Centers for Disease Control
National Institute for Occupational Safety and Health
Advisory Board on Radiation and Worker Health
135th Meeting
Wednesday, August 26, 2020

The meeting convened at 1:15 p.m., Eastern Daylight Time, via Video Teleconference, Rashaun Roberts, presiding.

Present:

Rashaun Roberts, Designated Federal Official
Henry Anderson, Member
Josie Beach, 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
Barton, Bob, SC&A
Barrie, Terrie, ANWAG
Burgos, Zaida, NIOSH
Buchanan, Ron, SC&A
Calhoun, Grady, NIOSH
Cisco, Jeanne, Worker Health Protection Program
Crawford, Chris, DOL
Fitzgerald, Joe, SC&A
Gogliotti, Rose, SC&A
Hicks, Stephen
Lewis, Greg, Doe
Lobaugh, Megan, DCAS
Naylor, Jenny, HHS
Palastro, John
Rutherford, Lavon, DCAS
Stiver, John, SC&A
Taulbee, Tim, DCAS
Tomes, Thomas, NIOSH
Vinson, Kathleen

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Proceedings

(1:16 p.m.)

Roll Call/Welcome

Dr. Roberts: Our court reporter is on the line, so I will officially open up this meeting.

So good afternoon and welcome, everyone. For those who may be on the line and may not know or heard, I'm Rashaun Roberts, and I'm the Designated Federal Official, or the DFO, for this Advisory Board on Radiation and Worker Health.

I took over as DFO from Mr. Ted Katz back in early June. And, again, I'd like to welcome you. This is Board Meeting 135.

So let me just -- uh-oh. Could someone put their phone on mute, please, everyone on mute? Thank you. So let me just get through some of the preliminaries for this meeting.

So this is the first full Board meeting that was actually supposed to occur face-to-face. And it's the first one that I've done, so today will certainly be interesting, I'm sure.

So today is the first half day of this virtual meeting. And tomorrow will be the second and final half day. So like today, tomorrow's session will start at 1:15 p.m. Eastern Time.

If you are just on the telephone line, all of the materials for today, the meeting agenda, presentations, and other documents are all posted on the NIOSH website under Schedule of Meetings for August 2020. And you can go there and read all the materials and also follow along with the presentations. And these materials were provided to the Board members and to staff prior to this meeting.

If you do look at the agenda on the website, you'll see that we have a fair bit to cover. So there's at

least one break built into the agenda for each day. And if there's room to take more, we will assess at that time.

At the top of the agenda, there is a Skype link which will enable you to watch the presentation through Skype. But I do want to advise you that you'll only be able to speak to the group and, I believe, to hear the presentations through the telephone line.

Speaking of telephone lines, in order to keep everything running smoothly for this virtual meeting and so that everyone speaking can be clearly understood, I ask that each of you please mute your phone unless, of course, you're speaking. If you don't have a mute button, press *6 to mute. If you need to take yourself off mute, press *6 again.

And also, because we're unable to see each other for this meeting, and I think we're all still trying to learn each other's voices, I know that's true of me, I would ask for the Board members, NIOSH staff, et cetera, please identify yourself by name before your comment or questions just so that we can all be aware of who is saying what.

Let me also mention that we do have a public comment session that comes at the end of the day. It's from 5:15 to 6:15 Eastern Time. So I would encourage people to be ready at 5:15 Eastern Time for public comment because the way we work this is we go right to the public comments.

And if we run through all the public comments at that time, we conclude. So we won't conclude before 5:15, but we could conclude at any point after that once we're done with the commenters. So please join us at the beginning of the public comments session so that you're assured to have your opportunity to speak. And I'll remind you of this again later this afternoon.

So we're getting toward roll call at this point. But before we get there, let me just speak to conflict of

interest.

We don't -- for today, we only have one agenda item that relates to a conflict, and that's the -- for the Site Profile Review for W. R. Grace. And Jim Lockey is conflicted for that.

So, Jim, you will need to abstain from discussion, and vote, and any tasking matters concerning that site by disconnecting from the call between 2:30 and 3:30 Eastern. And that should work.

When we get to that agenda item, I will note that you're abstaining for the record, and I will remind you to disconnect from the meeting.

Other than that, there appear to be no other conflicts to address for today's agenda.

So let me move into roll call now. I'll start with the Board members in alphabetical order.

(Roll call.)

Again, you may periodically just have to check your phone and make sure that it is muted just so that we don't have the interference. And again, just to keep things running smoothly. So again, if you don't have that mute button, press *6 to mute and then *6 again to take yourself off.

So with no further ado, let's have the program update from Mr. Grady Calhoun.

NIOSH Program Update

Mr. Calhoun: Hello, everybody. I think I, like most people, would rather see all of your smiling faces in person, but unfortunately, we can't do that. So I'll try to go through these as best I can. And I will also be doing the presentations for everybody else pretty much that's on this call.

Okay. Let's move. Okay. As far as our contracts and staffing go, we had a lot of retirements, and that's why you have me here, and that's why you have

Tim here. And anyway, that kind of went up the ladder, and we ended up hiring two -- we are, hired three people, but one of them was present at the last Board meeting. We hired two new health physicists, Angelica Gheen and Madeline Cook are two new health physicists.

We had yet another health physicist retired since the last time that we met. I promise you it's not because I'm the Director. But Chris Corwin retired. So we will be working to replace her here shortly as well.

As far as worker outreach, town halls, those type of activities, we've had the same issue with those as we've had our board meetings. And so as many of you are aware, we used to have in-person meetings, and we would try to meet near sites that are affected by the program. And we've not been able to do that.

But we did have, I believe, a very successful meeting in December or in July of, July 29th. And that was a virtual joint outreach group meeting. And that was attended by DOL, DOE, and NIOSH. We had many, many people on the line. They were able to ask questions. And aside from one audio glitch, that seemed to go, actually, way better than I would have thought. But that went well.

We don't have any further outreach or workshops planned and finalized at this point. Although DOL continues to work on scheduling additional outreach meetings. And we'll let you know about those as they happen.

Just case reports information. As of August 11th, we had 52,000 cases from DOL. We've returned 49,500 of those.

We currently have about a thousand, little over a thousand, 1,048 at our place for dose reconstruction. And that seems to be pretty typical. We usually have right around a thousand in our coffers to work on on various states of completion.

And we've had 944 cases administratively closed.

We've returned 45,430 cases to Department of Labor with dose reconstructions; 1,669 cases were pulled by DOL; and then -- for various reasons -- but for Special Exposure Cohort purposes, 3,547 cases were pulled.

Right now, Department of Energy also faces the same difficulties that we all are facing. They've got limited staff. We haven't really felt any significant pains from that yet. But the ways that could affect us is that there's not enough staff working in the facilities to respond in the manner that we're used to them responding. No fault of theirs. It's just how the COVID is affecting everybody.

We've got 235 outstanding records requests. Those are individual dosimetry records. But only 44 of those exceed 60 days at this point.

Overall, Probability of Causations for our dose reconstructions completed. 45,430 dose reconstructions were sent for final adjudication: 12,374 are greater than 50 percent; and 33,056 are less than 50 percent Probability of Causation.

Active cases, 1,048 cases active with us for dose reconstruction: 331 are in the dose reconstruction process itself; 179 of those we've already sent the initial draft reports to the claimants, and they're in the process of reviewing those; and then we've got 538 cases that are preparing for dose reconstruction. And what that means is that we're in the process of acquiring the required dosimetry records to begin the dose reconstruction process.

This is the chart I started showing at the last board meeting in person. This one's kind of a gobbledygook because it covers such a long period. But you can see how we had a significant spike in 2013 and then again in the end of 2015, but for the cases that are six to nine months.

And those are really the cases I try to keep my eye

on the most because we have a goal of getting all cases done within five months of receiving the last piece of information that's necessary to complete the dose reconstruction.

And to see that a little more clearly just within this year 2020, you can see that we have about 55 cases that are between six and nine months old. Those don't fall outside of our goal of getting it done in five months because that time starts from the date of initial receipt of those cases.

And there's various time periods such as the time that the claimants have a chance to talk to us and DOE has the chance to provide information to us.

So I just like to keep an eye on that, though. It keeps me in the know as to where we are in our production process. And I believe that is my last slide.

Any questions for me before I call up Mr. Crawford's slides?

Dr. Roberts: Thank you, Grady. Any questions from the Board?

Member Ziemer: Yeah, Grady, this is Paul Ziemer.

Mr. Calhoun: Yes, sir?

Member Ziemer: Could you go back to, I think it's Slide 2 maybe.

Mr. Calhoun: Yes, I can do that.

(Simultaneous speaking.)

Member Ziemer: Can you look --

Mr. Calhoun: Yeah, I'm doing it. But let me try it. Let me try to get back here. Let's see. I don't want to stop presenting. Oh, there I am. So which slide?

Member Ziemer: I think it's Slide 2. Can you put Slide 2 on there?

Mr. Calhoun: Let's see. Where is it? Hold on, hold on. I'm jumping around here. Something happened. Present now. Okay. Hold on. It fell off.

Member Ziemer: I'm not seeing anything.

Mr. Calhoun: I know. I'm not either. It's going to happen. It's just a little bit, I got out of it when I didn't hear anybody. And let's see it comes back.

Member Ziemer: Oh, you've lost it.

Mr. Calhoun: Yeah. It fell off of my screen here, at least. It says it's loading right now. Okay.

