare. But there are always portions of those that aren't fully covered also. So I just wondered whether we had looked back at all of them and covered those.

Mr. Crawford: Yes. Another good question. And of course, often we only get the claims years after the cancer in the Part B case.

Member Ziemer: Right, exactly --

Mr. Crawford: And it has been identified. So usually those are paid, you know, at the time of service being delivered. And then they can make a recovery of anything out of pocket, I'm sure.

Member Ziemer: Yes.

Mr. Crawford: I don't know if there's a third party recovery involved.

Member Ziemer: Yes. Well, it's not a critical

question, but it just occurred to me. I know going forward, once they are a successful claimant, then they're covered. But I just wondered about prior to those.

If it's something easy to come up with, you can let us know, perhaps.

Mr. Crawford: I'm sure it's an easy question. I just will have to get together with our medical people to find out the answer. I'm not involved in that area directly.

Member Ziemer: Well, and this Board isn't really directly involved in that, but just by way of having a complete understanding of the program in there. It hadn't occurred to me before, so I just wondered.

Mr. Crawford: Absolutely. I'll get back to you, Dr. Ziemer, on that one. I could also send it to Dr. Roberts for the Board if that would be useful.

Dr. Roberts: Yes, why don't you go ahead and send it to me. Thank you.

Member Richardson: And this is David Richardson. I had a question which maybe follows up a little bit on that.

I was wondering, for example, on Slide 7, where there's a description of cases, cases with final decisions, there seemed like there were three categories of terms being used. Dr. Ziemer was referring to successful claimants. And then we have some numbers you reported claims and some numbers you reported cases.

A successful claimant I think he's imagining refers to a unique individual. Could you help me understand? Can the difference between a claim, which I would imagine there could be more than one claim per individual, a case, in the case with a

decision, is it possible for there to be more than one case?

And when you finally have a case with a final decision, does that potentially represent multiple cases for the same individual before they finally resolve to a final decision?

Mr. Crawford: As far as I'm aware, there is only one case per employee. But there may be any number of claimants, survivors and so forth. So when we, on this slide for instance, we're talking about cases. That would involve 106,000 separate employees. If they have multiple cancers, that's not a new case. They're handled as a single case with multiple cancers, and a joint PoC is calculated.

Member Richardson: So could these --

(Simultaneous speaking.)

Member Richardson: -- for these numbers --

Mr. Crawford: Yes?

Member Richardson: These numbers can change over time then for a final decision, just understanding it would be that a person could contest a decision, for example, or could come back with further information or, as you said, could develop another cancer.

So what you're describing here as this pie chart of approvals and denials could represent, for an individual, a long history, years or decades of claims. And that could shift. Is that what you're saying?

Mr. Crawford: Yes. One example might be skin cancer cases which might be denied repeatedly over the years. People typically develop skin cancers serially for those who are susceptible to them.

It might not be until the 15th skin cancer that the PoC gets above 50 percent, let me put it that way. So that can take some years. But it depends on the cancers presented.

Member Richardson: And so is it possible for you to report to us how many people end up with a positive final decision and approval after one claim, or after two, or after three, and so on?

Mr. Crawford: I hate to over-promise, because I can't do it directly. But I will ask our support staff if they can come up with this. I don't know --

Member Richardson: I guess just my sort of impression is as you described, that there are people who may be spending years filing claims until there's finally, and so it would be, this is just another one of these issues of sort of the timing or someone's experience with the program.

Mr. Crawford: Yes.

Member Richardson: Thank you, that's very useful in terms of those distinctions between people and claims.

Mr. Crawford: But another thing to keep in mind is that, for a person who is accepted as a member of an SEC Class, they may have gotten a payment based on that. But they will submit further cancer evidence in order to get medical bills paid for a non-SEC cancer. This is common. So that process might start out with a very quick payment and then go on for some time after that to evaluate the non-SEC cancer part of the Part B claim.

Member Richardson: So would that person contribute to, on your pie chart, an approval and a denial? Or are they in approval whenever they had any approval for anything?

Mr. Crawford: As far as I know, they count as an approval. Now, if NIOSH hasn't seen the case, if the case was never sent to NIOSH, then it'll appear in NIOSH's records as an independent case, either as an approval or a denial.

There are little complications. But I think in this chart, what we mean by an approval is either an SEC approval or a dose reconstruction-based approval.

Dr. Roberts: Okay, any other questions from the Board?

Member Lockey: Just to follow-up on that though, if something was initially denied and then approved, it would move from the denial pie chart part to the approved pie chart, right, subtracting that?

Mr. Crawford: That's correct.

Member Lockey: Okay, thanks.

Dr. Roberts: Good discussion. Any other comments or questions?

Okay. So we're running just slightly behind. But let's go ahead and move on to the DOE program update given by Mr. Greg Lewis. Greg?

DOE Program Update

Mr. Lewis: All right, thanks. Hi, everybody. Can everyone hear me?

(Chorus of yes.)

Mr. Lewis: Okay, good. There was a silence there for a second.

Tim, since you're doing such a good job with the slides, would you mind going through my slides as well.

Dr. Taulbee: Sure. Give me just a second to get it uploaded here.

Mr. Lewis: Great. And while you're getting that uploaded, my plan is to basically give sort of an update of our situation in light of the COVID pandemic.

I have some standard boiler plate slides on the second half of my presentation, but I wasn't planning on going over those, although I'd be happy to if anyone would like me to. But those are kind of the typical slides that I've gone through on past Board meetings.

So again, I'm Greg Lewis from the Office of Worker Compensation Screening within the Office of Health and Safety at DOE. My office handles the records requests for EEOICPA, and then we also administer the Former Worker Medical Screening program.

Tim, if you'd go to the second slide. Okay. So again, I'm primarily going to be giving an update on DOE's situation with respect to COVID-19 and how that pandemic has, you know, affected our ability to respond to records requests.

In short, since March we've had a significant impact on some level to almost all of the DOE sites. Although, you know, the last time I spoke with you all in August, you know, things were just kind of easing up.

Since then, most of our sites have been able to make significant progress. And a lot of them have eliminated backlogs of claims. Although now, more recently in the last few weeks or the last month, the numbers seem to be getting a little bit worse. You know, so things, there are some sites that have had new restrictions or re-imposed previous restrictions.

So the bottom line is that we are doing everything that we can to respond to all of the records requests from DOL and NIOSH. And it really varies significantly depending on the particular site and the numbers of infections in that area.

So if you'd go to the third slide. Okay --

(Simultaneous speaking.)

Mr. Lewis: So again, oh, did someone have a question? No?

Dr. Taulbee: This is Tim, I was asking what the third slide was showing.

Mr. Lewis: Oh, you're on, at least I'm seeing the right slide. It starts with site status.

So, yes, again for each site it really is different, depending on location. Like, some sites like the, you know, the Hanford site was hit early because, you know, the pandemic really was, I guess, started in the US in the Pacific Northwest, or at least that was hit hardest earlier on. But I think as of now they have no outstanding requests. So it really depends on the site.

And then, in general, when I spoke with you all in August, there were a lot of sites that were just starting to have access to site. You know, staff were able to come back onsite, maybe not full staff, but they were able to come back in shifts for a skeleton crew and access records.

Dr. Roberts: Oh, I'm sorry.

Mr. Lewis: I'm getting some feedback.

Dr. Roberts: Yes, sorry, Greg. If everyone can please put their phone on mute please. We're hearing a lot of background interference. Thank

you.

Mr. Lewis: All right, that's a little bit better. So again, to talk about the long term trend basically from, you know, March when this started through about the June or July timeframe, many of the DOE sites were significantly impacted, maximum telework, many were unable to access any kind of paper records, microfilm records, anything that was physically onsite.

There were some sites that were still able to keep pace with the requests due to the records that they had electronically, whether it's data-bases or, you know, PDFs, things like that, that they could access from home. Some sites were better able to do this than others because of security, you know, requirements. But there were sort of significant problems being able to respond up through about June or July.

Around June or July, things started to turn around. More and more people were being let back in onsite. Even if the site wasn't fully operational, they were letting in sort of a skeleton crew into those physical record centers so we could pull boxes, pull microfilm, microfiche, et cetera.

We started to respond to claims and were reducing backlogs. And so we were kind of reducing backlogs all the way through, at many of these sites, up through, you know, around October or early November.

And then at a few of the sites, it started going backwards again as the numbers and, you know, some of the DOE site areas started to increase again. Sites started pulling people back offsite or going back to a higher telework profile.

What does this all mean? Well, right now there's

about three DOE sites that have a significant backlog. I'm talking more than ten requests over 60 days.

But the remainder of DOE sites have very few, if any, requests over 60 days, just to -- I'm not going to go over site by site, but just, you know, as an example, when Chris gave his slide of the top four DOE sites by numbers of claims, I believe that was Nevada Test Site, Savannah River Site, Hanford, and Y-12, we do have fairly significant backlogs at Nevada Test Site and Y-12.

At both of those sites, a big reason for this is that a lot of the records are in offsite storage facilities and Federal Record Centers which have been closed.

But at Savannah River Site and Hanford, two of the other larger sites, I believe we have zero claims outstanding over 60 days. So it really depends on how the records are set up at these sites. And it really varies.

Next slide. And I've touched on a little bit of this, but the ability of the sites to respond really depends on their records. And it's not just, even if a site is in maximum telework or not in maximum telework, that can even vary depending on the different department, the Medical Department, Rad, IH, HR, Records.

Some of those, like the Medical Department, there may be staff in there because of the nature of the work. They're more essential, and if they have down time, they may be able to respond to claims.

Places like a records center or HR may be all virtual, but they also may be able to access those records remotely because, you know, if they're digitized or electronic. So really, you know, it's hard to give an across the board answer for any of our sites.

Next slide. And the top slide really hits on a Federal Record Center. There are some of our sites that rely heavily on Federal Record Centers. The bulk of them really don't anymore. Most of them have most of their historical records onsite or accessible electronically. But there are a few that really rely heavily on these Federal Record Centers. And we're at the mercy of their status.

And, you know, for the most part Federal Record Centers have not been shipping records since March. However, some of them have been open periodically. You know, since the July timeframe they've been open here and there or able to ship records, depending on staff.

But that's kind of out of our control. And when we're able to get records, we basically process as much as we can as fast as we can.

And to a lesser extent, there's an issue with classification review that really doesn't impact the individual records so much. That's more of a challenge for the large scale research projects.

So, you know, when NIOSH, or the Board, or SC&A is looking into special exposure cohorts or DOLs, trying to augment their Site Exposure Matrix, some of that, you know, requires a classification review.

And, you know, because of the nature of that work, it really cannot be done remotely. So it depends on who's onsite, what their workload is and, if they have a skeleton crew onsite, are they able to accommodate our requests?

So we're doing what we can to prioritize that. And I think, for the most part, we've kept pace. But that has been a little bit of a challenge during the pandemic.

So I think the next slide there starts, sort of, my boiler plate, sort of the usual slides that I give. And I'm happy to go over those. But I guess, why don't I pause and take questions. And then if you'd like me to go over the rest, I could do that.

No questions?

Dr. Roberts: No, not hearing any.

Mr. Lewis: Okay. If there are no questions, if anyone would like me to go over the rest of the presentation, I could do that. But otherwise, I'll cede the time back and get you guys back on track.

Dr. Roberts: Okay. Would Board members like to see the rest of the slides, or has this been sufficient?

Member Clawson: This is Brad. I'm good with it. We've seen this time and time again. But that's just me.

Member Ziemer: And this is Ziemer. We do have copies of the presentation as distributed. And we do have copies on it anyway. So I personally don't feel like we need to go over it.

Member Lockey: Jim Lockey, I agree with that.

Member Kotelchuck: Same, Dave Kotelchuck.

Member Roessler: And the same for Roessler.

Member Valerio: Same for Loretta.

Member Schofield: Same for Schofield.

Member Beach: This is Josie, I agree with that also. Thanks, Greg.

Mr. Lewis: All right. Well, thank you, everybody.

Dr. Roberts: Yes, thank you, Greg.

Okay, so it looks like next on the agenda is the update on the Y-12 Plant SEC, after which Jim Lockey has a conflict of interest. So, Jim, you should disconnect from the meeting now and rejoin us. I think what we'll do is have someone give you a call and let you know when to rejoin. So I will note your disconnection now for the record.

Member Lockey: Very good, bye-bye.

Dr. Roberts: Okay, great. Thank you.

So moving right along into the update presentation for the Y-12, I will note here that Dr. Bill Field, he's the chair of the working group, but Mr. Bob Barton from SC&A will be the main presenter for this agenda item.

So, Dr. Field, I can turn it over to you if you have something you want to say. Otherwise, we can get into the presentation.

(No audible response.)

Dr. Roberts: All right. First of all, has Bill, I did get a note from him that he might be joining right for this agenda item. Bill, have you joined us yet? I can see him on Skype.

Dr. Taulbee: I am wondering if he's tried to connect via audio Skype, Rashaun.

Dr. Roberts: Yes.

Dr. Taulbee: He might need a note to dial in on the phone.

Dr. Roberts: Okay. So, Bill, if you can hear, you'll need to disconnect from the audio on Skype and call in to the telephone line.

Let me see, I'm not able to send a note right now. Zaida or Nancy, could you help out with that?

Ms. Burgos: I'm working on it. No, he's not going to be able, if he only has the computer audio, then he's not going to be able to hear you. But I'm trying to do that right now, send him a text through the link.

Dr. Roberts: Okay. Well, since Bill is the chair, let's pause and talk. And he can get on if that's okay.

Mr. Barton: This is Bob Barton. While we're waiting for Dr. Field, can everybody see the presentation slides up and hear me okay?

Member Beach: Yes, we sure can, or I can.

Mr. Barton: Okay, great.

Member Lockey: While we're waiting, I had a question for, I'm not sure if it's for Labor or DOE. We had mentioned some of the outreach activities that have been going on during the epidemic.

And I know that there's a lot of former workers who have various forms of lung impairment. And has there been any special effort to do outreach to them, or talk about services, and infection control efforts, or other special things that could be done for this large group of workers who are potentially at high risk?

Mr. Crawford: Sorry, I was on mute. This is Chris Crawford from DOL. Are you referring to only during outreach meetings or ---

Member Lockey: Oh, I'm interested in anything that's been done to address the issue.

Mr. Crawford: Right. I know we do approve medical equipment for people with breathing difficulties on a

frequent basis for, of course, accepted claims.

For people who are just inquiring or attending an outreach, I can't answer definitively. I rather doubt that we provide equipment in advance of an outreach meeting, but I can ask, certainly.

Member Lockey: Oh, I don't really mean providing equipment. I mean given the fact that you have a large number of people who, yes, you're providing equipment, or services, and compensation for known forms of lung impairment.

And recognizing that during this epidemic, pandemic, those people are at increased risk of poor prognosis or death if they do become infected, has there been anything tailored in terms of communication with them or to assist them because you sort of already have an established line of communication with these people and ---

(Simultaneous speaking.)

Member Lockey: -- you recognize ---

Mr. Crawford: And we communicate, I mean, even normally, before the pandemic, normally by phone, or fax, or letter, with either the claimant or, actually I should say the employee, or a representative if the employee has trouble communicating.