Member Ziemer: Oh.

Mr. Calhoun: And you want, there's 8, 7, 6, 5, 4, 3, the workshops and town halls?

Member Ziemer: Okay. Yeah. My question was, on the virtual workshops, are those only audio or are they, are you using something like Zoom on those as well or?

Mr. Calhoun: We had presentations like we are doing right now. We didn't have --

(Simultaneous speaking.)

Mr. Calhoun: -- the people's faces and cameras, yes, yeah.

Actually, I want to say was the platform was WebEx maybe. I may have that wrong. But DOL set it up, and it seemed to work relatively well.

Member Ziemer: Okay. So it's --

Mr. Calhoun: And then --

Member Ziemer: -- basically --

Mr. Calhoun: -- we had a, we had -- go ahead.

Member Ziemer: -- basically graphs and slides? Is that the extent of it?

Mr. Calhoun: Yeah. We had slides. And then we also had a section where the audience, which was many hundred, could call in and, or type their questions in, and --

Member Ziemer: Oh.

Mr. Calhoun: -- we kind of a triage group that would forward those to either Department of Labor or myself. And we would answer the questions verbally and as they came to us. And so it was a pretty interactive session. I thought it was pretty good.

Member Ziemer: Oh, that's good. I was concerned whether the participation would be as good as an open meeting would have been. But it sounds like it worked well.

Mr. Calhoun: Yeah. I thought it did. I thought it did. There was one, there was one audio problem, which I take full responsibility for. I think I pushed the wrong button. But besides that, I thought it went really well. And we got some pretty good feedback from it too.

Member Ziemer: Very good. Thank you.

Mr. Calhoun: Sure.

Dr. Roberts: Any other questions?

Mr. Calhoun: Anybody else before I switch? Yeah.

DOL Program Update

Dr. Roberts: Yes. Okay. I don't hear any, Grady. So thank you so much for the presentation.

Let's move on to the next. We're onto the DOL Program Update, which will be shared by Mr. Chris Crawford. Are you still on the line?

Mr. Crawford: Still here.

Dr. Roberts: All right. Thank you.

Mr. Crawford: And Grady has once again graciously

offered to turn the slides for me. Let me know when you're up, Grady.

Mr. Calhoun: I can see it right now. So let me know if you can't, and then just tell me next slide.

Mr. Crawford: Okay. I can't anyway. I can never get WebEx to work on my DOL computer for some reason. But so let's just launch into it.

First page we see. So let's go to the second.

Now, some of my talk will be echoing Grady's in terms of numbers. They're always slightly different but very similar.

And here we see compensation expenses of all kinds. Part B Compensation, 7.1 billion; Part E Compensation, 5.2 billion, Medical Bills, 6.0 billion; and the total 18.3 billion. That's compensation and medical bills. And that's out of 215,067 cases filed. Next slide.

This is our NIOSH Referral Case Status. We have 53,457 cases that were referred to NIOSH for Dose Reconstruction. Of those, 51,781 were returned to DOL from NIOSH: 47,270 with a dose reconstruction; and 6,511 withdrawn from NIOSH with no dose reconstruction.

And by our count, there's about 1,676 cases currently at NIOSH. Next slide, please.

These are Part B Cases with dose reconstruction and final decision. And we see that the, graphically, it's, it comes through very well. But we have, of 35,895 cases in this category, we have 12,365 final approvals, and 23,530 final denials. Next slide, please.

Here we see Part B Cases Filed, a little bit complex. But NIOSH sees about 49 percent of these cases, I believe, because there are SEC cases that are never sent to NIOSH. And there's a category of Other having to do with chronic beryllium disease, and

silicosis, and those features of the act. Next slide, please.

Now, here we have all Part B cases with a Final Decision. Now, that will include SEC cases. There were 106,247 cases with final decisions under Part B, of which 56,533 were approved, 49,714 were denied.

Dr. Roberts: Excuse me. I'm not sure that, are we on the right slide?

Mr. Crawford: And I can't see it.

Dr. Roberts: It's not advancing for me.

Mr. Crawford: It should say Part B Cases with Final Decision, and it's Slide No. 6.

Member Ziemer: That's what I'm seeing. This is Ziemer. I'm seeing that one.

Dr. Roberts: Okay.

Mr. Crawford: That's what I'm seeing.

Dr. Roberts: Maybe, okay, maybe my screen is frozen. Thank you. Okay.

Mr. Crawford: Of course. And I think we're finished with this and can go to the next slide.

Here we have the Top Four Worksites. And this is for fiscal year two to three. We have the Nevada Test Site, the Y-12 Plant, Savannah River Site, and Hanford. No real surprises here. Next slide, Grady.

We had to divide to, divide these slides into two for these sites being discussed for compliance reasons. Here we see the SEC Petition Sites being discussed at this meeting.

Superior Steel with 52 cases filed, 35 returned with dose reconstruction, 48 final decisions.

I'm not sure how best to do this. We could cycle through both of these slides, Grady, for each site or

just do all the top ones and then the bottom ones. Let's go to Slide 8 and then come back to 7.

To continue with Superior Steel, we had 19 approvals. There is no Part E for an AWE site. And we had a total compensation plus medical bills of 2.8 million. Back to 7.

For Hanford, 20,982 cases: 5,367 with a dose reconstruction completed; 9,707 with a final decision. And back to -- oh, sorry, 9, Grady, I'm sure you caught that.

Continue with Hanford, we have 5,845 approvals for Part B, 5,410 approvals for Part E, and 1.8 billion in compensation paid. Return to Slide 8 for the Reduction Pilot Plan.

Eight-hundred and eighty-seven cases; 83 dose reconstructions completed, 483 Part B final decisions. Back to Slide 9. There we have 22 Part B approvals, 32 Part E approvals, and 10.6 million in compensation and medical bills paid. Next slide, 10.

For W. R. Grace, which is a Site Profile discussion, we have 315 cases, 209 dose reconstructions completed, 299 final decisions under Part B. Let's go to 11, then, and we'll complete W. R. Grace.

One hundred and fifty-eight-Part B approvals. There's no Part E again. And $27 million in compensation and medical bills paid. Then we'll retrace to Slide 10.

Mr. Crawford: And this under the Site Profile discussion. Idaho National Laboratory, 6,618 cases filed; 2,067 have had a dose reconstruction completed; 2,931 final decisions under Part B. Slide 11.

Continuing with Idaho National Laboratory, we have 1,085 cases approved under Part B; 1,411 cases approved under Part E; $396 million in compensation and medical bills paid. Onto Slide 12.

Grady has already covered this from one standpoint. We, of course, have had to switch to virtual webinars instead of in-person meetings. And as Grady indicated, these seem to be working fairly well.

We're doing quarterly medical conference calls. We're doing authorized representative workshops. And we're doing town hall meetings. Go to Slide 13.

You're all familiar with this. The members including DOL, DEEOIC Group, Department of Energy, Department of Energy Former Worker Medical Screening Program, NIOSH, the Ombudsman to NIOSH for the EEOICPA-Part B, that's Denise Brock, and DOL's Office of the Ombudsman for EEOICPA itself, Malcolm Nelson. And the members have monthly conference calls.

Now, we had what was an upcoming event and it is taking place today. That is, the topic is Site Exposure Matrices and Former Worker Programs. That's the part, Part E program, essentially. That's today between 2:00 and 3:30. We're DEEOIC and DOE are discussing the SEM and the FWP/BTMed factor in the adjudication of claims. Sounds pretty technical. But go to the next slide, 15.

And then we recently had an outreach event as a virtual webinar, which I believe Grady discussed. There was one on July 29th. This includes, included both Part E presentations, and dose reconstruction, and SEC presentation. That's the last of our non-boilerplate slides.

I have more to discuss in a second part. But perhaps we should take questions on this presentation first?

Dr. Roberts: Sure. That sounds good. Any questions from the Board?

Member Ziemer: This is Paul Ziemer. Chris, I have one question. It actually relates to Part E, which this board is not involved in.

But could you remind me, is there not a parallel Board that's handling the chemical hazards and so on? Do they deal with the beryllium and so on?

Mr. Crawford: Unfortunately, I'm not the person to ask. Yes, there is an advisory board now at DOL primarily dealing with Part E issues, certainly.

I haven't heard beryllium specifically mentioned. I think that's more cut and dry than the rest of the party, let's say, the toxicology for, for other chemicals.

Member Ziemer: Right, right.

Mr. Crawford: But that's, that's somewhat non-official coming from me. I will jot down --

Member Ziemer: Okay.

Mr. Crawford: -- the question, though, and --

Member Ziemer: But, but they are operating or, or handling the party activities I assume, right?

Mr. Crawford: That is my understanding as well, yeah.

Member Ziemer: Yeah. Okay. Thank you.

Mr. Crawford: You're welcome, Dr. Ziemer.

Any other questions? All right.

Now, last December, believe it or not, seems like only yesterday, we had two questions. I think Dr. Richardson may have supplied one of them. The first question I think I'll get out of the way first because, it's unfortunately, not very satisfactory.

But we were asked if DOL did any predictions on incoming claims. And the truth is, we don't, certainly not under Part B. They've been pretty steady. They seem to follow more across a straight line. And we haven't done anything with that.

Under Part E, we have no official estimates yet. That

program is still expanding. And I think it's just a little hard to make a straight-line progression at this point. So I don't know have anything to report on that question.

The second question, which is more in my bailiwick, had to do with technical objections, which -- and there is a form reply that I think you all have now. It was sent out by Dr. Roberts.

What I did was to look at five years of the technical reviews, as we call them, or technical objections from 2014 through 2019. And that I thought was a good sample of what we have.

There were 265 reviews in the sample that I looked at, but only 21 resulted in rework request to NIOSH. Fourteen cases were quite complicated involving both methodology objections and application objections. And those we sent to NIOSH for a special review because we can't count on a methodology at all. And these were well-reasoned and had a lot of information in them.

None of those --

Mr. Calhoun: Chris?

Mr. Crawford: -- however --

Mr. Calhoun: Hi, Chris; this is Grady. Am I going through slides? I, I hadn't been advancing.

Mr. Crawford: Not, not as far as I know. There, there is a, there was another --

Mr. Calhoun: I'm just, I'm still at -- okay. All right. I just, I'm at, I'm at Department of Labor's handout slide, and I haven't moved since you haven't said anything. So --

Mr. Crawford: Right.

Mr. Calhoun: -- a couple people just asked me. Okay, thank you.

Mr. Crawford: Exactly. Unless you happen to have that document, which is the ABRWH Analysis of Tech Reviews, if you see it on your desktop, then I think we're just going to have to it verbally.

Then to continue a little bit. This is only about a page document, by the way. It's, the 14 cases that were sent to NIOSH for special review did not result in reworks. And I thought the Board would be interested in what happened to the cases that DOL sent back to NIOSH for rework as a result of a technical review. It's only about eight percent of the technical reviews, by the way.

Of the 21 reworks requested, ten cited new evidence in the objection documents. And that's why there sent back, so that NIOSH could consider the new evidence.

Three involved changes in accepted employment. That's fairly straightforward also.

Three were related to work locations, that is, on the site where the claimant or employee were able to give us information that was perhaps new to the case. They said, well, I didn't work there. I worked in this particular location for six years at this time and so forth. We thought that was enough new information to return those to NIOSH as well. And also those, that included time periods where they may have worked with a, with a particular hazard present and so forth.

Another three returns were made because I felt that NIOSH didn't explain adequately some of their decisions on the application issues. There's no, there was no necessary error in the case. The claimant asked, "Why did they make that assumption?" And I couldn't be sure, so I asked NIOSH to clarify.

One was a change in cancer diagnosis. And the final one was an IREP 5.8 issue, which is pretty rare.

Of the 21 reworks, five cases were then accepted

under Part B. Sixteen cases were rejected under Part B. And of those, two cases were later accepted under Part E. I thought the Board might find that interesting.

Well, if there are any questions on this, I'll be happy to take them. And if you want to hear these numbers repeated, I'll be happy to do that.

Dr. Roberts: Can, can everyone just make sure that their phones are on mute? I can hear some typing.

But are there any questions for Chris?

Okay. I'm not hearing any at this time. So why don't we move onto DOE? So Mr. Greg Lewis, you'll be presenting. Awesome.

DOE Program Update

Mr. Lewis: All right. Good afternoon, everyone. Can, can everyone hear me okay?

Dr. Roberts: Yes.

Mr. Lewis: Yes? Okay. And I'm still looking at Chris's slides.

Mr. Calhoun: I'm -- it's getting, it's starting to load, Greg. I'm trying.

Mr. Lewis: And I could just start any. So, so my plan, I, I was going to go over the first four or five slides, which are really kind of the update and the status of DOE's operations with respect to the, the COVID pandemic. The, the rest of my slides --

Mr. Calhoun: Coming next.

Mr. Lewis: --are -- now, there we go. And I see, I see that the first slide's up.

As I was saying, the rest of my slides are really pretty boilerplate. They're kind of my routine slides. So I don't think it's necessary to go over them. I'd be happy to do it, though. But first, so I'll give a

little bit of an update about our situation under the COVID pandemic.

As Grady alluded to, our operations have been pretty significantly impacted. And that's for a number of reasons. You know, primarily due to people not being able to be on site, although there's kind of other factors as well.

The bottom line is, we've been doing everything we can to try to produce the records that we can, you know, both with respect to individual claims as well as research projects, you know, the, the NIOSH-SEC research or the, the DOL is, is doing some additional digging for information related to their SEM database.

So we are doing the best we can to respond to that. But I'll kind of talk a little bit about some of the things, some of the reasons why that's a challenge.

You know, and I'll also say that -- so you can go to the, sorry Grady, you can go to the second slide, which, yeah, there we go.

So many DOE sites are still -- and I'm at the third bullet there. I kind of already covered the first two -- many DEO sites are still in a maximum telework situation where, you know, all but essential employees are working remotely.

So and that, you know, that really depends on the site, how many staff are on site versus off site, you know, at some of the, their production facilities, the National Security facilities, they have to have more people on more people on site than at some of the more, more science-based facilities where they can do much of their research and, and work off site.

So it, it's not the, you know, there's no really hard and fast number or percentage of people that are on site versus off site. That varies significantly from site to site. Grady, you can go to the next slide.

So, you know, again, it's, it's very different at

different sites. And these are decisions that are, you know, site-wide decisions depending on well, you know, a number of factors. One being the rates of COVID in the area, the trends of COVID. Is it going up? Is it going down? That kind of thing, so it's different depending on the area of the country.

It's also, again, different depending on the mission of the site. Can the work be done remotely? Does the work have to be done on site? Can the work be delayed? Or is this, then you have to have guards at nuclear facilities. You have to, some of this stuff has to be monitored or have, some of the work just has to be done and people have to be physically on site to do it. But where that's not necessary, a lot of folks are working remotely.

So because of this, we do have backlogs at many of the DOE sites for claims. In some we have hundreds of claims that they're just waiting to be able to do. And when, as soon as we are able to complete those or are able to start work on them, we are going to start working down those backlogs.

However, that's not the case at all sites. Some sites were able to process these remotely or to have, the skeleton crew on site are able to process these claims, so, again, it really varies widely by site where we have backlogs or where we, some sites were completely up to date, have zero claims over 60 days, and are processing everything as usual.

So, it depends on a few different things. Grady, you want to go to the next slide?

So, when I'm talking about the key staff on site, it's not just are there people in the records vault? With these claims, for NIOSH, it's more rad although it can be the rad plus the medical that they're looking for, sometimes even other types of records.

But if we need the right staff to be in in the Medical Department, the Radiological Control Department, Industrial Hygiene, HR, the records storage area, warehouse, there can be -- and even more at some

of these other sites.

So, at some of these sites, we might have a few of those groups able to respond but then a few of them not able to respond. So we are sending partial responses where it makes sense.

And I'm also really leaving that up to the site to work with their contacts at DOL and NIOSH because if they're sending a very small portion, it may just confuse things. We want to make sure that NIOSH and DOL know, if it's a partial response, they know it's a partial response. They're not going assume, oh, that's everything we're going to get from DOE.

So we, in some cases, we are sending partial responses. Mostly when we feel like we have most of the record package assembled, but we're just missing one or two minor parts, then we may be sending that partial and then following up with a complete once they're able to.

Yeah, so again, some of these sites are able to produce those different parts because they have some people on site or they're able to pull it remotely with electronic records.

But as you might imagine, for claims for workers, the further back you go, the less able we are to do that in a general sense. Again, that's, I don't want make any blanket statements across DOE, but for the older workers, that's more challenging because more of the records tend to be in paper, microfilm, microfiche, whatever, some type of hard copy records. Next slide.

So, and another issue that's tripped us up is the Federal Records Centers. My understanding is the Federal Records Centers are not, still, as of today, not sending records out or they may be sending records out but only in very specific emergency cases. So there are, some of their sites, some of our sites, one example being Y-12, that gets a significant amount of the records used to respond to NIOSH and DOL request, they get them from the

Federal Records Centers.

So the Federal Records Center is not shipping records. We are accumulating a fairly significant backlog at Y-12. And again that's a decision out of DOE's hands and certainly out of my office's hands.

As soon as they start shipping records again, I've had conversations where we're ready to authorize overtime, possibly bring in additional staff, I mean, we're gonna wait and see once we're in a position to start responding.

Again, and this goes for the other sites that have backlogs as well, whether it's related to a Federal Records Centers or just their site staff being in maximum telework status.

As soon as they are back, we will be reviewing the number of cases outstanding and, and which portions of the record we're missing or we need to get. And we'll be trying to bump up staff to the extent possible.

Again, once they come back, I don't know that we'll, they may still be in some form of, they may be incrementally ramping up staff, so it may not be possible to then bring in additional staff. But we will be authorizing overtime and anything else that we can do and is allowable based on site policy, given the pandemic, to start to reduce these backlogs.

And then another issue that we face that doesn't so much have to do with the individual claims is the classification reviewers. On occasion, we will have to review individual claims records for classification information. But that's not usually the case at most sites, and it's usually sort of a cursory review.

Where the classification reviewers comes into play is more so with both DOL and particularly NIOSH, the NIOSH, and SC&A, and the Board, their requests for information related to the SEC research or, say, profile reviews, that kind of thing.

I know there's recently, there was an issue at Sandia, and I think Los Alamos as well, and I'm sure there are other sites because, again, classification review is something that has to be done physically on site.

And I know most sites do have at least a few classification reviewers still on site. But many of them are not there, particularly if the individuals have health issues or are older, in one of those categories where they're at higher risk.