I don't know that we are doing anything, I mean, if they're under the care of their own physicians, both specialists and, you know, family physicians, so I would think that any protection against the pandemic would be discussed by the physician and his patient, her patient.

Member Lockey: Yes. So it's all still sort of trickled down to the individual or the expectation that their primary care providers. So there's nothing that's been coordinated through Labor or DOE?

Mr. Crawford: Not to my knowledge. Our interaction is mostly to approve new devices, new treatments, and that sort of thing. But those are always initiated by the patient and the attending physician. In other words, we're not doing anything proactively, particularly about the pandemic situation. We depend on the medical practitioner who is on the site.

Member Field: Yes. I'm on the call. Sorry I'm late.

Dr. Roberts: Oh, good. Great.

Member Field: Thank you.

Dr. Roberts: Okay, thank you, Bill.

Okay, are we ready to move into the Y-12 Plant? And, Bill, I was handing the floor over to you in case you wanted to say some words before we start with Bob's presentation.

Member Field: No, I think it's okay to start with Bob. But I think we had some very productive meetings. We had some petitioner, given the discussions with the petitioners too so we could understand their concerns. But I think it's fine just to let Bob provide the update.

Update on Y-12 SEC Petition #250 (Oak Ridge, Tennessee; 1987 - 1994)

Mr. Barton: Okay, thank you, Dr. Field. This is Bob Barton with SC&A.

Member Field: Thank you.

Mr. Barton: Again, we'll be talking about SEC-250 for the Y-12 Plant. And while I'm giving this presentation on behalf of the Work Group, I'm also going to try to indicate where discussions are and the path forward, where NIOSH is at, based on our

review of the Y-12 Plant, which our review of SEC-250 was released back in February.

I'd also like to recognize the efforts of Milton Gorden and Ron Buchanan who contributed a lot to this SEC review.

All right, so just a little bit of background. SEC-250 was presented to the Advisory Board in August of 2019. And it's sort of broken out into, the entire evaluated Class was from 1977 through the end of 1994. And it's sort of broken out into three sections.

There's the recommended and accepted Class. The Board accepted this Class in January of 1977 to July 1979. NIOSH did not recommend a Class from August of 1979 to December of 1986 and held a period in reserve pending the receipt of additional data related to thorium.

Because the basis for the recommended Class --- I'm getting a little bit of feedback, but I'll just carry on if everybody's okay. Please mute your phones.

But the basis for the recommended Class was that it was infeasible to reconstruct thorium exposures. Again, that's for the 1977 to July 1979 period.

And I'd also note that the Work Group met in late September of this year to discuss SC&A's SEC review and figure out a path forward.

So our review approach at SC&A is really just based on, is dose reconstruction feasible to workers who don't have monitoring records or insufficient monitoring records? And we focused on thorium, because that's really the crux of the accepted Class up through the middle of 1979.

And what we really did was compare the available information and data that we currently have captured and on hand, and available for analysis,

against really just what I consider the three main tenets of the co-exposure implementation criteria. And that's completeness, adequacy, and representativeness. And I'll get into each one of these in the subsequent slide.

Also during that 2019 meeting when this was first presented to the Board, there were some additional concerns specifically regarding machinists and whether they were adequately monitored especially when they were doing work with uranium in addition to thorium.

And then the last bullet here is, like, okay, we're discussing uranium and thorium but what about other potential sources of exposure at Y-12?

So the processing documentation for thorium, and again this is captured material that's available in the Site Research Database, affirmed at least in SC&A to be within the large scale thorium where it seems to have ended in the 1970s. So it's essentially already covered by the established SECs.

But really, the captured documentation that we looked at, and what we really want to look at when we're doing this type of research is, is there more information about production, the management of thorium materials, worker exposures, and any incidents, things of that nature which really go to establishing the coverage of the internal monitoring program at Y-12.

Regarding completeness, you want to say, you want to look at, all right, what locations handled the thorium, and how are they represented in any potential co-exposure model? Do we have monitoring records from the right locations where they were handling this material?

Our review identified about 14 specific locations that

were indicated as handling or processing thorium. But we're not at all sure that that list is exhaustive. And we really weren't able to find information about the magnitude of the source term as it maybe developed over time.

As I said, most of the large scale stuff ended in the 1970s prior to the SEC period we're looking at now. But there were still smaller scale projects. And how large were they, and what was the actual exposure potential for that?

Also, when considering representativeness, you know, what types of workers, what job types were included in the thorium processing campaigns? So we looked at some interviews, mainly conducted in 2018. But as I'll get to, subsequent interviews have been performed really in the last month or two. And I'll get into that.

But as far as job types from the documentation, what we came up with was a partial list. And this is in Table 1 of SC&A's SEC report.

And those would have been rad engineers, process quality control workers, procedure coordinators, system engineer supervisors, process engineers, boilermakers, plant maintenance, chemical recovery, machinists, which I mentioned earlier was of particular import during Board discussions previously. You also have your laborers, janitors, and material handlers. So a wide variety of people were indicated to us as having the potential for exposure to thorium.

We also tried to get a list of what departments possibly handled this. And again, this is all getting back to how well are these various areas, job types, represented in the data we have to try to reconstruct exposures to workers who don't have monitoring records.

And what we found was that you really can't differentiate, at least with the documentation we have, between the thorium department codes, and uranium department codes. They're really intermingled.

But in Table 2 of our report, we came up with about 33 distinct department numbers that appear to have the potential for thorium work. But is that list exhaustive, we simply don't know.

And that was really the impetus behind SC&A's Observation 1, is that our review of available documents that are found on the SRDB, while additional information was found, which is helpful, a lot of the documentation that we would have liked to see, such as possibly a list of workers involved in the actual thorium operations, and actual work area designations, and time periods, and throughput and such, was just not there at this time.

And we note that such information would have aided in evaluating the monitoring program's effectiveness. That was Observation 1.

In discussions with NIOSH, again back in September, and you'll see this is sort of a common theme throughout, is that basically the coverage of the thorium monitoring program is yet to be fully evaluated against the implementation guidelines for co-exposure development.

And so these are the types of questions that would have to be answered prior to accepting that doses to unmonitored workers are feasible.

So a little bit, again, about the completeness of the thorium data. What we did is we have a bunch of quarterly reports from the health physics department that list the number of in vivo counts in certain cases that were performed during that

quarter. And then we can take that number of in vivo counts and compare it to how much data we actually have in hand for analysis and potential co-exposure development.

Unfortunately, those reports were only available, or at least listing the number of thorium in vivo counts for eight of the quarters during the period of interest. So they were available up through September of 1981.

And of course, the period we're looking at right now is through the end of 1986 with a reserve period after. So that was really Finding 1, is that we have limited information available to determine the completeness of the data we have in hand.

But I guess, for what it's worth, for those eight quarters we could have analyzed, we had about 95 percent of the reported in vivo counts are available to NIOSH for co-exposure development.

And again, a similar theme, NIOSH has committed to a full completeness evaluation during the future formulation of a co-exposure model.

As sort of a parallel issue, we at SC&A actually found that there might be some additional thorium monitoring records that really were just coded under a different designation. They were shown as being uranium results primarily. But they also contained some thorium data, thorium counts associated with them. And so during discussions again in September, NIOSH intends to perform a formal analysis, again, of the completeness of the thorium data set.

Okay, moving along, another way you can sort of get at the completeness problem would be if you take a look at the number of samples you have during a certain period and compare it to the actual

production activities, the throughput of thorium materials.

You know, if you have a large amount of thorium being processed, you would think that at least during that period, or possibly in the immediately following period, you'd see an uptick in either the number of results or probably the number of workers involved in a thorium monitoring program, just based on the fact that the production was increasing.

We did find one reference that appeared to contain that throughput information. It's called the historical review of accountable nuclear materials at the Y-12 Plant. However, just a key piece of information, the actual thorium throughput was redacted in the document that we had at the time of the review.

However, NIOSH has responded that subsequent data captures, associated with that reserve period after 1986, they were actually able to capture that data. So apparently, the throughput information is out there. And so we'd be able to look at that moving forward.

Moving onto adequacy, and when we say adequacy we really talk about how well does this method of taking measurements capture the exposure of interest, in this case thorium? So is the monitoring method adequate?

Now, interestingly for this site, the precedent has really already been set in that the same technology that was actually developed at Y-12 was used at other EEOICPA sites, notably Fernald.

In Observation 3, we note that in SEC-46, which was for Fernald, the in vivo monitoring program for thorium and its methods were quite well vetted. And so, sort of, the precedent is already there, that we

accept that the method at Y-12, which has already been accepted at other sites, is adequate.

Now, one sort of parallel issue is that during those deliberations for Fernald it was noticed that there was a negative bias to the data which had to be accounted for. And NIOSH developed correction factors for that.

And again, NIOSH has committed to formally evaluating the potential for bias as part of its co-exposure development. And so they are considering that and looking to see if the same type of adjustment is necessary at Y-12.

Moving on to representativeness, the implementation guides generally indicate three types of monitoring. You have routine representative sampling, routine measurement of workers with the highest exposure potential, you know, basically targeting the workers who you think are going to have the highest exposure potential. And the third one would be incident-based sampling.

So among the thorium data, job title information was not available for every data point. But what we can do is we could match names up to a subset of claimants who are among that monitored population.

And so what we did is we classified the claimants we could find into 11 generic categories and just see how those job titles shake out, and which job titles were monitored more frequently, or which had the higher number of workers.

When strictly looking at the number of samples we had in our dataset, the greatest percentage was actually for health physics at about 28 percent. And then you had radiography and inspection, operators

and assembly workers which, to note, often those workers would also identify as machinists. And then you had electrical and instrumentation/maintenance workers.

So those would be the types of worker you would expect to be part of a regular monitoring program. That was the total number of samples. And you can see that actually in Figure 2 of SC&A's report. It's broken out into a pie chart.

We also looked at the total number of workers. And I guess the only real thing of note here is that even though health physicists had the highest percentage of samples, they were actually one of the lower number of total workers that were actually included in the data set.

Another thing we did is we tried to look at department codes. And there was a department code associated with each sample. So now we can look at the full monitoring data set, not just claimants. Again, but we had no definitive lists of codes to really provide a name or location.

But we note that although there were 54 distinct departments associated with the thorium data, nearly two-thirds of all of those codes were associated with just five departments. And similar to the total number of results we have, the Department 2373 appears to be associated with health physics, and that had the highest amount of records.

So that's sort of to be expected based on what we saw when we did the claimant sub-population to look at job title.

But ultimately, the Department code and job title analysis, SC&A really could find no real discernible trend either way. So I really, our preliminary

conclusion here is that the monitoring program is likely reflective of a routine representative and not necessarily a targeted or incident-based program. And that was the subject of Observations 5 and 6.

NIOSH responded that, again, they will be evaluating representativeness during the development of a thorium co-exposure model going forward.

All right, moving on from thorium, we're going to talk a little bit about uranium. Again, completeness, we really looked at the same sort of exercises we did with thorium, and then that's to compare those health physics reports and the number of samples that were reported to have been taken versus the number of samples that we have in hand.

Unlike thorium, they reported that the uranium, for all but one quarter during this period of interest, and it even had some information for '87 and '88 which were part of the reserve period, and what we found is that the range on any given year was about 75 to 121 percent.

That is some years, the low for a year would have been 75 percent data in hand versus what was reported, and the high was 121 percent data in hand versus what was reported. The average over the entire period was about 98.4 percent completeness overall, which was SC&A's Observation 7, which 98.4 percent is pretty high compared to what we generally see in this program.

Representatives of uranium data, we really just had no information available to break out the uranium data into job title or department codes as was done with thorium. And so that was really Finding 3 and just pointing that out. We don't really have a method right now to be able to pull out where all these samples were coming from, what type of jobs

were involved, and that sort of thing.

And again, NIOSH's response, which was discussed in September, was that completeness and representation will be performed as part of the co-exposure model development as laid out in the co-exposure implementation guide, which was formerly approved earlier this year.

One other thing here is that we identified that the majority of monitoring was for in vitro, urinalysis data. But there is also a significant number of in vivo monitoring data as well, and we wanted to point that out.

And NIOSH committed to evaluating that data to assess its usefulness in possibly developing co-exposure intakes and to assure that any intakes would be claimant-favorable.

As I discussed at the outset, one issue of particular import during Board discussions was what about machinists. You know, is the uranium monitoring program, and really the thorium monitoring program as well, adequate for machinists?

So what we did is we took a look at the claimant population again, and we found that there are about 236 claims that are designated as machinists. And we found that just under half were monitored internally for uranium while they were also badged externally.

And the other thing we really looked at is like, well, what does this really mean in terms of dose reconstruction? So we looked at each of these 236 claims and the records in their file and said, well, if we're just going to look at each individual claim, how many need a co-exposure assignment, how many don't need one, or how many need a partial?

In other words, there's a portion of their employment where they would likely require a co-exposure, formerly co-worker intake assignment. And you can see under this third bullet just over half wouldn't even require a co-exposure assignment. And then about a quarter each, one quarter would require co-exposure for their entire employment, and another quarter at least have part of their employment that would require it.

Now, one thing that might confuse you about this slide is how could you have, if only 47 percent were monitored internally, how could you have 51 percent would not require a co-worker assignment?

And really, the reason for that is the 47 percent, I considered any year in which there was dosimetry showing external monitoring, including non-covered years by DOL. But if you only considered the covered employment, which is obviously a DOL determination, that number actually increased to 51 percent.

And NIOSH's response to this is, again, we're talking about is there a special category of worker out there that might not be covered by a generic co-worker model, either because their exposure potential has significantly increased or they're just simply not represented in the monitored population. And so this gets to the notion of stratification.

And really, the question is do machinists or any other worker category, for that matter, need a separate co-exposure model distribution, again, possibly due to higher exposure potential?

And NIOSH is committing to obviously address the possible need for stratification. And that will come about when they evaluate and develop the co-exposure model.

So again, a common theme here is that a lot of the things SC&A pointed out in its review will be addressed. And they will be addressed by the development of a co-exposure model.

We do want to take a little bit deeper dive into the actual exposure potential for machinists. The previous slide I talk about how many were actually monitored, how many would require a co-exposure assignment?

But another thing we found was that we have airborne contamination data that was delineated into three categories. And that delineation was made by the site. That wasn't SC&A.

And you can see the three here under Bullet 1. You have metal fabrication, which is described as machining operations, so again, what is the exposure potential for machinists? Then you have two types of metal preparation, Type A and Type B. Type A included chemical processes, casting operations, rolling, and forming. And Type B was the chemical recovery processes.

And what we found is that those two metal preparation categories were really consistently bounding, at least when comparing the airborne contamination data to the fabrication activities, which again are described as machining operations.

So SC&A's conclusion was that the metal preparation workers likely bound the metal fabrication work done by machinists. And that was Observation 9.

Moving on again, that was thorium and uranium. And what about some other sources of exposure? As noted in, well, here in the first bullet anyway, RPRT-90 is really the document that deals with this. And it's titled Monitoring Feasibility Evaluation for Exotic

Radionuclides Produced by the Oak Ridge National Laboratory Isotopes Division, which applies also to Y-12.

So SC&A has reviewed that report, and discussions are still ongoing. I know we're getting ready to produce a response to NIOSH's response to our original review on that. So again, any issues associated with exotic radionuclides would really be handled by that process.