So we have struggled with the classification reviews. And I think that has held up some things relative to responding to SEC research. But again, that's, as soon as those folks are back on site, we're going to be putting in place a plan and timeline to get those completed as soon as we can. So I think -- you can go to the next slide -- I think that's really it.

The next slide I think should be the, yeah, the DOE's Core Mandate. And that's kind of my usual presentation. I don't have any new information there. So unless anyone wants me go through the rest of this, I probably prefer to stop and take questions.

Member Ziemer: Greg, Paul Ziemer here. I know this is pretty standard for the Board members. But we do have the new DFO. So I'm wondering if it wouldn't be worthwhile for you to step through. These may be the first time that she's seen them.

Mr. Lewis: Oh, good point. I'd be happy to do that. I guess before I --

(Simultaneous speaking.)

Member Ziemer: Ms. Roberts, unless you think otherwise.

Dr. Roberts: No, I appreciate the thought.

Mr. Lewis: Sure. Well, and before I do that, does

anyone have any specific questions on our status, our ability to respond, anything, because I may not know the answer offhand, but I could certainly provide you with more specifics if anyone's interested?

No? Okay. Well, I'll go through. So DOE's core mandate is to work on behalf of the program claimants to ensure that all available worker and facility records and data are provided to DOL, NIOSH, and the Advisory Board. Essentially, our role in the program is to provide records. Next slide.

We provide records in three different ways. We respond to individual requests. If someone applies to the program, both Department of Labor and NIOSH typically are going to send us request for the records. So we respond to individual-level requests.

We also help NIOSH and DOL with larger-scale site characterization-type information, those research projects.

And then the third is smaller, but equally important. We do research into covered facility designations for both DOE and AWE facilities. We actually do the designation for AWE. DOL makes the determination for DOE facilities. But we, of course, help provide records and information to, to make those decisions. Next slide.

So with the individual records request, claimants often worked at multiple DOE sites. Within a site, there are, of course, some folks that may have been on site for just a year or two or even for construction subcontractors that might have only been there for a month or two or a week or two. But there are plenty of career folks that may have been on a DOE site for 30 years.

So some worked at multiple DOE sites. Even if they worked at one site, if they were a long-term employee, they could have been in different divisions, different jobs, different locations within the site. So, we may have to go to a number of

different places and types of records to pull their information.

One site I think we have, each site has kind of a list of the places that they might go for an individual's record, and there's one site that routinely checks about 40 different places for response of records. And when I say places, I mean, some of those are actually physical, this collection, or that binder, or this set of microfilm, but also it's this database, this search tool, this records database again.

So it can be, it can be a fairly complex process. And our records searches can yield, sometimes nothing, unfortunately, but also I've seen responses that are over 3,000 pages for an individual. And, again, that's probably rare, but there can be quite a significant amount on some of these folks. Next slide.

So for the large-scale, records research projects, they vary. Some of them are larger than others. But we do the best we can to accommodate all requests. Some of these projects can take years and years, particularly if SEC research for the bigger DOE sites.

But we do everything we can to respond in a timely manner. And at least, work with NIOSH, SC&A, and the Board to come up with a time frame. So, well, it's X number of pages or X number of boxes or whatever it is that you want, here's how we can respond to that. Here's how long it's going to take us. And, we try to meet the needs of the requester. Next slide.

So classification review is an important part of most of these large-scale research projects, less so at some of the science facilities for DOE, but particularly at the NNSA, the weapons production sites, and the weapons labs, there's quite a bit of classification information that may be involved in this.

And so we review, the final reports are reviewed at DOE headquarters. And those typically take about

eight working days. That's kind of the easy part.

The harder part is the source documents because to put together the different final reports at large sites like Savannah River, and Hanford, and Los Alamos, places like that, NIOSH, and SC&A, and the Board are requesting hundreds of documents, thousands and thousands of pages, or they can be requesting that much. And that presents a much greater challenge.

And that's kind of where we get into what I was talking about with working with the requester to come up with a reasonable time frame based on the volume of records and the number of reviewers that we have available. So we try to come up with a time frame that's doable on our end and works with the needs of NIOSH and the Board to be able to make the decisions they need to make.

Of course, that's more challenging now, but we're continuing to try to do everything we can to meet your needs even with these challenges. Next slide.

Facility Research, just, there's a link to our covered facility list. We're actually working on an updated website for that covered facilities list. I'll certainly be sending that out when we do change it. The update is just to the look and feel of the website. None of the facilities will be changing. Or if they do, that will be a whole separate issue.

But the facility will be the same, the website will be the same with the same facilities. But we're going to give it a new a look and I think a little bit more user-friendly. So we're working on that. And we'll be sending it to DOL and NIOSH before we go final just for their input. Next slide.

And then our Former Worker Medical Screening Program, I always mention it because it's sort of a partner program. It's not directly associated with the compensation program. But the Former Worker Program is all former workers at DOE sites. This is not AWE, but at the DOE sites, all former federal

contractor and subcontractor staff are eligible for these free medical screenings.

If the screening results in a finding, we'll refer the individual or we'll suggest that they follow up with their physician and/or the relevant specialist.

And if they do have a condition that comes out of this, we'll suggest that they go on and apply to the DOL for the compensation. And they'll have a letter from the Former Worker Program that, where possible, ties whatever condition was found to their work, if the former worker doctors think it is relevant. So next slide.

Yeah, this just has a link to the website and a brochure on the program.

Now, given the pandemic, our Former Worker Programs have not been offering screenings for the last couple of months just due to the risk of getting people in there. But we are just this month starting to start those back up.

But again, similar to the DOE sites, a lot of where we're offering screenings have to do with the local rates of COVID, the numbers. Are they increasing? Are they decreasing? Are clinics able to, the clinics that we use, when we use clinics able to handle the additional individuals given the different policies and requirements. They don't want people waiting, they don't want backups, that kind of thing.

So we're certainly not operating at full capacity, but we are starting to do screenings based on the ability to do it in the different areas where there's demand. Next slide.

Yep. And that's it. So any questions on either that or what I started off with with our operating status under COVID?

Dr. Roberts: Okay. Thank you, Greg. I just wanted to say that the second part of your presentation was really helpful, in that it helped your COVID update

to kind of fall into place, so to speak. So I do appreciate that.

Are there any questions?

Okay. Well, hearing none, the next item on our agenda is the Site Profile Review for W. R. Grace. And that is scheduled to start at 2:30. So I am wondering if we could take a break and come back at 2:30 to get started with that item?

And again, Jim Lockey, you have a conflict of interest for that site. So you can go ahead and disconnect from the meeting now.

Following this agenda item, we do have a break scheduled. And that will end at 3:45. So you can rejoin at that point. But I will go ahead and note your disconnection now.

Member Lockey: Great, thank you. I will do that.

Dr. Roberts: Okay, great. So how do people feel about taking that comfort break and coming back at 2:30?

Member Beach: That works for me. This is Josie.

Member Ziemer: Sounds like a plan.

Dr. Roberts: Okay. Let's go.

Member Kotelchuck: Fine, thanks.

Dr. Roberts: Okay. Good. Okay. Meet you at 2:30.

(Whereupon, the above-entitled matter went off the record at 2:18 p.m. and resumed at 2:31 p.m.)

(Roll call.)

Dr. Roberts: All right. We're going to give Richardson and Valerio some time to come back. I think we have enough to go ahead and get into the agenda item.

Before we do that, I just want to say thank you to

Grady, Chris, and Greg for your presentations at the opening of this meeting. Everything was very clear.

So we're moving on to the Site Profile Review for W. R. Grace. Dr. Henry Anderson is the Chair of the Uranium Refining AWE Work Group, which covers W. Grace. However, Mr. Ron Buchanan will be the presenter for this particular agenda item.

So if you're ready to get started, Ron?

Dr. Buchanan: Yes. Can you see the screen okay and hear me?

Dr. Roberts: I can.

Dr. Buchanan: Okay. And do you --

Dr. Roberts: I can hear you and see the screen.

Dr. Buchanan: Okay.

Mr. Breitenbach: Just to let you know, Andrew Breitenbach from Fernald. I tuned in a little late, but I'm on here.

Dr. Roberts: I'm sorry. Who was that?

Mr. Breitenbach: Andrew Breitenbach from Fernald.

Dr. Roberts: Okay. Thank you.

Mr. Breitenbach: Yes.

Site Profile Review for W.R. Grace (Erwin, TN)

Dr. Buchanan: Okay. This is Ron Buchanan with SC&A. And today I'll present the current status of the W. R. Grace TBD Finding for Dr. Anderson, which is a Work Group Chair.

And so everybody see the second slide okay?

Dr. Roberts: Yes.

Dr. Buchanan: Okay. So the W. R. Grace and Company was, is located in Erwin, Tennessee. And

it's an AWE facility from 1958 through 1970, and as a residual period '71 to 2011.

Now, the W. R. Grace and Company was changed to the Nuclear Fuel Services, NFS, in 1964. And it had been --

Mr. Anderson: I don't think the slide advanced.

Dr. Buchanan: Okay. You don't see two?

Mr. Anderson: No. There we go.

(Simultaneous speaking.)

Mr. Calhoun: I just advanced that. Am I advancing those for you, too, Ron? Right?

Dr. Buchanan: Yeah, right.

Mr. Calhoun: Okay.

Mr. Anderson: I do remember all of these. All right. Go ahead.

Dr. Buchanan: Okay. Everybody sees Slide 2 now.

And so they processed weapons-related and non-weapons-related uranium, plutonium, and thorium.