However, specific to Y-12, one of the things that was noted was plutonium-241 in particular. And this was really borne out from the SC&A review of RPRT-90. We just noted that in RPRT-90 there's a sentence about items requiring additional evaluation by NIOSH. And the quote from in there is, The one remaining plutonium-241 was processed and handled on the Y-12 campus and, as such, not addressed further in this document.

So we sent all that. And they said, okay, it really should be dealt with then in the SEC context. Because the prior period under SEC-250, I believe it was 251, but prior to the period we're really looking at, plutonium-241 was identified as one of the infeasibilities. So if it was infeasible before, it should be dealt with going forward. It was actually, yes, it was part of SEC-251 up through 1976.

And NIOSH's response was, and again this points back to SEC-251, not 250, which we're discussing today, but in 251 they determined that plutonium-241 reconstruction is feasible, at least after 1967, based on the appearance of actual monitoring data for that radionuclide.

And we have some, we had a couple of clarifying questions on that, that we brought up to NIOSH during the September meeting really just to clarify some of the references and gain a little more

information on that.

And one of the key pieces is that it appears that 241 might have ended in 1973. And so then it really wouldn't be that relevant to this SEC discussion. But we just want to really run that to ground just to make sure that that isn't a source term that we really need to be concerned about in an SEC context.

And then the last one here is that the Isotopes Division that really produced all these exotic other sources of exposure really ended production in the early '80s.

But D&D activities and how that would be reconstructed is not really addressed in the evaluation of SEC-250. And so we feel that it at least needs to be addressed in terms of how are you going to reconstruct any doses to D&D activities for a lot of these exotic radionuclides.

All right. So the ongoing evaluation activities and the path forward, again, we all met in September. And, as I said, on almost every slide all these findings and observations that SC&A had in our review are really to be handled through the process of co-exposure development which has to consider, again, adequacy, completeness, representation, and stratification.

Also, since the September meeting, SC&A, in conjunction with NIOSH and ORAU, we performed 12 telephone interviews with former workers. One of them was in August. I think the remaining were in October and November.

There were supposed to be six additional interviews, but just communications were unsuccessful. We weren't able to really get those set up. Or if it was set up, you know, the interviewee just didn't show.

So the notes from those interviews are currently undergoing classification review which is a standard step. And then once we get those declassified, everyone who was on the call will have our notes consolidated into a summary form. And then it's sent to the interviewee to confirm the accuracy, at which time they can also add information, take away information, as they see fit.

And NIOSH does continue to evaluate the thorium source term in that reserve period, 1987 to 1994, which will be, I suppose, in that upcoming addendum report to SEC-250.

And also, one of the things NIOSH indicated they were undertaking was to rebaseline technical issues from, I believe, their TBD reviews that occurred in 2005 and potentially discussions in 2008, so quite a while ago, and to rebaseline those technical issues and see which ones are already handled by existing SECs and which ones need to continue to be discussed, whether in an SEC context or a Site Profile context.

Before we get to questions, I'm not sure, Dr. Field, if you would like to add anything or perhaps, Dr. Hughes, I don't know if you want to expand a little bit on some of NIOSH's activities. But this concludes my presentation. And I can take questions now, or give NIOSH a chance to speak up, or Dr. Fields.

Member Field: Lara, do you want to follow up with any information?

Dr. Hughes: This is Lara Hughes with NIOSH. I don't have much to add. So we are currently working, as Bob pointed out, on the Evaluation Report addendum that focuses on the internal dose reconstruction feasibility for thorium for the years 1987 through 1994.

And this is an ongoing process. There was some back and forth with the site to clarify information that was contained in the available data. This is currently progressing.

During the Work Group or before the Work Group there was this report from the petitioner that was submitted to NIOSH and the Work Group that raised several issues. And NIOSH was, during the Work Group meeting, tasked to provide a response paper to address those issues. And this is an ongoing process. And this response paper will also address the interviews that were done.

The petitioners have submitted to NIOSH 22 names of individuals that would have liked to be interviewed. And we proceeded to do this. We did 12 interviews that were successful. And as Bob pointed out, this is currently in the process of the interview transcripts being sent to the interviewees where they can check for accuracy and make changes to it.

From past experience, this is potentially a lengthy process, because it relies on the individuals to be responsive. So we don't have a clear indication of the timeline. But once we have the responses for these interviews, this will be incorporated into the response paper that will address those petitioner issues.

And this is something that will be completed before the ER addendum is completed. So I'd just like to point out the change in timeline because of this additional effort.

And then after that will be the completion of the ER addendum and after which the additional Issues Matrix items will be addressed by NIOSH. That's really all I have. I'd be happy to answer any questions.

Member Field: Yes. I think probably we'd take a few Board questions.

Member Clawson: Yes, this is Brad. So Bob, what you're telling me is that we're still doing the data completeness and adequacy check on the information?

Mr. Barton: Yes, Brad. I think that's accurate. Really what we were tasked with is to go and look and see what we have. And if there were any real red flags or, you know, where there's smoke there's fire type of things that stuck out to us, that would say, well, we don't even really think you can do a co-exposure model. We think there's an SEC here.

So it's a very preliminary data evaluation, but really to get at whether dose reconstruction is feasible to the unmonitored worker, NIOSH needs a chance to really go and prove it against the co-exposure guidelines which, again, were approved by the Board earlier this year. Oh, I guess it was last year.

Member Clawson: Okay. I just wanted to make sure that I understood that correctly. Thanks.

Member Ziemer: Bob, this is Paul Ziemer. I have a question regarding the uranium urinalysis. I noticed, I forget what slide number it was, but you indicated that there was something like 98 percent of the uranium urinalysis. Yes, and I see you put the slide up, 98.4 percent completeness.

I wondered why that's considered an observation. Usually, observations indicate a concern you had. So it wasn't clear to me why that was an observation. Could you clarify what the concern is with the 98.4 percent.

Mr. Barton: So it's certainly not a concern. I guess from my viewpoint, observations could be a concern

that doesn't rise to the level of a finding. Or it could also be basically reporting out. I guess you could call it --

Member Ziemer: Okay, I misunderstood. I thought it was some sort of a concern. So you've used observation in a little different way than I was used to.

Mr. Barton: No, I understand. It's definitely not a concern in this context, no.

Member Ziemer: Got you. Okay, thanks, that helps.

Ms. Barrie: This is Terrie Barrie. Are the petitioners permitted to make a statement for the Y-12?

Dr. Roberts: No. There is a public comment period so you can make your statement at that time.

Ms. Barrie: Okay, thank you.

Dr. Roberts: Thank you. Are there any additional concerns, or comments, or questions from the Board?

Okay, I'm not hearing any. It sounded like maybe somebody had something. But we are scheduled next in the agenda for a break. But let me check in with you, Bill. Is there anything else that you wanted to do on this agenda item for Y-12?

Member Field: No. I think we're good. I look forward to hearing petitioners if they have comments for later during the public comment period.

Dr. Roberts: Okay, very good.

Member Anderson: This is Henry Anderson, just a quick one. Any sense of how long the process will go on yet? Do we have an estimated end where we may hear more?

Dr. Hughes: This is Lara Hughes with NIOSH. So the current expected completion date for the ER addendum is at the middle of next year. But that's a tentative date. This is precluding any, you know, things coming up that we're not anticipating at this point.

Member Anderson: That's good. That's all I wanted. There's no firm date, but it's good to have a target. And again, if there's going to be interviews, that's always a challenge these days.

Dr. Roberts: Okay, anything else?

Okay, well, the next agenda item, as I was saying, is for a break. And that was scheduled from 3:15 to 3:30. Is the Board, would anyone object to taking a break from now, which is about 3 o'clock, to 3:30 and then resuming with the Board work session at 3:30? It's a little bit of a longer break than planned. But is it okay?

Member Kotelchuck: Fine, Dave.

Member Beach: Josie, sure.

Dr. Roberts: Okay.

Member Valerio: Loretta, good.

Member Kotelchuck: Okay.

Member Ziemer: Paul, good.

Member Clawson: This is Brad. I'm always good for a little extra break.

Dr. Roberts: Me too. Okay, does anyone object?

Member Roessler: This is Gen, I agree.

Dr. Roberts: Okay. Very good. And Nancy, or Zaida, can one of you get in contact with Jim and let him

know that we'll be back on at 3:30. And then we will start the remaining part of the meeting with a work ---

Ms. Burgos: I can do that.

Dr. Roberts: -- session. And I'll take roll call. All right, thank you.

All right, so we will see you all back at 3:30 Eastern.

(Whereupon, the above-entitled matter went off the record at 3:00 p.m. and resumed at 3:30 p.m.)

Dr. Roberts: Okay, my clock is showing 3:30 p.m., Eastern, exactly. Remember, if you're back on the line, please mute your phones and make sure they stay muted. *6, if you don't have a mute button, and *6 to unmute.

I'm going to take a quick formal roll call. I know that some of the members, the Board members are back. But let me go ahead and quickly take it. Anderson?

Member Anderson: Here.

Dr. Roberts: Beach?

Member Beach: I'm here.

Dr. Roberts: Clawson?

Member Clawson: Here.

Dr. Roberts: Field?

Member Field: Here.

Dr. Roberts: Kotelchuck?

Member Kotelchuck: Here.

Dr. Roberts: Lockey?

Member Lockey: Here.

Dr. Roberts: Richardson? Richardson?

(No audible response.)

Dr. Roberts: Roessler?

Member Roessler: Here.

Dr. Roberts: Schofield?

Member Schofield: Here.

Dr. Roberts: Valerio? Valerio?

(No audible response.)

Dr. Roberts: Ziemer?

Member Ziemer: Here.

Dr. Roberts: Okay. So we do have a quorum. Let me just check back. Has Richardson joined yet?

(No audible response.)

Dr. Roberts: Okay, Valerio, have you joined?

(No audible response.)

Board Work Session

Dr. Roberts: Okay. Well, we'll go ahead, and perhaps they can join as they are able. Let's go ahead with the Board work session.

So the first part of this is pretty straightforward. It's looking at our schedule of meetings of the full Board for 2021.

Currently, we have one on the books for February

24th, 2021. And that will be a teleconference. And typically in those we simply plan for the next, quote-unquote, face-to-face Board meeting.

The next full Board meeting following that one would be April 14th and 15th. And normally we would be doing that in person. However, given the COVID situation, I am thinking that we're going to have to do that as another virtual meeting. And perhaps what we could do is have it on Zoom. But I do want to open that up for comment.

Member Anderson: Just back to the 24th, what time would that call be?

Dr. Roberts: Typically they're at 10:30 a.m. So I think that's what I scheduled it for.

Member Anderson: That's Eastern time?

Dr. Roberts: Yes, 10:30 a.m., Eastern. That's correct.

Member Richardson: Hi, David Richardson.

Dr. Roberts: Yes. Oh, hi. Thanks. Okay. So, David, we were just taking about the schedule of meetings. And I was saying that, due to some of the projections and predictions related to COVID-19, we're probably going to need to do the April 14th and 15th meeting virtually.

Are there any, you know, are there any comments or anything in response to that?

Member Lockey: Hi, this is Jim Lockey. Yes, I can go first.

Dr. Roberts: Sure.

Member Lockey: Perhaps I think, just for discussion purposes, I think this is for the Board. We're going

to have our phone call, I think, in February, I think you said, right?

Dr. Roberts: Yes, that's correct.

Member Lockey: So I find that having these types of meetings when there's complex issues is problematic. And I'd like to entertain the idea that in February we look to see what's going on with COVID. We see where the vaccine is, and at least talk about, if feasible, if it looks like things are opening up, and people are safe to travel, that we consider postponing that meeting until the following month or perhaps even June to have it in person.

I think these meetings leave, by Zoom or whatever, it leaves a lot to be desired. I think we're doing the best we can, but having something in person is far much better, especially when we're dealing with complex issues.

Dr. Roberts: Okay.

Member Anderson: It could also depend on the agenda.

Member Lockey: That's correct. And I agree with that. But, you know, I think that this is lot to be, it leaves a lot, this morning's not an issue. But if there's something like Savannah River or Hanford, or something where there's a very complex issue that we've been dealing for a number of years, I think an in-face meeting is vitally important.

Dr. Roberts: Okay. So what --

(Simultaneous speaking.)

Member Lockey: I would like to say, in February we look at it and see where we stand from a medical perspective in relationship to our own safety. Because I think a lot of us, including Brad, are old

people. And --

(Laughter.)

Member Lockey: Nothing personal, Brad, right? Please.

We can at least re-evaluate it, okay, and we can, if we have to, we'll keep the meeting on the April 14th. But at least we can look at it again.

Member Kotelchuck: Jim, Dave Kotelchuck. The only concern I have is that I believe it will be difficult for Rashaun and her staff to arrange a meeting site from February 24th to April 14th.

I think, in a way, if we are going to make a decision to go in person, probably the April 14th, 15th meeting will have to be delayed for at least a month, just because it is so difficult making arrangements.

Member Lockey: I agree with you. I leave that up to NIOSH. But if we have to postpone it, in February we can say it looks like the country's going open up and be safe in May or June.

Member Kotelchuck: Yes. Yes, I think that's right.

Member Lockey: Okay. And I think that's probably when it is going to be safe. I mean, I'm not going to delay getting my vaccine; as soon as I'm satisfied to where I should get it, I'm going to get it. And the data out for the vaccine looks like it's very robust. So I just want to throw that out for consideration.

Member Kotelchuck: Yes.

Dr. Roberts: Yes.

Member Ziemer: This is Paul. I think it may not end up being our decision. The CDC may have in place

some particular policy, pro or con, at that time. So we may have to depend on what the CDC allows travel-wise for its staff, and its contractors, and its consultants.

But I think you're right, we may have to wait until February and discuss it again and see where things stand.

Member Lockey: That's all I'm saying, Paul, I would like to raise the issue in February again.

Member Ziemer: Okay. I'm open to that too.

Dr. Roberts: Okay, so it sounds like most are in agreement that we should, in the February teleconference, we just re-evaluate whether or not we need to delay and have things face-to-face or if it looks like we need to go forward with the virtual meeting in April. So does that pretty much sum it up?

Member Lockey: Yes.

Member Clawson: That's correct.

Member Beach: That makes sense.

Dr. Roberts: Okay, great. Yes, and I think a lot of good points have been raised about us needing enough lead time to book hotels, and get the locations. And also the CDC policy around travel is also a major consideration as well. So we'll talk about it further in February as suggested.

Okay, so beyond April 14th and 15th, we do have a teleconference, another full Board teleconference tentatively scheduled for June 23rd. Again, I try to have all the meetings started about 10:30 a.m., Eastern.

And then in terms of the next face-to-face meeting,

I'm assuming that by August of next year we will actually be able to meet face-to-face. So I'm optimistic that that will be the case. And we've tentatively got August 25th and 26th tentatively scheduled for that.

Member Beach: Yes, Rashaun, this is Josie. I actually have the 18th and 19th, so that date must have changed to the 25th, 26th. Is that correct?

Dr. Roberts: You have the 18th and 19th?

Member Beach: Yes, that's what I had listed from our last call.

Member Field: Yes, this is Bill. I have those.

Member Roessler: I have that too.

Dr. Roberts: Hum.

Member Roessler: The 18th and 19th.

Dr. Roberts: Interesting.