All right, three we have the TBD for W. R. Grace was issued in 2011. And SC&A conducted on-site interviews in October of 2012. And we issued a review of the TBD in January of 2013. And in that review, we identified seven findings and four secondary findings, which today we would call observations.

So we will go through those findings individually since a lot of you maybe are not familiar with WRG or it's been a while since you've reviewed it. And then I'll try to keep it as condensed as possible. And you can ask me questions at the end of each finding or at the end of the presentation, whichever you prefer.

So we'll start with Finding 1. And that was

concerned with the accuracy and completeness of recorded bioassay data that had not previously been addressed as part of the routine verification and validation, V&V, database review.

And in August of 2019, NIOSH issued a White Paper addressing this finding. And they went through all the previous claims. And they just had three claims yet to be resolved at that time.

And so we evaluated their V&V White Paper and issued an evaluation report in November of 2019. And in that review, we found that NIOSH's analysis of the W. R. Grace claimant bioassay data in NOCTS was inclusive and covered the many time periods at the various facilities for the uranium and plutonium radionuclides of concern.

We found that, in general, our workers were bioassay, and those that should have been, weren't. There was a, NIOSH provided a coworker, or we call co-exposure or environmental intakes for the dose reconstruction purposes. And these are outlined more in Finding 2, 3, and 7, okay, and in the TBD.

So in the January of 2020 Work Group meeting, NIOSH presented resolution of the three remaining claims. They found two claim files were located and the third one was compensated using other records.

In that meeting also, the finding was discussed by the Work Group, and we found it was satisfactorily addressed and Work Group wanted to close that finding. That was Finding 1.

Finding 2 was concerned with what appeared to be insufficient uranium bioassay and intake data, and we questioned the appropriateness of using a 1961 air concentration data for operating period at W. R. Grace and then suggested additional investigation of this data for the longer time period.

And so the AWE operational period was 1958 through 1970, and residual '71 to 2011. And NIOSH's approach was to, in resolving these intakes

for these two periods were discussed during the August 2015 Work Group teleconference and accepted by the Work Group.

And but since the NIOSH resolution was a bounding approach, which would cover all possibilities of workers and intakes, the Work Group recommended NIOSH provide further breakdown of the intakes by the worker category. And in other words, some of the workers could not necessarily receive this maximum amount. And so NIOSH did that. They issued a resolution for the Findings 2 and 7 in July of 2019.

And that White Paper provided inhalation and ingestion intakes by worker categories. And so Table 1 of that White Paper covered the operational period, and Table 2 covered the residual period.

And so we analyzed NIOSH's White Paper in conjunction with TBD-6000 or AWE's, and we evaluated that report and issued our evaluation in November of 2019.

And now SC&A concurs with the intake values listed in Table 1 of the White Paper for the operational period. In addition, the SC&A analyzed the derivation of NIOSH's intake values in conjunction with TBD styles and then concur with those listed in Table 2 of the White Paper for the residual period.

So conclusion was we found that NIOSH sufficiently addressed Finding 2 concerning insufficient uranium bioassay and intake data. We had no further issues concerning that. The issue was discussed during a January 2020 Work Group meeting and was closed. That was Finding 2.

Finding 3 was plutonium. And we found that the plutonium was not the reason for the SEC. Doses should be assigned in other periods, not just during the operational period and also was needed for non-bioassayed workers for plutonium. And so not doing this wasn't consistent with a SEC because SEC was based on thorium. And so in January of 2019,

NIOSH issued a White Paper addressing this finding.And SC&A evaluated the White Paper and found that NIOSH used the recommended methods per approved appropriate procedure documents to derive reasonable co-exposure data from available recorded bioassay and air monitoring data. And SC&A issued a report on August of 2019. And we did not identify any findings, but we did have three observations.

And that Observation 1 was the need to address the extension of 1967 data back to ‘65 and ‘66 through ‘67.

The reasoning for doing that, Observation 2 were the use of 30 percent and 3.9 percent factors in deriving data and the dose is unclear. We suspected it was because of the number of days in the year. But we want to clarify that.

And Observation 3 where the question were in vivo bioassays required or performed for the D&D workers?

So NIOSH responded to the three observations. Number 1, the plutonium inventory was much less in ‘65 and ‘66 than in the years the bioassay data was available. Therefore, extension of ‘67 back to ‘65 and ‘66 was reasonable. We looked at that data and the invoices and such and agreed with that.

Observation 2 was the difference in the plot data and the table data is due to 365 days versus the 250 days as we suspected. And, but we wanted to clarify that.

And Observation 3 says that although the wording concerning the bioassays is not clear in one of the documents concerning the D&D phase, NIOSH did found urine, fecal, and in vivo data during the D&D phase. And we looked at that data and agreed.

So during the January 2020 Work Group meeting, they discussed this finding. And the Work Group found it satisfactorily addressed and the issue

resolved. And the Work Group closed Finding 3.

That brings us to Finding 4, lack of neutron dose assignment, Slide 20. SC&A questioned the lack of neutron dose assignment in the TBD. We did not locate any recorded neutron doses in the claimant files that we reviewed and we suggested further investigation of the potential neutron exposure and appropriate methods to assign neutron dose were needed.

NIOSH agreed that further investigation was necessary. In the August 2015 Work Group meeting, it was discussed, broached this situation, and SC&A agreed that the proposed neutron-photon ratio method was reasonable and would evaluate the data and recommended a method when it became available.

And in May of 2017, NIOSH issued a Neutron Dose Assignment for Plutonium Fuel at W.R. Grace. And in that White Paper, NIOSH analyzed the N:P ratios at other DOE sites that processed plutonium in a similar manner and similar composition as at W. R. Grace.

SC&A evaluated their White Paper and issued a memorandum in September of 2017. And we reviewed the N:P ratios at other DOE sites that processed similar plutonium and found them to range from 0.2 to one for non-glovebox workers, and from one to 1.7 for glovebox workers.

SC&A had previously reviewed the NUMEC site profile in 2017 and concurred with NIOSH's recommended N:P ratio geometric mean of 0.34 for non-glovebox and one for glovebox workers and since NUMEC had similar operating conditions as W. R. Grace.

Now, while we used, we concur with using that N:P radio, our main concern was choosing the workers that might be exposed to neutrons. And so we have three concerns here.

And we did not find that NIOSH's recommendations for the determination of potential neutron exposure to be applicable to W. R. Grace because there was no significant AWE neutron monitoring at W. R. Grace.

There wasn't anything later on that we could back-extrapolate to because there was no neutron monitoring at W. R. Grace.

And the detailed dosimetry information is not available in early years at W. R. Grace. In other words, they didn't separate out the low energy photons from the higher energy photons. And they certainly couldn't really determine if the worker was exposed to the low energy photons from plutonium or not.

And so we found also that criteria for selecting neutron exposure to some of the other sites is not very useful for W. R. Grace. W. R. Grace is a small site, few facilities, few workers, and so it really didn't, couldn't use something like the Savannah River site or something.

And so Concern 2 was the potential for neutron exposure from plutonium needs to be addressed for other periods, such as the D&D phase.

And Concern 3 was that neutron exposures from uranium was mentioned in the TBD, but it was not included in NIOSH's White Paper and how that would be addressed.

So that was the three concerns we had with neutron N:P dose assignment.

Now, this finding was discussed during their January 2020 Work Group meeting and resolved as following.

For Concern No. 1, NIOSH will use worker categories to assign neutron dose, not the method suggested in the White Paper. And they had previously done a worker category analysis that can

be used.

Concern No 2, NIOSH had neutron monitoring requirements and data for the D&D phase. So it answered that question, and we reviewed that as true.

And Concern No. 3 is that NIOSH would use the ratio values in Report 60 to estimate neutron dose for enriched uranium, which had briefly been covered. And so we found that that was satisfactory.

So the conclusion was that NIOSH will revise the TBD to reflect these three areas of concern and their resolution. Work group found them satisfactorily addressed and decided to close this Finding 4.

Finding 5 is lack of neutron higher dosimetry calibration knowledge. And this was discussed during the during August 2015 Work Group meeting. And essentially, as I alluded to before, there wasn't a lot of details in the earlier dosimetry records separating out the different types of radiation that the worker might have been exposed to.

And in the August 2015 SC&A performed some additional searches on the SRDB and did not identify any additional relevant information concerning dosimetry calibration.

And the same month, NIOSH reviewed several claims to see if there was a noticeable change when they switched from the older fighter in to the Landauer, which began service in 1961. Claims did not indicate, seem to indicate that there was a sudden change in doses and so would indicate a difference in actually reading the dose to the workers, just that there was, wasn't as much information in the earlier dosimetry records, but the doses were still there.

So in March of 2016, SC&A contacted the NSF and

former Landauer dosimetrist in attempt to determine the calibration of the badges during the earlier periods. And SC&A did not find any additional definitive information.

So conclusion and closure, in 2016, SC&A did not find indication that further research would significantly alter the external doses assigned and suggested closing this issue, that the doses could be assigned accurately without the additional information in the early days. And this issue was discussed in July of 2016 Work Group meeting and closed. An older issue that I just wanted to be inclusive in all these years.

Okay. This is an older issue too. Finding 6, onsite medical x-ray exams. And so this is discussed during the 2015 Work Group meeting. And essentially what this boils down to is there's no documentation that the X-rays were performed off site, neither was the documentation that they were performed on site. And since they could have been performed on site, would apply the WRG TBD and the OTIB-0079. And we found this was resolved and the status was changed to closed for Finding 6.