Member Beach: Either one is fine. I just wanted to make sure we're all on the same page.

Dr. Roberts: Okay. Well, I could do either week. Is there a preference? Because I have it on mine for 25 and 26. I don't know if something got changed along the way, but we could certainly have it the 18th and 19th if that's preferable.

Member Ziemer: Somebody raised a question before on the later date. I don't remember what it was.

Dr. Roberts: What is that --

Member Richardson: I thought it was Dr. Kotelchuck.

Member Kotelchuck: I had raised concerns about the 18th. And I do actually have the 25th and 26th down, only because with schools opening earlier and earlier we often go out with the grandkids earlier in August. So I would prefer the 25th, 26th.

But given the way things are, I'm more than open to, at this stage, to going to 18th, 19th, depending on our mutual will.

Dr. Roberts: Okay. Does anyone have an objection to the 25th and 26th?

Member Beach: No, not at this time.

Member Clawson: This is Brad, I don't.

Member Kotelchuck: Looks good.

Member Valerio: This is Loretta ---

(Simultaneous speaking.)

Member Valerio: -- works for me.

Dr. Roberts: Okay, sorry.

Member Ziemer: This is Paul, it works for me.

Dr. Roberts: Okay.

Member Clawson: You know, you may want to talk to Lockey. Because, you know, the world seems to rotate around him anyways, so, oops.

(Laughter.)

Dr. Roberts: Okay. Gen, did you want to weigh in?

Member Roessler: Yes, am I, can you hear me?

(Simultaneous speaking.)

Dr. Roberts: Yes.

(Simultaneous speaking.)

Dr. Roberts: I'm sorry, a few people were talking.

Member Roessler: I'm okay with the 25th and 26th.

Member Lockey: Jim Lockey, I'm okay with the 25th and 26th also.

Dr. Roberts: Okay. Was someone else speaking in the background? It sounded like a few people were talking at the same time.

Member Roessler: This is Gen. I'm okay on the 25th and 26th.

Dr. Roberts: Okay, got it.

Member Valerio: This is Loretta. I'm okay on the 25th and 26th.

Dr. Roberts: Perfect. Okay. Well, it sounds like we've got those dates nailed down well into 2021 with the understanding that we will talk in February about whether or not it's feasible to have the next face-to-face actually face-to-face.

Okay. Well, are there any other questions or concerns about the meeting schedule?

Member Beach: The only thing I would say is if we cannot meet in April face-to-face I would hesitate to not have a meeting, especially when we already, we would have to push it out, I'm sure, a couple of months because of the scheduling part.

Member Kotelchuck: Oh, yes.

Member Beach: Anyway, just a thought on that.

Dr. Roberts: Okay. All right. Well, it sounds like, you know, it will depend on a number of different variables to be assessed in February. So we'll see

where we end up.

Okay, any other concerns or questions about the meetings?

Okay, hearing none, I think we need to turn to our Work Group and Subcommittee reports. I do know there are a number of chairs that have reports. So I'll let you guys start.

Work Group and Subcommittee Reports

Member Clawson: This is Brad. We're going to have a presentation tomorrow with SRS, so that one will be taken up tomorrow. And I want to go over, we're still collecting data for the Nevada Test Site, as Greg mentioned today. I think we're still doing some final up work on Fernald. Is that correct, Tim?

Dr. Taulbee: This is Tim --

Mr. Barton: Yes, this is Bob Barton. I believe Fernald, with all the Site Profiles, I think that's been essentially closed up. I mean, the only thing left to do is to have the documents appropriately revised. But I think all the issues have been settled. Is that your view on it, Tim?

Dr. Taulbee: That's correct. The current open action items that we have, whether it is in the open items, it is revising the TBDs. And that is currently ongoing. And so I don't have the dates for when those TBDs are going to be completely finalized at this time, but we are working actively on that.

Member Clawson: Okay. Yes, that's kind of where I was at. And as soon as those TBDs are revised and stuff, SC&A's going to review it per our requirements and go from there, correct, Bob?

Mr. Barton: Yes. It would essentially be to verify that any suggestions, or not suggestions, changes,

the changes agreed upon by everyone involved are correctly implemented in the revision. That's really just the last step.

Member Clawson: Okay. And, Chuck, I think that you're on. Where are we sitting at with Hanford right now? I think we've finished up all of the, we're just getting everything all put together. I think most of our issues are completed, correct?

Mr. Nelson: Yes, that's correct. Basically we're going to start co-worker evaluations very, very soon.

Member Clawson: Okay.

Mr. Nelson: So that's where we are with that. That's what's remaining.

Member Clawson: Okay. And I appreciate you keeping me apprised of the process that's going on. That's been helpful for me. I appreciate that, Chuck.

Mr. Nelson: Okay, thank you.

Member Clawson: So that covers most of my sites.

Member Kotelchuck: The Dose Reconstruction Review Subcommittee. Rashaun suggested that we might (audio interference) more than usual, give a bit of a report, an informal one today. And so I do, I can talk a little about it, and if it would be useful for five minutes or so.

I realize that the last report we gave was in December of last year, before you, Rashaun came on board as the Designated Federal Officer. I might just repeat one or two items, and also to bring to the attention of the Board, even though it was read and passed, but just to say a couple of nice things.

First, last December we reported a total of 498 dose reconstruction review cases that we had done and

32 blind reviews out of a total of 48,089 dose reconstructions completed by NIOSH. So that gave us a 1.04 percent rate of review, and that's been our goal and continues to be our goal which was set by the Board, that the Subcommittee review one percent of all NIOSH dose reconstructions.

And just to emphasize something, people -- this is something I think we can be fairly proud of as a board, that since 2002 in terms of the dose reconstructions, there has only been one single case where the Subcommittee compensation decision was determined to be different than NIOSH's.

Out of -- so out of the 498, there was one where there was disagreement, and the disagreement came because in fact there was new information that came in after the original comp decision was made. So if you will, if there was a disagreement rate, it is .02 percent. It's fairly impressive. I mean we haven't had a disagreement, a disagreement that changed the compensation decision, or debate about it to change it for many years.

Basically the other, the other really major emphasis that we've had or new emphasis that we've had certainly since I've been on the committee and the chair was we reported last December 32 blinds, up to and including Set 24, and out of the 32, the comp decision for 30 of those 32 cases was the same by both NIOSH and SC&A.

The one case was given to the Surrogate Data Committee, which upheld NIOSH's effort. So we can say that as of last December, there was not a single blind case in which the NIOSH, the original NIOSH dose reconstruction was not upheld.

So that's a pretty good record. Since last December, we've done -- we have done another set of six, and then we are in the middle of another set of six in

Set 28, three of which have been completed. And so by our next meeting on February 25th, we'll have 44 blinds done.

Now once we -- once we began doing more blinds, there were really -- before 2015, there were only two blinds that had been done. So we're really doing a steady, a steady stream of them. Before they -- let me just see, one second. My point, wait. Excuse me one second. Let me catch my -- something I wanted to say about the blinds.

Basically, oh yeah. We have been, we have been -- in choosing blinds, we look for cases that were evaluated, dose reconstructions that were done under best estimate, and for PoCs between 45 and 52 percent. But as we've been doing more and more blinds we have also been choosing more and more difficult cases, in the sense that we've been choosing -- we've been choosing blind cases where the PoCs were within, typically often within one percent of 50 percent.

So even the slightest difference between NIOSH and SC&A might well give a difference of compensation decision. So we are now having a few cases and we'll report on them later, at some later time, when we finish our next set, where there are disagreements. But the disagreements reflect simply the variability in -- the slight variability in dose reconstruction determination.

So we're, I think we're both doing lots of blinds. These are very important to show that we are doing work consistently, and that the work that we're doing is reliable and consistent, and that's very good. So that's --

And then the other news for our Subcommittee is that we determined after the last report that we had, we were going to try to speed up our review of

just regular cases. Not blinds, just regular dose review, dose reconstruction cases by splitting them up into two categories. Category 1 was really fairly easy decisions because basically they're ones in which NIOSH and the SC&A agreed, or after some discussion agreed.

And so we were able to do a lot of them very quickly, and that leaves us more time for the Category 2s, which are more difficult because there is disagreement or either of the groups wishes us to consider some matter that they want to bring before us.

So we're, I think we're moving right along and, you know, we have an active Subcommittee. Josie, Brad, Jim, David Richardson and Loretta, and of course we are helped by Rose Gogliotti from SC&A staff consultant. So that's sort of where we're at right now, and we'll be bringing a report on the blinds to, probably to the Board in the next, after our next meeting, which is on February 25th of next year. Okay, thanks. If there are questions --

Dr. Roberts: Thank you.

Member Beach: Rashaun this is -- are we ready to move forward? I don't want to step on questions.

Dr. Roberts: Sure. Does anyone have any questions before we move on to Josie, the Dose Reconstruction Subcommittee?

Ms. Gogliotti: This is Rose Gogliotti. Can I just point out that we will be doing our one on ones? In the next month or so we're going to get started, so please look for my emails and respond with scheduling questions, comments. I would appreciate that.

Member Kotelchuck: Yeah, right.

Member Beach: Oh Rose, I -- can I follow up on a question for Rose? How are we going to do the one on ones? Have you guys determined how we're going to pair up for those?

Ms. Gogliotti: Rashaun, you can do the tasking on that.

Dr. Roberts: Yes. I will be working on that later this week.

Member Beach: Okay, because we had some discussion on how we've done it previously and how it was done the last time, and I was hoping that that was going to be tweaked and not -- anyway, I think we had some comments on that at our last --

Ms. Gogliotti: I think we're hoping for three to four cases per call, and then the Board members would partake in two calls.

Member Beach: Okay, that sounds great. Thanks.

Member Kotelchuck: Yes, good. Okay.

Dr. Roberts: Okay. Well, hearing no additional questions or concerns, Josie, I think you can go ahead.

Member Beach: Okay. So I have five sites I'm going to report really very briefly on. The first one is LANL. We do have a Work Group scheduled for LANL on February 4th of next year. We have two remaining SEC issues for the time period of 1995 to 2005 at LANL.

We have the 1999 LANL assessment that led to the non-compliance tracking system report. We refer to it as the NCID-484. The issues include data gaps for bioassay enrollment and drops of specific bioassay participation. NIOSH had a path forward that we discussed at our last Work Group meeting last year,

to determine the compliance with the bioassay requirements.

We had questions. Is it even feasible to conduct the sampling plan at LANL from 1996 to 2001? Are the RWPs available? NIOSH agreed during our last call to develop a sampling plan and submit it to the Work Group. This was actually due in November of I think it was 2020. LaVon, if you're on. I was trying to remember if it was 2019 or '20 that that was due.

Mr. Rutherford: It was actually due, yeah. Well, it was actually due in November of this year, but actually what we determined was that we did not need a sampling plan, that we could actually -- we had access to all the RWPs and we were going to pull the data from all the RWPs for analysis.

Member Beach: Oh, that's right. Okay, great. And so now our next meeting we will have that plan, and we as a Work Group will be able to -- it's not a plan, but we'll be able to look at what NIOSH will put forth.

The next one is the mixed activation products and exotics. NIOSH is to compile in-house the data that they had on hand, and they were waiting for the site to send the other data sets to analyze. Those were held up because of COVID, and I believe they have all those in-house, in hand now as of what, November LaVon or first of -- did you get those last ones?

Mr. Rutherford: Yeah. I think it was in November period, October-November time period. I did misspeak. We were to have that sampling plan last year, but when we were held up with the site getting the data and then the COVID hit in March, and that pushed us off on getting that.

So we had anticipated -- we've been waiting on the site for some period of time. We did get all the data for the RWPs and the mixed fission activation product samples as well back October-November time period.

Member Beach: Yeah, and those all -- both of those are due to the Work Group in mid-December of -- or out --

(Simultaneous speaking.)

Mr. Rutherford: Yeah.

Member Beach: Right?

Mr. Rutherford: Yeah. Well, we were hoping mid-December. I'm going to get the update on that because we were having some difficulties on getting the last of that data downloaded. I need to check on that and get back to the Work Group within the next few days.

Member Beach: Okay. Yeah I just realized it is mid-December. And SC&A needs to have that in plenty of time. So if we need to push back our February meeting, we probably need to know that like you said, within a couple of days.

Mr. Rutherford: I'll get that to you.

Member Beach: Yeah, good. I want to make sure we have plenty of time for response. Any questions on LANL? Joe, anything to add?

Mr. Fitzgerald: No. I think that covers it pretty well, and we'll certainly look for the data when it's available.

Member Beach: Great, okay, thanks. On Metals and Controls, our last Work Group meeting was held in September on September 2nd, and we do have

another meeting scheduled for January 13th of next year.

There are several open items. I started to kind of try to write this up, but there's some disagreement within the Work Group on how the plan is going to take, how the modeling is going to take place between SC&A and NIOSH.

So the Work Group really wants to know the fine-tuning of how we're going to do or how NIOSH is going to do some of this dose reconstruction.

We still have a couple of SEC. We haven't actually voted on that SEC issues. So the Work Group has some work, and I'm hoping that we will have some clarity and will be able to bring this to the Board in April. If not April, it will definitely be by August. So we're getting close.

LaVon, and I was going to say that it's written up in the DCAS coordination, all the different items, and LaVon and I have sent emails back and forth on some items, to make sure that the Work Group or NIOSH understands what we're looking for. So I think we're clear. Anything else to add, LaVon?

Mr. Rutherford: No. I think you've covered it. Like you said, we're pulling the whole dose exposure or the dose modeling picture into one, and basically like how we would complete a dose reconstruction. We're pulling that all together, and we also had additional items that we were tasked with and as Josie mentioned, we went over those and I think we're on track.

Member Beach: Thanks. Yeah, this has been an interesting site, to say the least. So any other Work Group members want to comment on Metals and Controls? No, no.

Member Kotelchuck: Dave, no.

Member Beach: Okay. Thanks, Dave.

Member Valerio: Loretta, no.

Member Beach: Okay perfect, and I'm not hearing from Andy so --

Member Anderson: Nope, I'm good.

Member Beach: I think we're on track for our next Work Group meeting in January, and hopefully we'll move on from there. So Brookhaven is one of my sites. We're just waiting for the OTB-0048 to be updated. That's not due until June of 2021. Yeah, and Mound, we have been waiting for the external TBD for several years. It's a low priority, and I don't actually even have when that's due. Does anybody know for Mound the external? All the others are completed.

Dr. Taulbee: This is Tim. The Mound external, the issue is finalizing the neutron dose reconstruction methodology from that standpoint, and that work is ongoing right now. So there's some evaluation of that, the final time period.

I believe it's 1971 to '77 time period. So that's where the holdup has been and as you indicated it has been kind of a lower priority, and as people have time they are working on that to update that TBD.

Member Beach: Great, and once that's out, I'm sure SC&A will look at that review, and the Work Group can set a call for that. Thanks, Tim. My last one is the Procedure Subcommittee. We've met a year ago or it's probably been a little over a year.

Our next meeting is scheduled for February 18th. We have an agenda that, Rashaun, I know we were

looking at it the last couple of days, and Rashaun sent that back out to Kathy for review, and that should be finalized in the next couple of days. So that's all I have.

Dr. Roberts: Thanks, Josie. Any questions? Okay, hearing none, who else would like to report?