Finding 7 was that we felt that the TBD did not adequately cover environmental dose. In 2019, NIOSH issued a White Paper addressing Finding 7. And SC&A evaluated White Paper and analyzed that data and was used to derive the recommended annual environmental intakes for various time intervals throughout the '58-2011 period. And we issued a evaluation report in November of 2019. And the following is a summary of our analysis.

We analyzed the data to derive annual uranium environmental intakes as listed in Table 7 of the White Paper for the full period. And we concur with the methods used and the results.

Same way with plutonium. We analyzed the data and the values in Table 6 of the White Paper for the period that plutonium was perhaps an exposure pathway, '65 to '78. And we're concerned, and we

concur with the methods used and the results.

And now in Finding 7, the third part was in external environmental doses. We analyzed the methods used in the annual environmental doses listed in page, or in Table 15 of the White Paper. And we found that they were correct and agree with the results and had no issues with that.

So Finding 7, resolution was this January 2020 finding which was discussed during the teleconference. The Work Group found it satisfactorily addressed and the issue resolved. And the Work Group closed the finding.

So that's the seven primary findings and what we called observations, which at that time was termed as Secondary Finding A. And that was that the TBD tables based on 365 instead of 250 days, again, this is someone back related to one of the previous findings.

That's the TBD Tables 3-15, 5-2 and 5-3 are based on 365 days. However, that wasn't made clear. And this was discussed during the August 2015 meeting and decided that that was the problem. The tables are correct. It's just the dose reconstructor needs to be aware that that's the way they're based.

And so during the January 2020 meeting, it was discussed again. And NIOSH agreed to revise the TBD to reflect changes necessary to reflect, to clarify this issue so that the dose reconstructor will do the procedure consistently. And the Work Group closed this finding.

Okay, next finding, B, was AEC material. The AEC material was buried and removed from the ponds and grounds. But there wasn't a lot of documentation presented about that time period and the material as discussed during a 2015 teleconference.

And during the January 2020 teleconference, again, this was discussed among the Work Group and

SC&A. And NIOSH has stated that they would revise the TBD to reflect changes necessary to clarify this issue in this, and so it was closed by the Work Group.

Okay. And this Secondary Finding C is somewhat related to the burial ground workers and definition issue because that, again, was discussed in a 2015 Work Group meeting and again during the January of 2020 teleconference.

And NIOSH stated that it would revise the TBD to reflect changes necessary to clarify this issue. In other words, the workers might have been exposes to that area where they had the burial grounds.

Okay. D is methods used to derive the older Table 5-5 in the original TBD and was not clear in the original TBD. And so that was discussed during the August 2015 Work Group meeting.

And SC&A, as I say, issued a, their response to environmental dose section in Finding 7. We evaluated NIOSH's White Paper concerning this. We verified the revised calculations of the beta dose on Page 26, which had changed since the original TBD, and then in the entries in total in Table 16 of the White Paper.

And this was discussed, and then on November of 2019, SC&A evaluation report concurs with the methods used and derived values in that section of the White Paper. And it discussed during the January 2020 teleconference the finding was found to be satisfactorily addressed and that NIOSH will incorporate the revised external dose data into the revised TBD and the Work Group closed the finding.

Okay, thank you for listening. And have any questions, I'll attempt to address them at this point.

Member Ziemer: This is all, anyone have a question? Someone else has something. Go ahead.

Dr. Buchanan: Go ahead.

Member Ziemer: Which one? Ziemer go ahead?

Dr. Buchanan: Yes, Dr. Ziemer go ahead.

Member Ziemer: I have two questions. One is the terminology question. You talked about secondary findings. Is that a new terminology?

Do those have the same impact as what SC&A normally called observations? I was a little puzzled by the terminology secondary findings.

Dr. Buchanan: Yes. It's the other way around. That was originally what we used previously and now we replaced that with observations.

But I didn't change the slide to observation in case somebody was following along on the old script. And so, a secondary finding has been changed in the terminology to observation at this point.

Member Ziemer: Okay. So, that's the same thing basically then, okay. I just wanted to clarify that. One other question now. I was trying to track here Finding Number 4 is still open, is it?

Dr. Buchanan: No. That was a neutron issue.

Member Ziemer: Yes. It looked like there was some follow up NIOSH was to do and it wasn't clear to me whether Finding 4 was closed or there is still more to do there.

Dr. Buchanan: No. It has been closed. All the follow up has been done. Okay, neutron okay and then they agreed.

They did the, okay, the only follow is that they would change the TBD wording so that the designation of who would be assigned neutron dose was clarified and details provided on that. And then also that they would use the N:P ratios in that report 60 to estimate neutron dose for uranium, risk to uranium workers. And so --

Member Ziemer: Okay. So, the finding is basically

closed but they still have some things they have to do?

Dr. Buchanan: Well, yes. Several of these we're taking on revising the TBD to reflect. None of them had to do really with incorrect doses or anything within the TBDs.

If I remember right, all of the changes were clarifications so the dose reconstructor was clear on who got what, when.

Member Ziemer: Yes. Maybe someone who is on the Procedures Committee, maybe, Josie, you can help me on this. But don't we usually put these things in abeyance until NIOSH actually does them and close them?

Member Beach: Yes, that is correct.

Member Ziemer: When they get entered into the, what's the name of the big database?

Member Beach: The BRS.

Member Ziemer: Yes. It doesn't get entered as closed until NIOSH actually does that. Isn't that correct?

Member Beach: That is correct. Yes, that's correct.

Member Kotelchuck: This is Dave Kotelchuck. I just ask that if there is nothing left for the AWE Working Group to do.

Member Ziemer: No. I think --

Member Kotelchuck: It's closed or in process of being closed.

Member Ziemer: Well, I think the terminology they've been using is that it's in abeyance which means you're basically done with it but NIOSH hasn't actually implemented, they haven't done the changes, yes.

Member Kotelchuck: Okay, all right. Good, thanks.

Member Beach: On that, Paul, Ron does anybody know if the BRS for W.R. Grace has been uploaded?

Dr. Buchanan: Yes, it's been updated as of our, after our January 2020 Work Group teleconference, I updated the BRS to reflect all of what the slides show.

Member Beach: And are those denoted as in abeyance or how did you --

Dr. Buchanan: I did what the Work Group stated and closed them. But I can go back into the BRS and put them in abeyance until NIOSH issues the revised TBD and then I can review it and make sure that the clarifications have been done and then go back in the BRS.

Member Ziemer: Yes, I think that's probably a good thing to do in that was the method we had for sort of tracking things that were sort of promised to be done just to make sure that at some point we take a look and make sure they actually happen.

Member Kotelchuck: Yes, Dave, good, good. I agree.

Member Ziemer: Yes. The in abeyance category provides a way for us to do that and make sure that we go back and look at it at some point in time.

Member Anderson: We can blame this on Ted.

Member Beach: Good catch, Paul.

Dr. Buchanan: Sorry about that.

Member Ziemer: Well, the terminology is a problem in all of these things.

Dr. Buchanan: Well, and if it goes back to 2011 and so, I mean, there is a lot of moving parts that have been added since then.

Member Ziemer: Right. And terminology has changed.

Dr. Buchanan: We've got all of the written parts together. It's just a matter now of someone at NIOSH actually doing the update.

But there's kind of asterisks on it that a dose reconstructor can follow. That's what we were concerned about that there could be dose reconstructors saying --

Member Ziemer: Right, right.

Dr. Buchanan: -- they wouldn't know that what they're following is not absolutely correct. So, I think that's what -- all we have. I don't recall, I don't know if the Board votes on this or not.

I thought it was we were just giving you an update on this. It's been quite a while since this has been discussed.

Dr. Roberts: It is on the agenda with a potential vote. But first of all, are there more questions or comments from anybody on the presentation before we move to that?

Member Schofield: This is Phil. I've just got one comment to make.

For people who are looking, going onto to DCAS' website there and taking a look and stuff, if we had a definition so when they see some of this information, you know, well this is in abeyance or, you know, whatever particular terminology that we're using that they can find that terminology defined so they understand what we're saying. That's just a thought.

Dr. Roberts: So, you're recommending that the NIOSH DCAS website be updated to somehow describe what's meant by terms like abeyance and perhaps other things?

Member Schofield: Correct.

Dr. Roberts: I see.

Member Ziemer: This is Ziemer again. Phil, I think those may have been defined in the main document itself, the -- Josie, help me again on this. Didn't we have those definitions in that, in the primary?

Member Beach: I believe they are, Paul. But I'm not exactly sure where at this point. I suspect --

Member Ziemer: I haven't looked at it for a long time. If somebody needs to pull it out, whoever the caretaker is could pull it up.

I think the definitions are in there because we have a number of them in process and in abeyance and there's, I think there is about four or five different terms for that particular.

Member Schofield: Yes. I know a lot of the other terminology is defined. But some of the stuff you almost have to dig out sometimes.

Member Kotelchuck: But, Phil, I mean in abeyance -- the person who really has to know are the dose reconstructors.

Whether it's in the text or not, whether it's on the website or not as soon as the things are taken out of abeyance and completed my understanding is that folks go back and have to look at, see that all of the previous dose reconstructions that they had engaged in are changed to reflect any changes, right, or any updates.

So, I don't know that it has to go on the site, on the website. It may be premature in some ways because we're still working.

Member Schofield: Right. But it's just for people when we're having these discussions they can look it up and understand what is the Board saying?

What do we mean when they use this terminology? It's just something to help the public.

Member Kotelchuck: Okay. If we put it on the general website the difference between in progress, in abeyance, et cetera as a general thing not associated with a particular company.

Member Schofield: Right, as a general thing.

Member Kotelchuck: In fact, we have the list of terms that we use, the glossary. And we could put that in the glossary easily and that would be nice.

Member Schofield: That was my whole point, thanks.

Member Kotelchuck: Okay, got it. Okay, I thought you were talking about it for the individual work site.

Member Schofield: No, no. Just so they can look at the glossary and understand what our discussion is, you know, what do they mean by this, you know.

Member Kotelchuck: Good, good. I agree with that. In fact, I think that's a very good idea. So, I'm supportive.

I don't know if that's something that we mandate or something that actually Grady and the NIOSH folks just simply have to say, yes, I think it's a good idea, we'll do it.

Mr. Calhoun: This is Grady. We'll take a look and see, you know, how often you can find items like that on the website to begin with and then see if there is a good way to put that definition in there.

I'm not sure there is. But we'll take a look.

Member Kotelchuck: That sounds good to me.

Member Schofield: Okay, thanks.

Dr. Roberts: Any other questions? Now, did the Working Group want to make a motion in regard to W.R. Grace?

Member Anderson: I would say other than the terminology of in abeyance, we would like to say our recommendation would be that this had been thoroughly reviewed. The committee has gone through it.

SC&A has done their review. There are multiple White Papers that were developed, have been looked at and accepted.

So, we're done with our work and we would suggest that now it's a matter of implementing this and getting the changes and the references and the verbiage changed in the site profile TBD.

So, whether the Board needs to accept that our Committee is done that's what I would say we would recommend. The Committee has completed its review and task and NIOSH understands what needs to be done and is in agreement with the interpretations we've made of all of these things.

We think it's ready to go to be now implemented into the final updated site profile. So, I guess that's it. If there needs to be a motion it would be that the Board accepts that we have done the review and completed all of the identified --

Participant: Hello. Are you there?

Dr. Roberts: Hello.

Member Kotelchuck: Hello.

Dr. Roberts: Hello. Sorry, it sounds like he hung up. I'm sorry, go ahead.

Member Kotelchuck: This is Dave Kotelchuck. So, I think what we're saying is that if it's desired then we can say that the Board accepts the report of the Committee and the Committee has reported that, as will be shown in the transcript, that its work is done on W.R. Grace.

And the, certainly the Board can accept. I don't think it's a question of approving. But obviously, we

make a report to the Board.

If there was something wrong and the Board wants to change something of course it can and should. So, maybe it's an acceptance. What do you think, Henry?

Member Anderson: That's fine, yes.

Member Kotelchuck: Yes, the Board will accept our report.

Member Anderson: It's basically, it's a report.

Dr. Roberts: Okay. So, do we need to take a vote on that? We can do it by alphabetical order.

Member Beach: I think that's usually just a roll call and everybody aye or nay on this.

Member Kotelchuck: Yes.

Dr. Roberts: Okay. Then, okay, so --

Participant: We'll just have to do it by roll call on a telephone call you can't --

Dr. Roberts: Yes, it's hard to do.

Member Anderson: Everybody raise their hand.

Member Beach: Aye or nay.

Member Schofield: Higher, I can't see it.

Member Ziemer: So, the motion is to accept the report of the Work Group.

Dr. Roberts: Right.

Member Ziemer: Is that correct?

Dr. Roberts: Yes. And do we need a second or can we just move into the vote?

Member Ziemer: You don't need a second since it comes from a Work Group.

Dr. Roberts: Okay, great. Okay. So, let's start with Anderson.

Member Anderson: Yes.

Dr. Roberts: Beach?

Member Beach: Yes.

Dr. Roberts: Okay, Field?

Member Field: Yes.

Dr. Roberts: Kotelchuck?

Member Kotelchuck: Yes.

Dr. Roberts: Richardson?

Member Richardson: Yes.

Dr. Roberts: Roessler?

Member Roessler: Yes.

Dr. Roberts: Schofield?

Member Schofield: Yes.

Dr. Roberts: And Valerio?

Member Valerio: Yes.

Dr. Roberts: And Ziemer?

Member Ziemer: Yes.

Dr. Roberts: Okay. So, it sounds like the motion carried and it's pretty much unanimous that the report of the Committee will be accepted and I guess we're good.

Member Kotelchuck: Actually, probably the technical formalities are the vote is unanimous but the decision is not unanimous until you speak to Brad and if there is anybody else missing because they do have to vote.

Dr. Roberts: That's right, yes. Thank you for reminding me, okay. So, I will contact them via email and get their votes as well.

Member Ziemer: Well, it doesn't matter -- it doesn't have to be unanimous. The motion passes is all that we need.

Member Kotelchuck: Right.

Dr. Roberts: Okay.

Member Ziemer: Even if the others are no, all we require was the motion to pass or fail and it's passed.

Member Anderson: And a question for Grady. Does something like this to update site profile TBD, is there a process for that or what kind of a potential time line do we see because otherwise it kind of goes into a black box of it's in abeyance and nobody really calls up to see what have we removed from abeyance?

Mr. Calhoun: Right. I'll have to check into that to see what, if it's just the issues we discussed maybe not terribly long. But we've got a project plan with everything on it.

I just have to make sure that it's not caught up in whole co-exposure model. But I'll try to figure that out before the end of the meeting here and get an answer back to you.

Member Anderson: Because right now it's kind of off our table.

Mr. Calhoun: Right.

Member Anderson: The Committee -- unless we're going to every time we get together ask what's the status of all these old ones that we've completed but are waiting to be updated.

Mr. Calhoun: Right. And I'm going to check into that one real quick and see if there is anything else that

may be in the way for that. But I'll try to get you some kind of answer here before the end of the day.

Member Beach: And, Grady, and this is Josie. Doesn't SC&A track those on the work coordination document they send out before every meeting?

I know John Stiver usually keeps track of the TBDs and where they're at.

Mr. Calhoun: Yes, we do as well. And again, I have to go back and look at that to see what our document said. There were several on there.

Dr. Roberts: Okay, very good.

Member Anderson: It's nice to clean up as much of these as we can.

Dr. Roberts: Exactly. Okay, well with that we do have a break next on the agenda from 3:30 to 3:45.

We could have more of an extended break and then come back at 3:45 to talk about Superior Steel SEC Petition if that is agreeable. So, 3:45.

Member Lockey: Sounds good.

Dr. Roberts: Okay. See you back.

(Whereupon, the above-entitled matter went off the record at 3:16 p.m. and resumed at 3:46 p.m.)

Superior Steel SEC Petition 247 (Carnegie, Pennsylvania; 1952-1957)

Dr. Roberts: So, let's go ahead and get started. So, we are at the SEC, Superior Steel SEC Petition.

And let's see, Dr. Paul Ziemer is the Chair of the TBD-6000 Work Group of which Superior Steel is covered and is a part of. And he, I believe, will be the main presenter for this one.

Member Ziemer: Thank you very much. This presentation covers the activities of the TBD-6000 Work Group relating to Superior Steel. I don't

believe we've talked about Superior Steel before.

So, I will give some background information in a moment. And let me indicate, that although I'm presenting this as Work Group Chairman, I want to acknowledge the fact that the main contribution to preparing the slides and the lead person was Dr. Megan Lobaugh.

She prepared the PowerPoint slides that we're using here today. And my narration really is adopted largely from her presentation to the Work Group earlier this year.

Unfortunately, Megan is on leave although I noticed during the initial roll call that she was on the phone. And, Megan, if you're still there I would be glad to have you make the presentation. But I know that you're on leave.

And if you're still listening at least you are there to help out if I run into major snags.

Dr. Lobaugh: Hi, Paul, yes. This is Megan. I'll help you out. But I would prefer if you took the lead because it has been a while since I have been working full-time.

Member Ziemer: Yes. Well, I'll go ahead. But just so everybody knows, this is largely Megan's presentation.

So, I notice here in Slide 2 and this gives really an overview. Today I'll provide a brief review of the Superior Steel Company and what they did and the AEC contract.

And then we'll discuss the Evaluation Report that NIOSH produced for SEC-00247 and also then the evaluation of that, the Evaluation Report review by SC&A. I also am covering NIOSH's responses to the SC&A review of the ER.

So, we'll begin with the review of Superior Steel Company. On Slide 4 here this presents a general

review of the site. Superior Steel is located in Carnegie, Pennsylvania. And in this picture you'll see the five interconnected buildings that make up this facility.

They had a contract with the AEC to do uranium rolling because they already were doing metal rolling. And the covered period for the contract, that is the AWE period is January 1, 1952, to December 31, 1957.

That's the petition period as well. And we'll talk more about that later. There is also a residual radiation period which means the site was not cleaned up at the end of the AEC contract.

The residual radiation period starts January 1, 1958, and continues through the present day. There was some clean up apparently at the site.

But the total site has not been remediated. So, that's why the residual period continues through present time.

On Slide 5 here you see two diagrams demonstrating the flow of work and the rolling stations that were used at Superior Steel. In the top picture there is a layout of the former Superior Steel facility that shows the area designations and the approximate locations of the process line machinery.

There is Area C, which is in the left of the upper diagram, that has the storage shed, the rolling area. And then Area A and B, contain the finishing stands, the roughing mill and the salt bath.