Member Roessler: Well this is Gen. I think it would be okay for me to report on ORNL, based on my overhearing Bob Barton's report this morning on -- or was that this afternoon on Y-12. As you know, NIOSH produced a major report on the ORNL exotic radionuclides.

This was turned over by the Work Group to SC&A, and according to what Bob said this morning in his report on Y-12 and of course there's overlap there, SC&A is getting ready to respond to the NIOSH evaluation. So assume that means that soon our group will be able to meet again. I think if Lara's on the phone, she might know more, or maybe Bob is the best source on that timeline.

Mr. Barton: Well, this is Bob. I might want to defer to Joe a little bit on this, but yeah the report on exotics was reviewed by SC&A, and NIOSH has provided responses to our review. We've responded to the responses, so it's probably about time to sit down and really kind of hammer these things out. Joe, if you're there, I don't know if you want to add anything to that. But I think that report is probably -- I'm not sure if it's -- it still needs to go to DOE, I believe.

Mr. Fitzgerald: Yeah, I think to answer your question, you're quite correct. It's completed from our standpoint. Just requires ADC review and final editing. So it's about to be issued.

Member Roessler: Okay. That's all I think we have

on that then.

Dr. Roberts: Okay, thank you. Any questions or comments? Okay. Any other Work Group or Subcommittee updates?

Member Anderson: I can -- this is Andy. I can give a quick update on the URAWE and the SEC Issues Work Groups. For our URAWEs, I think we're waiting for some TBDs to be finalized and so we're moving along there. I don't remember if we have another site being assigned to our group and there was some discussion, but at least that hasn't happened yet.

On the SEC issues, we got involved with the Savannah River Site that we're going to talk about some, specifically addressing the coworker models issue. I think there were some at the last -- at the November Savannah River meeting, I think there was some discussion that some of the reports that are on model issues that were raised in actually reviewing the guts of the models, might need to be gone over again or presented specifically for work by the SEC Work Group, Issues Work Group.

I don't know if NIOSH has any thoughts further on that. Do we need to do that or -- I think our conclusion for the group was that we actually got involved with the Savannah River Site because that was to be sort of a test case, you might say the best test case because of the fairly extensive data available, and I think we thought that the approach used there was feasible.

But the issue really has come down to it really has to be looked at, whether the data to be put into the coworker models is adequate on a site-by-site basis. So we didn't sign off on this is now a basic tool to be used in coworker models, but it is something to be considered and looked at and then see if it does

meet the criteria that have been established. There are some disagreements on some of that.

Dr. Taulbee: I believe that's correct, Dr. Anderson. This is Tim Taulbee. I do think, and correct me if I'm wrong; maybe I'm misremembering here.

But I did think that the -- one of the tools, one of the methods, multiple imputation, was discussed and was kind of decided upon that that was a reasonable tool to be used going forward. I think that was one of the outcomes.

Member Anderson: Yeah, I think that's -- yeah. I think you're right. But again that is --

(Simultaneous speaking.)

Dr. Taulbee: Okay. Now whether we present that to the whole Board, that's up to your group.

Member Anderson: Yeah, yeah.

Dr. Roberts: I'm sorry, I didn't hear that last exchange.

Dr. Taulbee: Oh, this is Tim.

Dr. Roberts: Can you repeat what you just -- uh-huh.

Dr. Taulbee: Sure, this is Tim. As to whether we present that methodology, the multiple imputation to the full Board or not, I don't know that that's necessary or needed because everybody seemed to be in agreement on that. But if you want that, that is certainly something we could do in the future.

Dr. Roberts: Thank you, and Henry, were you saying something too?

Member Anderson: I was just saying when he said that imputation model had been discussed, and we

found it to be a tool that could be used. Since our group has dealt with the coworker model things probably more than some of the others, I guess I would leave it.

I'm not sure that that needs to be presented to the whole Board unless there's others that would like to become more familiar with it, because it's a kind of thing when, if it's going to be used on a site and it's part of the SEC determination, then on a site-specific basis, it will come up and the Board will need to hear about it.

So I think we want to be sure that the Board is familiar enough with it and comfortable that, when it is presented, we're not now going way back to is this an appropriate tool or not. So that would be --

Member Clawson: Hey, Henry? This is Brad talking. I think that we've got to bring that before the Board, because the whole Board needs to understand what this is and how it's going to be implemented, because all --

Member Anderson: Okay, well, that's fine. I mean I'm comfortable doing that. There's only three of us on our Subcommittee, so I think we're somewhat -- I think your Savannah River group is somewhat familiar. But I think it probably would be a good idea. We'll see after tomorrow's discussion as well, because it's one of the key issues related to Savannah River on the adequacy of the data.

So I think it might be -- it might be something worth looking at. I think that could be done on a conference call or issues like we're dealing with now. So if we're looking for not being able to go face-to-face in April, that might be something to put on the agenda, to have that presentation and discussion there.

Dr. Roberts: Okay, great. Thank you. Are there any other questions or comments about Henry's report?

Member Anderson: I don't know if we have anything new on Sandia.

Mr. Fitzgerald: Yeah Henry, this is Joe Fitzgerald. We just issued a OUO version to the Work Group and NIOSH a couple of days ago actually, and the Sandia report's been finished for a while, but was held up pretty much COVID-related issues.

It's taken a long time for ADC review and it took certainly a fair amount of time for the interviewees to approve the summary of the interview we did last January, just because of the mechanics of, you know, of getting ahold of them and having them respond.

So you now have that. It's an OUO version, but we expect that to be releasable once Sandia confirms the redactions that we had to make in it in the next couple of weeks.

Member Anderson: Okay. So that's probably something to bring to our Work Group.

Mr. Fitzgerald: Certainly. I mean it's -- like I said, we pretty much completed our review and provided our conclusions. You now have that, so it's essentially finished from our standpoint.

Member Anderson: And is NIOSH going to comment on it?

Mr. Nelson: Yeah. This is Chuck Nelson. The intention -- we got the document, and our plan is to provide a response to the Work Group to the report that SC&A provided. There's like one finding and I think four or five observations. We will provide a written response to that and get that to the Work Group. We're projected to have that done in March

of 2021.

Member Anderson: Okay. So then after that, just for the group's enlightenment, probably early April or the end of March when you get your data. We may want to schedule a meeting, Rashaun.

Dr. Roberts: Okay.

Member Anderson: That's it. Those are my three.

Dr. Roberts: Okay. Have we gotten everyone at this point?

Member Ziemer: This is Paul Ziemer. I can give a brief report on Lawrence Berkeley.

Dr. Roberts: Okay.

Member Ziemer: Yeah. Lawrence Berkeley has ongoing work on the Site Profile. The Work Group last met just a year ago in November, but in January of this year there was a data capture effort by NIOSH and SC&A together, and NIOSH has been working on follow-up on that.

I got a brief report from Megan Lobaugh of NIOSH actually this morning, just to give me an update on where NIOSH is on this. It's a very brief report, but I'd just like to read it into the record. She says, I am writing to provide a brief update on the tasks from the Lawrence Berkeley National Laboratory Work Group that NIOSH has been working on since the last Board meeting.

The Board reviewed more specifics on these tasks as agreed to at the November 2019 Work Group meeting. In short, research efforts continue in order to more fully respond to the SC&A issues on the TBD, as well as the SC&A issues on the NIOSH White Paper entitled Method to Assess Internal Dose Using Gross Alpha Beta and Gamma Bioassay in Air

Sampling at the Lawrence Berkeley National Lab.

Then she goes on to say NIOSH is determining whether additional data requests and interviews will help to further refine our responses. We will keep you updated on the specific tasks as progress is made and any responses are completed.

So basically -- and that ends her report. Basically it's an ongoing effort by NIOSH to update the TBD and will have further efforts then by -- for SC&A to review those responses, as well as for the Work Group to interact. And that's my report.

Dr. Roberts: Thank you, Paul. Just as a reminder, I'm hearing some interference in the back. So if you could mute your phones if you're not speaking, that would be great. Okay. So thanks for that report, Paul. Are there any questions or comments about Lawrence Berkeley? Okay. Are there any additional reports, or have we covered everything for today, for Work Groups or Subcommittees?

Member Schofield: Yeah, this is Phil. We're going to -- I'm sure everybody's aware of this on the agenda for this afternoon for Santa Susana/DeSoto Field Labs. We met in October. There were a number of things submitted by CORE Advocacy for us to go over and SC&A and NIOSH looked at some of these. So I believe Bob Barton will be this afternoon going over those.

(Simultaneous speaking.)

Member Schofield: So and then INL, INL we have not met since back in July. It's probably time we need to follow up with SC&A and NIOSH and see if we have enough at this point to schedule a Work Group meeting, and that's really all I've got at this time.

Dr. Roberts: Great, thank you. Any questions? Okay. Any other Work Group or Subcommittee reports, or are we done? Okay. I did want to mention, for lack of a better word, that the Pinellas Work Group has been resurrected. Phil has kindly agreed to be the chair. Other members from the Board are Beach, Clawson and Anderson.

For SC&A, Bob Barton will be in that group and Laura Hill, Lara Hughes for NIOSH will be on that group as well. So I just wanted to let you know.

Mr. Rutherford: Rashaun, this is LaVon Rutherford. Actually Megan Lobaugh will be our lead for Pinellas.

Dr. Roberts: Oh, okay. Let me change that.

Mr. Rutherford: We changed that on you. I apologize.

Dr. Roberts: No problem. Thanks for letting me know. Are there any other questions or corrections or anything to that? Okay. Well, we have about eight minutes until the next agenda item. I just wanted to give a brief summary of the August public comments. I believe they're comments from our meeting of the 26th, I think was the day that we had the public comment session.

Most of the comments were focused on monitoring at the Y-12 plant and difficulties related to obtaining employment records to support claims. So I think those were the majority of the comments. No comments, written comments were received for this meeting, just to provide you with that update as well.

Okay. So we have about a few minutes before we start. Do you want to just briefly check out until 4:30 and then we will open up with the update on SSFL and DeSoto?

Mr. Calhoun: Rashaun, this is Grady. I was listening when we were discussing the August potential dates, and there was a conflict there and that's why that was brought up, and that's why everybody else has that other date on their calendar.

So I think that we agreed at least tentatively on -- I have to pull up my calendar here, but I think it was like the 14th and the 15th, because we have several -- 18th and the 19th, yeah, because we have several people out the 25th, the whole week of the 23rd through the 27th.

Dr. Roberts: Yeah. You know what? I vaguely remember that. Okay, yeah. Somehow I didn't change it on my calendar. So --

(Simultaneous speaking.)

Mr. Calhoun: It was in my brain. I just couldn't remember it until --

(Simultaneous speaking.)

Mr. Calhoun: When everybody else mentioned it, that was -- that jogged my memory, as well.

Member Kotelchuck: Well, Grady and Rashaun, I was the one who said that I would really prefer the 25th through 26th, right. I have no conflict for the 18th and 19th I think it is, but that earlier week. So if we -- I mean if there's a problem, then I can certainly -- we can certainly go back to the one that most people had originally.

Dr. Roberts: Okay, yes. Both of us were still on the wrong dates. Okay, so 18th. So the correction is that the next face to face for the fall or late summer was the 18th and 19th. Okay, great.

Member Kotelchuck: Okay, good enough.

Dr. Roberts: All right.

Member Kotelchuck: So folks, fix your calendars back again.

Dr. Roberts: I'm sorry.

Member Kotelchuck: I am too, but we're glad to cooperate.

(Simultaneous speaking.)

Dr. Roberts: I'm sorry?

Member Anderson: Is it the 18th and 19th now?

Member Kotelchuck: Yeah, it's back to the 18th and 19th.

Dr. Roberts: Yeah, 18th and the 19th. Okay, and I'm going to change that now. But if folks want a five-minute break, if there are no other comments or questions, we could take five and come right back at 4:30 or what do you think?

Member Clawson: Rashaun, I'd just like to make one comment and that is for Lockey. Notice how that was done and Dave worked with us on this Lockey? I just want you to think about that, if you would.

We'll see you in a few minutes.

Member Lockey: Was somebody of significance talking on the phone? I don't think so.

Dr. Roberts: Okay, behave. Okay, so see you at 4:30.

(Whereupon, the above-entitled matter went off the record at 4:25 p.m. and resumed at 4:30 p.m.)

Dr. Roberts: Okay. I do have 4:30, so we need to

get cracking with SSFL and DeSoto. Let me do a quick formal roll call for all the Board members, to make sure everyone's back. So Anderson, are you here yet?

Member Anderson: I'm here.

Dr. Roberts: Great. Beach?

Member Beach: I'm here.

Dr. Roberts: Clawson?

Member Clawson: I'm here.

Dr. Roberts: Okay. Field?

(No audible response.)

Dr. Roberts: Kotelchuck?

(No audible response.)

Dr. Roberts: Lockey.

Member Lockey: Yeah, I'm here.

Member Kotelchuck: Kotelchuck here.

Dr. Roberts: Okay, Kotelchuck's there. Okay. Richardson?

Member Richardson: Here.

Dr. Roberts: Roessler.

Member Roessler: Here.

Dr. Roberts: Schofield?

Member Schofield: Here.

Dr. Roberts: Valerio?

Member Valerio: I'm here.

Dr. Roberts: And Ziemer.

(No audible response.)

Dr. Roberts: Paul, are you there?

(No audible response.)

Dr. Roberts: Okay, how about you, Bill? Have you come back?

(No audible response.)

Update on area IV Santa Susana Field Laboratory SEC Petition #235 (Ventura County, California; 1991-1993)

Dr. Roberts: Okay. Well, why don't we let them come in as they're able? I think we have enough to go on to the agenda item. So next on the agenda we have the update on Area 4, Santa Susana Field Laboratory, SEC Petition 235 and the DeSoto Avenue, SEC Petition 246. Mr. Phil Schofield is the chair for that group, and I believe Mr. Bob Barton will be making the presentation on behalf of the Work Group.

Member Ziemer: Rashaun, this is Ziemer. I'm back on the line.

Dr. Roberts: Oh great, hi. And Bill, are you back yet?

(No audible response.)

Dr. Roberts: Okay, okay. We can move forward. So Phil, did you want to say anything prior to the presentation?

Member Schofield: The only thing I've got to say is that we did meet in October, and CORE Advocacy

submitted quite a bit of information to us that we, that SC&A and NIOSH has looked at. Bob Barton is the one who's going to be presenting that, and it is -- he has generated a rather extensive paper here. So I really appreciate all the effort and work he's put into this. So I guess it's Bob turn now so --

Mr. Barton: Okay, thank you, Phil. I guess that's my cue. You know, similar to the Y-12 presentation from earlier today, I'll be presenting on behalf of the Work Group, and this is an update on the ongoing status of activities. You know, I probably should have put in a little bit more background slides into this presentation.

But just to remind everybody on the Board, Area 4 and DeSoto, these two are sort of grouped together as they're sort of sister sites, you know, same general oversight of the program but potentially different source terms to consider. SEC-235 extends through 1988 on the basis of inability to specifically reconstruct americium and thorium.

A lot of that comes from the fact that they were doing decladding activities that we know about up in Area 4. The DeSoto SEC has been granted up through 1964, again on the basis of inability to reconstruct internal doses that were going on in that earlier period.

So what we're going to be talking about today, and oh, let me also just state that it has my name up here on the presentation, but I wanted to recognize the great work that Milton Gordon put in in helping me do the research and really try to get our heads wrapped around this issue.

So and another thing just to note is that SC&A has reviewed both of these SEC petitions, the one for 235 in Area 4. I believe that was in November of 2017, and 246 was about a year later. So 246

DeSoto was about a year later, in the winter of 2018.

Since that time, there have been a number of document submittals, information submitted by the petitioner CORE Advocacy for nuclear and aerospace workers, which required careful evaluation and review and in some cases significant further research to try to get our heads around it, which I'll try to summarize in a meaningful way in this presentation.

So this is really a summary of what's sort of happened since the last time we reported out to the Board, and this first one is really the, perhaps the most concerning of them. It involves this TRUMP-S program, which stands for Transuranic Management by Pyropartitioning Separation.

What this would involve is actual handling of actinides after, up at Area 4 after 1988. Since the SEC was granted for Area 4 up through 1988 based on the inability to reconstruct doses of those actinides, any sort of activities that occurs with these actinides, operational exposures would be of particular importance.

And also on this first sort of item, and we'll go through each of these sequentially in this presentation, there is a 2012 EPA characterization study that identified a number of buildings, again up at Area 4, where it was listed that thorium and americium were contaminants of concern.

So again, since the previous, the SEC that's been granted through 1988 specifically involves thorium and americium, we're very interested in the potential for exposure after that period.

We're also going to talk about some worker interviews that were conducted in 2018 and 2019.

They were mainly tasks in support of SEC-246. But again, a lot of these workers worked at both locations, both at DeSoto, which is SEC-246 and Area 4, which is SEC-235. SC&A released a memorandum summarizing those interviews, the results of those interviews this past July.

The third item here is again further documentation that was provided by CORE Advocacy specifically related to Area 4, but also some material related to DeSoto. Like I said, they're really, the sites are sort of intertwined in the oversight of the health physics program. So it's very important to establish what the source terms were at the different sites.

So there's actually two reports for the third item. One was November of 2019, responding again to the specific documentation provided by CORE Advocacy. There's also a second report which I believe Phil was alluding to, that was sent to the Work Group has an Official Use Only copy on October 9th of earlier this year, unfortunately it was very difficult to get that ready for public release.

It actually was only released to the public I think this morning or late last night. So Phil, you probably just got it in your hands and I know the petitioner just got it today as well. And so that report has not actually been discussed by the Work Group. So it's that October 9th, 2020 report. So while I'm going to provide a very, very brief overview of what the issues were there.

It's probably not fair to discuss it in this setting before the Work Group has had a real chance to digest it. NIOSH has not had a chance to really respond to it and as I said, the petitioner just got that October 2020 report in a publicly releasable version this morning.

So I mention that here as one of the work products

that has occurred since SC&A's original reviews of the SEC petitions for 245 and 246, but it's likely not going to be a big discussion point here.

And then the final, fourth topic to be covered is the Boeing incident database, which was provided by CORE Advocacy also, and is described in detail in a memorandum that SC&A released in June of 2019.

So for this first item, again this is the TRUMP-S program, which again involves actinide, potential actinide exposures and also the 2012 EPA characterization study that identified areas at SSFL, specifically Area 4 where thorium and americium would have been a concern. Again, we released a memo evaluating that information that was provided again by CORE Advocacy since our original review. That SC&A memorandum is dated July of 2019.

I would also point out that all of these materials that I'll be discussing today are available in a publicly releasable form on the NIOSH website, for those of you who want to take a deeper dive into a lot of these issues.

So just a little background. Again, it's TRUMP-S and it's EPA historical site assessment that was released in 2012. In that document, the 2012 EPA site assessment indicates that work on this TRUMP-S project might have occurred in a two year period beginning in July 1988, which is partially covered by the SEC that's already in place but for a two-year period extending beyond that.

According to that EPA document, the primary separation activities were to occur in the hot lab, which is Building 4020, or Building 20 depending on the era you're looking at. But also support operations were supposed to occur in Building 4023, which is something that was pointed out by CORE

Advocacy in that 2012 historical site assessment.

Also included in the HSA, which is Historical Site Assessment, again 50 total buildings were identified by CORE Advocacy where americium and thorium was listed as a radionuclide of concern. So first we're going to get into sort of the timeline of what we've been able to find out about this TRUMP-S program. Did it occur at Area 4? Is it of concern for exposures to actinides for workers after that, after 1988 when the current SEC ends?

So here's our review approach. First, we went right back to that EPA report where it indicated that TRUMP-S might have occurred for a two-year period, again beginning middle of 1988 and extending potentially two years past that.

Our review approach really is let's see what EPA used to determine that TRUMP-S occurred there, and then let's continue to sort of follow it down the rabbit hole and see whatever references we could find in those references, and keep digging and see if we can get a better handle on did this occur at Area 4 and what are the implications in an SEC context.

So what we provided is really a time line of the key documentation that both underpins the EPA report and also again, as we followed the references from the EPA report and the references in those references, here's what we basically were able to put together for a timeline.

So in October 1988, there's an internal letter that proposes a usage application, a change in the usage application to allow for the TRUMP-S material in that project to go forward. So again, that's in line with what is contained in the EPA report. They said in the middle of 1988 the thing was supposed to get started, and was supposed to run for a two-year period.

However, about a year later in July of 1989 there's documentation of a planning meeting to be able to operate the TRUMP-S glovebox. Essentially, it's a safety overview, something that you would do before you actually started up any sort of experiment involving this TRUMP-S material, which again is actinide material. It's things like americium and neptunium and plutonium and that sort of thing.

Again, in mid-1989 there's another planning document that describes how, what to do with the TRUMP-S waste that is to be generated. In other words it's for a future term, and how it's to be handled later in 1989 or possibly in early 1990. But again, it's the future tense there used as in the waste has not actually been generated yet.

Again, later in October 1989 there's an internal letter describing an upcoming test readiness review. Again, this is all sort of prework before you'd actually start physically handling a lot of these serious alpha-emitting materials. Again, in October 1989, there's another, an internal letter for Area 4 that describes what actions had to be taken before you can start the radioactive portion for the TRUMP-S program.

Again, they're still trying to get this thing started up. One thing I would note is that these two references from October 1989 were actually the references that underpinned EPA's conclusion that it happened.

But again, we sort of followed the rabbit down the hole to see well, did it actually happen? What references do we have later on beyond these 1989 references cited in the EPA report to either affirm or deny that the TRUMP-S program occurred at Area 4?

So we move into February 1990. There's a letter to the NRC that concerns a license amendment, again just to allow the TRUMP-S program to be conducted. There's a technical progress report from the same month, and it indicates that, you know Rockwell International, who was operating Area 4 at the time, is still awaiting DOE permission to start up the test.

That's how it's put in February 1990. So it appears to us that it actually still hadn't gotten off the ground.

But also in that technical progress report, there's implications that they're starting to question whether they can even try to have this experiment at Area 4, and you'll see why in a minute. But they're already considering well, let's see if we can find an alternate facility to get this work done.

There's a local newspaper article in February of 1990 that really describes the public opposition that was there at the time for the again future tense planned TRUMP-S project. Now it was planned, but it hasn't really started yet.

A follow-up article in May of 1990 indicates that the TRUMP-S project, which was originally scheduled to take place, was going to be relocated to the University of Missouri. Again, I think the future tense here is important. It was originally scheduled to take place, but they had to relocate it due to the public pressure that was mounting regarding --

Basically what was going to be the one last project at the Rockwell International hot lab was supposed to be this TRUMP-S thing and then they were going to basically shut the whole thing down. Moving along to the 1993, you started to have D&D operations in Building 4023, which was again the one that was identified in the EPA HSA as possibly

being associated with this TRUMP project.

So September 1993, that facility's getting D&Ded. In October 1994, they did a confirmative tour/survey of that building for DOE. It was cleared for unrestricted release, and when they -- when they went for the confirmatory survey, they only took samples for uranium and cesium in the soil, which is -- would be strange if they had actually had TRUMP-S material in process there because you'd want to be looking at some of the actinides and whether they're a contaminant.

That really needs to be either cleaned up or you can be reasonably sure that it's not there. But in this case, they only just looked for uranium and cesium. Moving along to February of 1998, the state of California concurs that that building can be released without any sort of radiological restriction.

So that's sort of our timeline on TRUMP-S. Again, our feel is that, you know, they really did -- they did all the planning. They had a glovebox ready. They were testing it with inert gases and they really just couldn't get their license amended correctly to be able to conduct the radiological portion of the test, and then there was significant pressure from the local community that said no, we don't want this happening, you know, essentially in our backyard.

So eventually Rockwell decided all right, you know what? We've got to find somewhere else, and that's when they identified the University of Missouri, who eventually actually did modify their license and build an alpha lab and did essentially the radiological work there. At least that is our read based on the information available.

So a little bit more about this 2012 Historical Site Assessment, because I think it's important. As I've said, CORE Advocacy had identified 50 buildings

where americium or thorium was identified as a radionuclide of concern. Now it's important to understand what the purpose of the EPA 2012 study was.

It was essentially a paper study of historical records, very similar to what we do in this program a lot of the time. It was to identify potential contaminants that could be present. This was simply to aid in any future sampling, to figure out if it needed to be remediated or not.

So historical documents would have gone all the way back, you know, into the 80's, into the 70's to identify what sort of operations were there. So it was really not surprising, at least to SC&A, that all these buildings were identified with americium or thorium as a radionuclide of concern because that material was there. Americium and thorium were the reasons for the SEC up through 1988.

They were handling it and it was definitely a radionuclide of concern. The real question is, were there operations going on past 1988 that posed an exposure potential that is similar to or rises to the level of what caused the SEC up through 1988 in the first place.

So we reviewed the information for all the buildings identified. In fact, we reviewed information for all of the buildings included in say a site assessment. If you look at Attachment A of the SC&A memo titled Evaluation of petitioners' Specific Concerns Regarding SEC-235, we actually go and discuss each building that was included in that EPA study.

We just didn't identify any evidence of operational activities that would have involved americium, thorium. Aside from that, one mention of TRUMP-S which we just went through, and I provided the time line on, where we believe the radiological

portions just simply never got off the ground in Area 4.

However, I mean you would expect americium and thorium to potentially be there in the form of residual contamination. It's essentially the residual period at Area 4 that we're talking about here. And so one of the action items for NIOSH based on that that the fact that you have residual americium or thorium, you have to deal with it in a dose reconstruction context.

So NIOSH is to develop methods to reconstruct those exposures during D&D and other remediation-type activities. So that's sort of a summary on Historical Site Assessment and what we have found regarding the potential for TRUMP-S materials such as again americium, plutonium, neptunium, actually being handled in an operational context at Area 4 after the already-established SEC.

Talking about DeSoto, I'm going to kind of switch sites here a couple of times, but again they're sort of intertwined a certain extent. One of the conclusions of SC&A's review of SEC-246 is that well, you know, we really only interviewed a couple of people for DeSoto, you know. We should really talk to some other people to figure out was there still a, you know, significant thorium fuel processing campaign.

Did they have similar problems as Area 4, where they were doing decladding of spent fuel? Were you going to encounter those actinides? So we went through and we tried to find interview candidates that worked at DeSoto, to try to get a handle on what materials were there.

One thing we know that they were absolutely doing at DeSoto was fuel fabrication for uranium fuels, whatever processes might have been going on. So

we wanted to track down some former workers and talk to them. So we only found six unfortunately and we interviewed them in November 2018, and then five more in May and June of 2019.

We were only able to confirm five of the summaries. As was discussed before under Y-12 and also during the Sandia update about a half an hour ago, the whole process is very involved when you interview a former worker. There will be numerous people taking notes. Those notes have to be undergo ADC review for classification issues, and all those notes are combined into a single summary.

That summary is sent to the interviewee, where they can modify it, add, delete, what have you and depending on how that goes, you might have to send it back for further classification review.

And then after all that's done, you can finally produce a product that can be released in some form to the public. Obviously it will often be heavily redacted just because of the personally identifiable information that would be contained in that.

So we had five confirmed summaries. The focus was to really gain insight into activities at DeSoto. Is there americium there? To what extent was thorium used at DeSoto? We knew, we know it was there to a certain extent, and I'll get into that. But were they doing similar activities at DeSoto as they were doing at Area 4, which involved, you know, decladding the spent fuel in the hot labs up there.

What we focused on trying to find interviewees specifically from DeSoto, as I said they're sort of sister sites. So a lot of the workers worked at both locations to varying extents. So while we were focused on DeSoto, we certainly tried to elicit any sort of information that would be beneficial to Area 4 as well that these interviewees might know about.

Just as a brief summary, the interviewees did not really suggest that the decladding spent fuel occurred at DeSoto, and also regarding specifically americium, none of them thought that it was very probable that you'd have significant unencapsulated sources of americium. However, I want to point out that other documentation, aside from these interviews and again we'll talk about that in a minute, other documentation that we identified suggested that there was contaminated material used in cleaning of decladded fuel that was found in the laboratory areas at DeSoto.

Also, we found that when they were doing some remediation activities specifically in the mass spectrometry lab, they found americium in a drain line. So that suggests to us that it at least was handled on some sort of bench scale basis in all likelihood.

But again, we just don't know how it got there, when it got there, in what quantity it was and what is the reason we're seeing it there if we're really not expecting to find these type of actinide materials at DeSoto?

Moving on to the next item, again this is more documentation and evidence provided by CORE Advocacy related to SEC-235, but also tangentially to SEC-246.

As I mentioned at the outset, there are two White Papers that really handled this. One was from November of 2019, and then the aforementioned October 2020 report which has not yet been able to really have been digested by the Work Group, NIOSH or the petitioner.

But that was released in October (audio interference) version, basically uploaded (audio interference). So a little background on some of the

records review we did on the documentation supplied by CORE Advocacy.

Again, what are we looking for? We're looking for thorium and americium, and what are the implications on those (audio interference). Again, we're back to TRUMP-S. Is there evidence in these submissions of TRUMP-S?

And also transuranic waste management. Are they generating more waste, transuranic waste based on any sort of operations that are occurring outside of the SEC period at Area 4?

The other item here beyond just thorium and americium really is the main question, and this has been under some discussion by the Board, especially in the past few full Board meetings when we presented our SEC findings. The main question is are operational conditions sufficiently bounding of the residual conditions, and why are we asking this question?

Co-exposure models have been developed for both sites essentially, since it was one, essentially one radiological monitoring program. And co-exposure models have been developed for fission products uranium and plutonium, again not americium and thorium. But the question is after 1988, there's an issue. There's a two year period in which the bioassay data they have for uranium and plutonium, the things the co-exposure model was designed for, was actually found to be faulty.

It was analyzed by a company called the Controls for Environmental Pollution, and they were found to essentially be fraudulent, fraudulently reporting results. I believe that it was first found at Rocky Flats, but they also serviced Santa Susana, both Area 4 and DeSoto.

So the dose reconstruction approach to say okay, we had this two year period in the 90's when we can't trust the bioassay data. There's still an in vivo program, but we cannot trust the bioassay data.

So what do we do? Well what we can assume is that the radiological conditions during operations, so that's pre-1989 when they're actually still doing these sort of higher risk operational activities, can we take that operational data, the co-exposure estimates based on that, and apply them to the residual period and be reasonably sure that we're going to be able to bound exposures to those workers who were doing the D&D during the residual period. So those are really the two main issues associated with SEC-235 for Area 4.

I'd just point out that our original review, again that was in late 2017, we didn't find any evidence during that review of an internal exposure potential that would necessarily preclude dose reconstruction.

However again, there was additional documentation after that 2017 review that was submitted in 2019 and 2020, and both of those again they're on the website and were provided to the Board. And again, we did not identify really sufficient evidence that would give us pause and make us think that dose reconstruction feasibility was simply not possible.

Specific to the transuranic waste management, we actually don't have any -- there's no evidence that TRU waste was generated in any sort of operational capacity after 1988. It would have been managed, the site stored it after 1988 due to all the legacy operations, and then anything that was generated for D&D activities, you know, removing gloveboxes, drain lines, that sort of thing would have had that residual waste there.

CORE Advocacy noted that, you know, since TRU

waste contains plutonium, americium is a daughter product of plutonium, neptunium is a daughter product of americium, you might have all these nasty actinide contaminants in the waste packages. And again, NIOSH is developing dose reconstruction methods based on breathing zone data, which has yet to be captured. I'll certainly let Dr. Hughes give an update on that at the end.

That is certainly one of the action items moving forward to try to get a handle. Can we for Area 4 come up with a reasonable dose reconstruction method to account for americium and thorium, for which we really don't have sufficient direct bioassay monitoring?

Dr. Roberts: Sorry to interrupt. Sorry to interrupt you Bob. It sounds like someone is off mute. I can hear some, something moving or something in the background. If everyone could just please check their phones for mute.

Mr. Barton: Yeah --

(Simultaneous speaking.)

Dr. Roberts: Sorry about that. Yeah, I heard some typing too.

Mr. Barton: Okay. Well I'll move along here. This last item was reviewing characterization of the Boeing incident database, and SC&A submitted our memorandum, an overview of this Boeing incident database in June 2019. That was supplied by CORE Advocacy as it shows here in the first bullet.

They provide a thumb drive that contains all these incident files in December 2018. SC&A was tasked to look at these files in the context of DeSoto, to see again is there evidence, are there incidents out there that suggest that actinides were handled in an

operational context at DeSoto, such that you know, an SEC similar to what's at this site at Area 4 is warranted.

Again, DeSoto the SEC ends in 1964. At Area 4 it extends all the way to 1988. So the question is how similar or dissimilar are the radiological conditions between these two sites. So just as a quick overview, there were 784 incident reports and 486 unusual occurrence reports that were contained in that database.

The unusual occurrence reports are really, you know, sprained ankles and that sort of thing. They didn't involve any sort of exposure potential. So we could pretty much discard those. The 78495 are roughly 12 percent were related to DeSoto. There were actually three reports that we don't actually have the original incident report.

All we essentially have is a one line description of what happened, which may or may not have contained the actual contaminant, or it might have been often these radiological incidents, and these are all documented in the SC&A report, a lot of them involved fiascos with X-ray equipment. You know, someone walking into an area where they were doing some X-ray tests. The others were mainly involving uranium.

However, there were two incidents that we specifically noted that are definite concern for DeSoto. In 1965, there's an incident where an energy employee was cutting and grinding an irradiated fuel element in a clean lab area at DeSoto. It specifically says irradiated fuel element, and that simply wasn't supposed to happen at DeSoto.

You know, they really didn't necessarily have the laboratory equipment and hot cells and everything

they had at Area 4 to actually deal with the irradiated fuel element. So it's very, very strange for us to come across this, where they're working with irradiated fuel at DeSoto. Whereas we really were under the impression that it was all up at Area 4, sort of contained up there.

For this specific incident, the Energy employee did submit bioassays and all the results were no detectable activity. There's a second incident that we identified. Again, these are the two out of all of those that we reviewed that are of real concern. This was in 1975, and then again you had another fuel element that was getting stripped of its cladding for destructive inspection and this was at DeSoto.

The main exposure potential in the incident report is identified as krypton-85, and it's just not clear to us from the incident report itself whether that fuel element had been irradiated or was a fresh fuel element that was just simply being tested.

So in conclusion, based on SC&A's review of the Boeing incident reports, we didn't find any direct references to internal exposure to americium or thorium for DeSoto. Most incidents, as I said, involved uranium. However, you do have that 1965 decladding incident which involved cutting and grinding, which could obviously create airborne activity.

We asked a question was it only reported as an incident because it occurred in a clean lab, or did this activity also occur at other locations at DeSoto, such that you really have to be cognizant and take into account the fact that decladding of fuel not only occurred at Area 4 but might have been at DeSoto as well.

Then also that 1975 incident which involved

decladding. We're just not sure whether that fuel element was irradiated, where you'd have to worry about the buildup of actinide materials, again the americium, the neptunium, that sort of thing.

So a status on these two reviews. Based on the totality, we still feel that our original conclusions from 2017 and 2018 is that dose reconstruction is likely feasible. However, there are qualifiers here on the second bullet as you'll see.

This conclusion that dose reconstruction is feasible is really dependent on methods that are still under development. This includes americium and thorium at Area 4 after the current SEC period.

So that's after 1988, and again NIOSH is developing that or plans to develop that based on breathing zone data, to develop essentially a co-exposure model based on the air sampling to reconstruct doses to those two contaminants.

We have thorium at DeSoto post-1964, we know this, I mean, we have a few minor documented activities involving thorium fuels. NIOSH has at least a framework together to reconstruct doses to thorium based on a variable documented activity in which thorium fuel was being ground and there are pre-fecal bioassays and post-fecal bioassays. So there's a pretty good handle on that activity, which would have been expected to generate some airborne dust essentially, that certainly poses a concerning exposure potential situation.

Also as I mentioned, we found evidence of there's at least some amount of americium in the drain lines at DeSoto, and that really is not supposed to be there according to what we had assumed before. But lo and behold they found it there. So it appears that americium might have been used at least on a benchtop level.

So that's one of those things that NIOSH is looking into. What do we really do with that issue? How did the americium get there and how do we get a handle on what we do about it in an SEC and dose reconstruction context.

But SC&A does believe that these are likely Site Profile issues. Again, we believe that the breathing zone data can potentially be used at Area 4. We believe NIOSH has the framework for thorium at DeSoto post-1964 and really the evidence suggests that americium was likely on a benchtop level. But we really need to run that to ground and figure out what we're going to do there.

And again, I think these are at this point tractable problems, but frankly we need to see what's produced as far as the dose reconstruction methodology, to be able to make a recommendation on whether we think these are in fact tractable problems.

And then there's that question of the remaining source terms. Uranium-plutonium fission products at Area 4 specifically for that period where the bioassay has been invalidated. But as I said, NIOSH is planning future data captures to capture breathing zone data during that remediation period in Area 4.

And so that data could certainly provide perspective on what the differences in exposure potential during remediation versus operations. That's again back to that question of can we use operational monitoring data at Area 4, so that would be prior to 1989, to bound doses to D&D and remediation workers after 1988.

So that concludes my presentation. As before, this may be a good time for Dr. Hughes to maybe provide an update on the activities that NIOSH is

undertaking, or you know Phil, if you would like to make some comments. Or I can answer any questions.

Member Schofield: You know, I've only got one comment that's probably not on the record, is if they had done any biochemical separations of the americium stuff, I think we could expect to see a higher level of neutrons in those (audio interference) because they all fit in the reaction, since they tend to use light metal elements in that. I don't remember there being any indications of that, unless you do.

Mr. Barton: I don't recall that being documented anywhere. You know in addition to that, the whole TRUMP-S thing got started really because of that EPA report, which if you trace where EPA, or actually it was their contractor Hydrogeologica that put it together.

If you trace where their references come from, they're all from 1989, and again that was sort of in that planning phase. Whereas if you continue to follow sort of the time line and documentation available, in 1989 they certainly expected that they were going to be able to do it. But as you get into the early 90's, it seemed clear that they just weren't able to get that operation off the ground and so had to move it to the University of Missouri.

Member Schofield: That was my only comment.

Mr. Barton: I guess I didn't answer that. But yeah, I don't think we've seen any documentation about elevated neutron levels. But I'm not sure that we've seen, you know, things like area dosimeters or we specifically know about which workers worked in these buildings and were they monitored for neutrons.

So while I haven't seen any evidence of that, the information regarding neutrons is to my knowledge pretty scarce regarding these facilities.

Member Clawson: Bob, this is Brad Clawson. If they weren't monitoring for it, how are you going to know? I mean there's not that much information there. We've got documentation saying that we have these things and if they're not monitoring for it, you're not going to be able to do anything.

Mr. Barton: And that's a point well taken Brad. I guess I was just pointing out that we don't have information to affirm that there were elevated neutrons which would give us, you know, certainly cause for concern. I guess I'm just trying to say that we certainly haven't seen anything to that effect.

I think the, you know, if they didn't actually perform the activity there, then I'm not sure why they'd want to monitor for it there. I think the totality of evidence if you look through that time line we put together, it gets into much more detail in the actual SC&A report. Again, it just seems like they really wanted to do it as a sort of last, last gasp activity at the hot labs at Area 4 and they weren't allowed to.

Member Ziemer: Okay, so this is Ziemer. I was just going to comment. To produce neutrons on an Alpha-N reaction, basically you've got to have the alpha material mixed directly with the metal, such that an americium-beryllium source or something like that. Just having the alpha sources around is unlikely to produce any neutrons to any extent, unless you specifically were making an Alpha-N source.

I wasn't understanding that that's what they had, Alpha-N sources. They had just alphas, right? In other words, they didn't have like plutonium-

beryllium sources, for example, or americium-beryllium sources, where you have intentionally mixed the alphas with a metal.

(Simultaneous speaking.)

Member Ziemer: -- about that. But let me ask you a separate question. Bob, on the incident reports, 784 reports, what was the time span over which those occurred? Was that pretty extensive or all in a couple of years or what?

Mr. Barton: They really appeared to be really the entire life of this --

(Simultaneous speaking.)

Mr. Barton: -- beginning in the 60's, you know.

Member Ziemer: Yeah, okay. A couple of other things related to that. A lot of places have definitions of what constitutes an incident. Like it might be a spill that produces contamination greater than some amount. Do you -- do we have any indication of what constituted an incident at this facility?

Mr. Barton: No, I haven't seen any documentation that would establish set guidelines.

Member Ziemer: If we knew that, that would help us get a baseline of what the, sort of the lower level of contamination might be for an incident. So it would be something above some amount.

Then I want to ask a question on irradiated fuel elements. Does that imply that the fuel elements have been in a reactor, or are we talking about fuel elements that have been examined for their consistency by an X-ray exam? Because there's a big difference on a fuel element that's been examined for consistency by X-ray, which would be

unused fuel versus fuel that's been in a reactor.

Mr. Barton: Right, I understand what your question is. You know based strictly on the incident reports, again I believe the site had a specific definition for what constituted irradiated. That's simply how they put it.

We know that at Area 4, which is sort of the sister site to DeSoto, they definitely had irradiated fuel, as in irradiated in a reactor, which then they would go and strip the cladding off of for various testing purposes.

Member Ziemer: Okay.

Mr. Barton: In this case, all we have is an incident report that says irradiated fuel element.

Member Ziemer: But generally they meant fuel that had been in a reactor then it sounds like? That's what I wanted to clarify, or if we knew that one way or the other.

Mr. Barton: Well at Area 4 certainly. Certainly that was one of their production activities. Now our assumption has been that that material was not used in an operational context at DeSoto.

Really our research focus was to figure out well if these guys are, these two sites are pretty similar, they had the same sort of health physics oversight, you know, is it possible that any sort of the decladding of elements that had been in a reactor, did that ever make it down to DeSoto in a meaningful way that would really show that the SEC at Area 4, the same radiological conditions were present at DeSoto.

That's the main line of questioning, and this is about as far as we've been able to get as to whether that happened.

Member Ziemer: Yeah. It sounds like they're referring to fuel that's been in a reactor then, based on what we know at this point, that they were examining fuel that had been. Otherwise, they're just doing quality control over new fuel, and that wasn't one of their tasks, right?

Mr. Barton: Oh no. At DeSoto, that certainly was something that would occur there, because they were producing fresh fuel.

Member Ziemer: Well, then they could -- yeah, then irradiated could have a different meaning then.

Mr. Barton: That's an excellent point.

Member Ziemer: Yeah, okay. Just wondering. Thanks.

Dr. Roberts: And do Board members have any additional questions or comments?

Member Richardson: All right. I guess just to follow back through with the logic that was just described, there was the observation of the similarity of the activities between Area 4 and DeSoto. The motivation was to investigate whether any of those activities had spilled over to DeSoto, and you have an observation of this work with irradiated fuel.

Now I mean to carry the logic through or for you to help clarify it, because it sounded like when you came here today, your interpretation of what the meaning of irradiated fuel was was that it was used fuel.

So we've got the sort of black swan event, which leads you to kind of refute the hypothesis that they were strictly separated activities or was this the type of information you were looking for, which would lead you to come to the conclusion that there was intermingling of activities between those areas?

So where do you stand?

Court Reporter: Would the speaker identify themselves?

Member Richardson: David Richardson.

Mr. Barton: Yes. Thank you Dr. Richardson. I think, well at this point as Phil mentioned, we met in October and discussed a lot of these issues.

I believe sort of the path forward is that NIOSH was going to look into this a little bit more and possibly acquiring further data capture. I don't want to put words in their mouths, you know. Dr. Hughes, do you have a sense of path forward to this? That's what I recall.

Dr. Hughes: Yes. This is Lara Hughes with NIOSH. This is exactly these two incident reports that were discussed in the October Work Group call. It's something that we're looking into further, and that will be presented in a response paper, formally responded in a response paper by NIOSH.

Along with -- excuse me, other responses to the SC&A recent paper on the petitioner submissions. Yes, you're absolutely correct, that for some of these issues that were raised, there could be the potential that we need to look for additional data, which is currently a little bit on a delay there because the Federal Record Center is currently closed.

So this is one of the -- I'm unclear on the schedule at the moment, but this is something that I'm working on and that our contractor staff is working on.

Member Richardson: Thank you.

Mr. Barton: And this is Bob. I'd just like to reiterate,

you know. There are -- I'm sort of regretting saying that these are all going to be Site Profile issues, because we simply don't know. I mean they appear to be from where we are at this point in the evaluation, which has involved significant back and forth and you know, working with the petitioner in those document submittals.

There's certainly some items that still need to be run down, I think, before we can truly make a determination that dose reconstruction is feasible and then you move on to I guess, you know, sort of hammering out the details on how you actually go about assigning what dose to what worker and that sort of thing. So I don't think we're done here yet. I believe the action items are mainly in NIOSH's court at this point.

Dr. Roberts: Okay. Anything else on this presentation? Questions, comments from the Board?

(No audible response.)

Dr. Roberts: Okay. Hearing none, we have about eight minutes until the public comment session. We want to start that promptly at 5:30. But if folks want to just kind of take a quick break and come back at 5:30, we can get started on the comment session at that point.

Member Anderson: Do we have public members signed up?

Dr. Roberts: Yes. There are some folks who do want to comment.

Member Anderson: Okay, great. Thank you.

(Whereupon, the above-entitled matter went off the record at 5:22 p.m. and resumed at 5:30 p.m.)

Dr. Roberts: Okay. So I have 5:30 Eastern Time. So I want to go ahead and open the session back up, and first start with our attendance. So Anderson, are you back on?

Member Anderson: Yes, I'm here.

Dr. Roberts: Great. Beach.

Member Beach: I'm here.

Dr. Roberts: Okay. Clawson?

Member Clawson: I'm here.

Dr. Roberts: Fields.

Member Field: On the call.

Dr. Roberts: Okay. Kotelchuck?

Member Kotelchuck: Here.

Dr. Roberts: Lockey.

(No audible response.)

Dr. Roberts: Richardson.

Member Richardson: Here.

Dr. Roberts: Roessler.

(No audible response.)

Dr. Roberts: Schofield.

Member Schofield: Here.

Dr. Roberts: Valerio. Valerio.

(No audible response.)

Dr. Roberts: Ziemer.

(No audible response.)

Member Lockey: Lockey's here.

Dr. Roberts: Okay, great. Thank you. All right. Has Roessler joined us yet?

(No audible response.)

Dr. Roberts: What about Valerio? Ziemer.

(No audible response.)

Public Comment

Dr. Roberts: Okay. It sounds like someone's trying to speak, but I'm not completely sure. At any rate, I just want to remind everyone to please put your phone on mute. This is the public comment session that we are opening up, and we'd like to welcome and thank members of the public for being here with us today, and I want to open it up for them to comment.

I do want to advise everyone who wishes to speak that you have about a five minute limit. But without further ado, we will open this session up to anyone who would like to comment from the public. Thank you.

Ms. Barrie: This is Terrie Barrie and good evening members of the Board and Dr. Roberts. I'm from the Alliance of Nuclear Worker Advocacy Groups and authorized representative for a couple of SEC petitions. I want to thank you for providing this time for the public comments.

I hope, I heard that Steve Hicks was on the phone and we were emailing each other, and I hope that I am not taking his comments away. But I wanted to remind the Board about the basis for the Y-12 SEC petition that Mr. Hicks submitted. It's SEC Petition

250.

He submitted DOE documents that internal dose assessments were not accurate. A few quotes from our presentation to the Work Group in September of this year is this. Number one, NIOSH says that if a claimant has fecal monitoring that would prove that they were exposed to uranium, yet the Y-12 uranium exposure study said that this wasn't done before 1999. How can NIOSH assume that only workers with a fecal sample were exposed to uranium?

Number two, DOE's memo of 1999 states that internal dose assessments were not accurate. There's a third one from Dr. Kregel (phonetic) that states prior to 1989, bioassay measurements were not assessed for internal dose. So how can NIOSH say that they can reconstruct dose when DOE and their contractors say they can't? Maybe I'm a bit naive, but I think this should be an 83.14 SEC petition.

Now I'd like to read comments from Ms. Kathy Vinson. She had prior commitments and couldn't call in her comments and asked me to read them into the record. I happen to agree with them, and so do other SEC petitioners because they experienced the same problem.

I start quoting. I am Kathy Vinson, a survivor claimant for my mother, Elise Meadows, a laborer at Y-12 from 1981 to 1994. Her claim for skin and pancreatic cancer was denied in 2016 after many submittals. It was clear that 'claimant-favorable assumptions were not an accurate model for her work.' No other proof was available --

Participant: Hello?

Ms. Barrie: -- because no records.

Dr. Roberts: Hi, yes. Hello. If you could mute please. We're in the public comment session and a member of the public is making a comment. Please mute. Thank you. Sorry about that.

Ms. Barrie: That's okay. Virtuals don't always work. No other proof was available because there was no records kept of her work. So I filed an SEC petition, No. 241. It did not qualify. I would like to respectfully disagree with many statements I see on the SEC update slide show that's scheduled for tomorrow.

They are (1) in the qualification process, it is stated affidavits are valid proof when no records exist. I was told on my phone interview with Pat Kraps of ORAU that I should submit affidavits from my mother's co-workers. I did just that and my experience with the affidavits were not considered.

Number 2. It states NIOSH works closely with petitioners during the qualification process to develop relevant information and explain any deficiencies in the petition, and to aid in submitting any needed materials.

I did not receive any of this guidance. NIOSH did not work with me at any time during the process, and they did not aid me in any fashion. Number 3. In stating the reasons the petition did not qualify, I was never told why my petition did not qualify other than to say 'no new information was submitted.' This is to imply that there had been other petitions that did not qualify, that had stated similar things to mine.

This caused me to wonder why the petitioners were not allowed to confer in an attempt to strengthen our case, especially when the same issues were raised during the same time period at the same site.

Number 4. The final difficulty came when I was attempting to find out my options going forward, and there was no one at NIOSH who would return my phone calls, finally causing Josh Kinman to apologize for the lack of support, saying they should have been -- they should be doing better. But by then, the clock had run out.

Overall, I came to believe that my petition was not seriously considered, and I was not able to find out why. This was very disappointing and caused me to believe that there are many practices relating to the SEC process that are not openly stated in policy, making the qualification and approval process onerous, opaque, overly burdensome to the claimant and pretty much impossible for the outsider to navigate. Thank you. Kathleen Vinson, Oak Ridge, Tennessee.

As I said, I've experienced similar issues with the latest Rocky Flats SEC petition, and I did receive the letter from NIOSH finally, and I will be reviewing that to see another path forward. Thank you for all of your work, Dr. Roberts. You've been doing great as DFO and I wish everyone a happy holiday. Thank you.

Dr. Roberts: Thank you so much, Terrie. Now did Mr. Stevie Hicks want to make his comments at this point?

Mr. Hicks: I didn't hear you. I was taking the mute off and I didn't hear exactly what you said.

Dr. Roberts: Oh, I was just inviting you to comment, if you would like.

Mr. Hicks: Okay. In this document DOE Internal Standard, there's a Section 8.2.3 and it says, I'm going to read it to you. Doses due to intakes prior to January 1, 1989. Prior to January 1, 1989,

regulations in the DOE did not require computation of E sub 50 to HT/HR sub 50, values from bioassay and workplace monitoring.

From January 1, 1989, SAPS (phonetic) was required to access and record these values. Prior to 1989, records of intake if they exist was likely expressed in fraction of maximum permissible body burden, MPBB. There's no simple or straightforward general metric to convert MPBB values to E-50 values.

SAPS should consider whether it's feasible and cost effective to attempt to historically reassess doses prior to 1989. The dose position on these prior years' exposure records does not address doses due to intake prior to 1989 or intakes at non-DOE facilities.

On my bioassay, it says that. Prior to 1989, internal doses were not recorded. So you know, if DOE cannot convert these values, I'm curious how NIOSH can convert them. You know, that was just a question I've got and I guess that's all I've got to say.

Dr. Roberts: Okay, thank you so much.

Mr. Hicks: Okay.

Dr. Roberts: Thank you for the comment. I'd like to invite additional folks to comment at this time. D'Lanie, for instance, if you'd like to comment now.

Mr. Barrett: Yes ma'am. I'd like to speak if I can.

Dr. Roberts: Oh sure.

Mr. Barrett: Yeah. My name's Andy Barrett. I'm a guard at Savannah River Site. I represent the labor union down here, and had a couple of questions and comments. I did some investigation, talked to some

people that have been in our union for a long time, and have been at SRS for a long time.

They just feel that the early years, '84 to maybe '92, had some concerns with accurate dosimetry. I looked at the briefing and just wanted to make sure I ask the question. Are we covered? We were not the prime contractor. I just wanted to make sure that we were captured in some of those evaluations.

And then I know at one point in time we had had a beryllium release, and I know that's not -- doesn't fall under NIOSH, but did have a concern. We had several people on our guard that were exposed to beryllium. I just kind of want to get that on record.

Dr. Roberts: Okay, thank you. And you do realize that SRS is on the agenda for tomorrow?

Mr. Barrett: Yes ma'am.

Dr. Roberts: Okay, okay.

Ms. Blaze: Hi, this is D'Lanie Blaze.

Dr. Roberts: Okay, hi D'Lanie.

(Simultaneous speaking.)

Ms. Blaze: Hi there.

Dr. Roberts: Sure.

Ms. Blaze: Okay. Can you all hear me?

Dr. Roberts: Yes, we sure can or I can.

Ms. Blaze: Thank you. Thanks everyone. I hope that you're all doing well. Thank you for addressing SEC Petitions 235 and 246 for Santa Susana Area 4 and the DeSoto facility today. I'd like to quickly talk about two issues. First, the established similarities between both of these sites and second, the

TRUMP-S program and its related processes possibly at both locations, and I do have a short update on that.

So first the similarities between the sites. As we know, NIOSH considers both of the sites to be the same entity operationally and contractually, and I know that we have continued to discuss this issue. But it just cannot be understated. If NIOSH cannot achieve sufficient accuracy in worker dose reconstruction for those who were affiliated with Santa Susana until 1988, then they cannot do it for those who were affiliated with the DeSoto facility, because the majority of workers had occasions to perform job duties at both work sites.

We've established that regardless of administrative affiliation, regardless of time clock locations, workers routinely rotated between the sites after clocking in, and therefore they performed job duties at both sites interchangeably and often without documentation. Sometimes they rotated between the two sites several times in a single day.

NIOSH admits that it cannot reliably track worker movements between the sites based on their administrative location or their radiation records. So essentially we don't know which workers who were affiliated with the DeSoto facility may have encountered americium or thorium exposure at Area 4.

On numerous occasions and indeed again today, we are discussing these two SEC petitions at the same time, for two sites that NIOSH insists are the same entity for dose reconstruction purposes, but conveniently different and subject to separate burdens of proof when it comes to passing the SEC.

It seems that NIOSH is selectively using this same data set to perform dose reconstruction, but then

ignoring shared data limitations when it comes to passing the SEC Class. That feels a little like an attempt to have their cake and eat it too. I want to point out that the reason we keep having to discuss these petitions together is because we keep finding ourselves in the position of having to acknowledge how the information about one site is relevant to the other.

And we keep having to examine overlapping work processes or shared contracts and radionuclides. Most importantly, we keep stumbling over the same undocumented worker rotation issue, and the inability to tell which workers were at either site while monitored or exposed to radiation.

Ultimately whether these work sites are ever merged to be considered the same site, concurrent SEC Classes are needed at both sites, one in Area 4 and the other at DeSoto, always, always for the same time period. Nothing prevents NIOSH from taking that course of action, and of course NIOSH can share their observations on worker records and rotation with the Department of Labor.

Now at the last Work Group meeting on October 15th, 2020, NIOSH was asked if they have ever raised these issues with the Department of Labor, and they indicated that yes they have, and that Department of Labor is steadfast on keeping these sites as separate facilities.

On October 16th, the next day, Alliance of Nuclear Worker Advocacy Groups filed a Freedom of Information Act request with the program's director, Rachel Pond, seeking copies of letters or memos between Department of Labor and NIOSH regarding this issue, specifically Department of Labor's opinion or their position on the treatment of workers who had performed job duties at both sites.

On October 29th, Ms. Pond responded to ANWAG with the following statement: In response to your request, I've searched for responsive records relating to any records or memoranda that I sent to Stuart Hinnefeld at NIOSH regarding employees who worked at both Area 4 of Santa Susana and DeSoto. However, I did not find any letters, memoranda or other documents about Santa Susana and DeSoto between Stuart Hinnefeld and me. Therefore, DEE/OIC has no records responsive to your request.

It really does not appear that NIOSH has been forthcoming with Department of Labor about its knowledge and its evidence of worker rotation, and how this problem can and so frequently does compromise the accuracy in dose reconstruction.

It does not appear that NIOSH has been honest with Department of Labor by simply saying look, there's no point in trying to say that workers were confined to Area 4 or to DeSoto based on their time clock locations. We know otherwise, and confusing time clock locations with site exclusivity prevents us from conducting dose reconstruction in the way that the radiation records dictate, and here's what we know about the sites.

NIOSH has taken information like this to Department of Labor before for other work sites, and in those instances Department of Labor has responded appropriately. I just don't understand why that is not happening now.

So I'll turn real quick to the topic of the TRUMP-S program and transuranic waste and repackaging processes. You guys remember about two years ago, 1,300 boxes of documents were found that Boeing had shipped to DOE's Cincinnati offices. That shipment included an inventory sheet that indicated that several of those boxes contained information

on transuranic and pyropartitioning processes, as well as the TRUMP-S program potentially at Area 4 and at the DeSoto site.

In January 2019, I filed a FOIA request for some of those specific documents, and now nearly two years later I still do not have a response. In April of 2019 at the Pittsburgh meetings, Dr. Hughes and Dr. Taulbee indicated that with respect to these boxes, NIOSH had provided Department of Energy with a list of key words and search terms that Department of Energy had agreed to set aside relevant documents for NIOSH to review.

And as Department of Energy progresses with their own inventory of the boxes and their contents, apparently they're involved in some reorganization efforts, at the last meeting on October 15th NIOSH reiterated this agreement. They indicated that Department of Energy's research and retrieval efforts are currently underway.

On November 23rd, a couple of weeks ago, I spoke to my contact at the DOE Cincinnati office for a situation update on fulfillment of my FOIA. I suggested that Department of Energy just copy some of the documents that they're currently retrieving for NIOSH, because obviously we're looking for the same type of stuff.

But my contact person at Department of Energy is completely unaware that any such agreement exists between DOE and NIOSH. She was unaware that any such effort is underway, and she never heard of any list of key words or search terms that are supposedly being looked for by Department of Energy or the terms that were provided by NIOSH. She had no idea that any of this was even going on.

So clearly there seems to be some inconsistent information regarding NIOSH's assertions and their

attempts to engage Department of Energy and Department of Labor in meaningful dialogue and action regarding these SECs.

At the end of all of this, I respectfully reiterate that if NIOSH cannot perform dose reconstruction with sufficient accuracy for Area 4 workers between 1965 and 1988, then they just can't do it for the workers affiliated with the DeSoto facility.

If NIOSH considers Area 4 and DeSoto to be the same entity for the purposes of dose reconstruction, then I believe we must acknowledge that they are also the same entity when it comes to data limitations that would support a concurrent SEC Class at both sites without exception.

As always, it's a privilege to represent the workers at Santa Susana and DeSoto, and to present information to the Advisory Board. And again, I thank you for everyone's hard work on these SEC petitions and stay safe out there. Thank you.

Dr. Roberts: Thank you D'Lanie, appreciate your comments. I want to just kind of reach out and ask for someone named Josh who wanted to make some comments with regard to SRS. Would you, are you on the line and would you like to make those comments now?

(No audible response.)

Dr. Roberts: Okay. Hearing none, are there any other members of the public who would like to comment?

(No audible response.)

Dr. Roberts: Okay. Well I'm not hearing anyone at the moment. So we will go ahead -- first of all thank you and thank you to all the presenters who updated the Work Group, the Board today. I really

appreciate all the work that went into all the presentations and the content of the presentations. Very informative, so thanks to all the presenters.

And I want to thank the members of the public who commented this evening as well. We will go ahead and adjourn this session of the meeting. We will have another session of this Board meeting starting tomorrow at 1:15 Eastern Time. So please join us at that time. So thank you and have a good evening.

(Whereupon, the above-entitled matter went off the record at 5:53 p.m.)