The bottom picture is a layout of the actual uranium mill operations at Superior. The process starts on the right side of the drawing with the salt baths and proceeds through the left side.

After the salt bath it goes to the mill run out table and the roughing roll. The salt would then brush the plate at the brushing station and then put through

the finishing stand and the roll conveyer.

In general, the rolling started with about a one inch thick slab of uranium anywhere from about 61 to 89 inches long and anywhere from five and a half to seven inches wide. And then you ended up after the rolling with a slab that was about 182 to 191 millimeters thick.

So, that's a pretty thin slab when they finished. The slab was typically passed through the roughing roll about five times and then sent through the finishing stand and then was cut and transferred to the cooling area.

Next, let's go on to the next slide then. I'll summarize SEC-00247 which is the Evaluation Report.

NIOSH had received a Form B Petition or an 83.13 Petition on May 1, 2018, with an F.1 basis that the radiation exposures potentially incurred by the members of the proposed class were not monitored either through personnel monitoring or through area monitoring.

NIOSH qualified the petition for review on July 19, 2018. The class that was actually under review is all atomic weapons employees who worked in any of Superior Steel Company in Carnegie, Pennsylvania during the period from January 1, 1952, through December '57 as you see delineated here.

Let's go on to the next slide. The petition actually emphasized two different statements. The first one here is on this slide. We're going to come to the second one in a second.

But the first statement, as you see at the top here individual uranium urinalysis data are unavailable for Superior Steel workers and none are known to exist.

In the NIOSH review of this basis, they provided the following response that when personnel internal

monitoring data are unavailable NIOSH uses their monitoring data from worker breathing zones and work areas in accordance with our implementation guide, that is the NIOSH implementation guide, Internal Dose Reconstruction Implementation Guide.

NIOSH pointed out that specifically for Superior Steel air monitoring data and process data and information are available to estimate uranium doses.

One thing I haven't mentioned is that in addition to the uranium rolling at Superior that they did on the AEC contract, NIOSH found in their evaluation that this petition for Superior Steel also had a commercial contract to do thorium rolling.

So, for the thorium internal dose NIOSH proposed to use airborne mass loading calculations from the uranium air monitoring data to estimate the internal thorium doses.

Slide 9 shows the second statement in the petition, namely that no external dosimetry results are available for Superior Steel employees. Again, NIOSH's response to this is that when personnel and area external area monitoring data are unavailable NIOSH uses workplace information.

That's typically the source term and process information for estimated dose and that's in accordance with NIOSH OCAS-IG-001, External Dose Reconstruction Implementation Guide. Stay on that slide just a moment.

There is site-specific information in conjunction with Battelle-TBD-6000 to be used to model external uranium exposures and site-specific information, in conjunction with Battelle-TBD-6000 that could be used to also model the external thorium exposures.

Now, we can go ahead to Slide 10. So, here on Slide 10 is a summary of the feasibility findings for Superior Steel for this SEC-00247. You'll notice that

for the uranium internal dose, the thorium internal, uranium external and thorium external as well as occupational medical, NIOSH believes that dose reconstruction is feasible.

Slide 11. The Evaluation Report also provided proposed dose reconstruction methods. So, let me go through those quickly before we get to issues that were raised by SC&A.

Okay. So, the slide shows the applicable years that would be covered by the proposed dose reconstruction methods.

The AEC contract covered uranium rolling. And so, starting with uranium the operations period for that contract period is June 27, 1952, to December 31, 1957, with a residual contamination period from January 1, 1958, and to present, as I had previously indicated.

And then -- that's specific to the uranium rolling that was done for the AEC. But as I mentioned earlier, NIOSH found evidence that thorium --

Member Beach: Paul, we can't hear you.

Member Ziemer: Okay. Is that better? I'm off mute.

Dr. Roberts: That's better.

Member Ziemer: How are we doing? I'm pulling the phone a little closer. I'm hearing some background noise from somewhere.

Dr. Roberts: Yes, if people could mute their phones.

Member Ziemer: Yes, something is interfering I think.

Dr. Roberts: Yes, there is something there.

Member Ziemer: Okay.

Dr. Roberts: I don't hear it anymore.

Member Ziemer: So, well as I mentioned earlier,

NIOSH found evidence of thorium rolling that occurred at least one day. And for this the operations period would be March 27, 1956, to April 20, 1956.

And this time agrees with the time of an AEC licensing that Superior had for thorium work. That work was done during an AEC contract period. So, even though it wasn't done for the AEC, the doses would be covered.

It was commercial non-AEC work. I'm still hearing the background noises. Can you still hear me okay?

Dr. Roberts: I can hear you.

Member Ziemer: Okay.

Dr. Roberts: Again, everyone check your phones for mute, please.

Member Ziemer: So, this commercial non-AEC work, the dose from the thorium contamination would only go through the end of the AEC contract period. And there wouldn't be a residual period for that since it was not AEC related work. Slide 12.

On Slide 12, we have a summary of the proposed dose reconstruction methods that would be used for the SEC petition period which is 1952 to 1957.

So, let's look first at the uranium. There are two different specific -- Dr. Roberts: You're fading again.

Member Ziemer: Fading again. Well, let's see. I'm on a cell phone. So, I'll shift positions here a little bit and see if that helps. How is this?

Dr. Roberts: That's better.

Member Ziemer: Okay. So, there's two different specific intake times for the different intake types. One is for rolling when the actual uranium rolling was occurring and that's in the first row under uranium.

The proposed dose reconstruction method here assumed at 500 hour per year exposure to the uranium air concentration results that NIOSH has for Superior Steel. You'll notice a teal colored box around the 500 hours per year.

Megan put that in there to help us remember to emphasize the fact that this is actually a proposed change to the actual TBD that NIOSH was originally using to reconstruct dose.

Remember, there -- I think we got the report earlier from either, I think it was DOL and I think they told us that there was something like 50 dose reconstructions had already been done for this site.

But anyway, under the proposed dose reconstruction methods here this 500 hours is a change from the methodology that had been used. The current TBD assigns 800 hours per year. So, this is a reduction from the current TBD.

Continuing with the uranium and going to resuspension, this refers to the resuspension of uranium contamination when they were rolling non-uranium, when they were rolling the non-radioactive materials. So, the resuspension time that NIOSH is proposing you'll see here is 2,000 hours per year.

Using these resuspension methods that are currently in use the way this comes about is that NIOSH is assuming 2,500 hours a year of work, that is as overtime. But if you subtract then the 500 hours per year from rolling you get the 2,000 hours per year for the resuspension.

So, the resuspension is calculated then by the total hours, 2,500 minus the 500 hours for rolling. So, that's also in the teal colored, teal outlined box to remind us this is a change from the existing approach.

Also, this material would be assessed as U-235. It includes recycled uranium contaminants. And this is because it's known that recycled uranium could

have been used during this time period.

Next, let's go through the thorium column. Starting with rolling there is evidence, again we indicated that NIOSH found commercial thorium rolling was done.

So, NIOSH assumed ten hours of exposure during the March/April time frame. That's when this outside thorium work was to have been done.

And it appears from the records likely that there was just one day of thorium rolling. So, it's in here as ten hours.

NIOSH assumed ten hours during that period. And then the March to April date comes from the AEC license that actually, that gave them permission to use the thorium. The thorium air concentration that NIOSH would be assuming would be calculated based on mass loading approach from the air samples.

The next row here is the resuspension. Again, this is commercial work resuspension that would only be assigned through the end of the AEC contract period. So, that's the remainder of '56 through '57.

In this case, the material would be assessed as Thorium-232, including the daughter products in secular equilibrium. Again, I want to emphasize the teal boxes shown there were changes from the current TBD.

So, we have what is being proposed, 500 hours per year rolling, 2,000 hours per year for uranium resuspension. Let's go on to Slide 13.

So, this is for external dose now, the previous slide was internal. These slides look sort of the same. But this now is external.

So, here again we see for external rolling you see 500 hours per year proposed for the direct rolling and then you see, well there's really four different

exposure types, right because there we see what is called submersion rolling.

I should mention first the 500 also again is in the teal covered area, outlined box that reminds us that this is different from the original TBD. For the -- well let me mention one other thing about it.

The current TBD uses a surrogate site which was Simonds Saw and those doses NIOSH thought would be better or more appropriate to use rather than Simonds Saw modeling to use a TBD-6000. That's why it shows 500 year, 500 hours for TBD-600 or 6000, rather.

Now, submersion rolling there would be contamination that goes up into the air and causes a cloud. So, in this case for external you're talking about exposures that would be calculated for a person submerged in the cloud for 500 hours per year.

The third row is for direct storage. And that would be the time that the material was on site but not being rolled. You see this is supposed to be a red box outlining the 500 hours there.

That again represents a change in methodology. The -- calculating those dose rates again would come from Battelle-TBD-6000.

And then for post-rolling this would be the time period after rolling was completed, the time period outside the uranium rolling when other metal rolling was going on. And this assumption would again be 2,000 years of submersion or direct exposure using that EPA reference that's shown there.

For thorium direct exposure, the right-hand column, all of this thorium information would be a change from the current TBD because at the time of the site profile NIOSH didn't know about the presence of commercial thorium work.

So, starting with the direct rolling the proposed

method would be to assume ten hours of direct rolling. I've mentioned that before. And here NIOSH would use MCNP modeling and distance guidance that's provided in Battelle-TBD-6000.

For the submersion rolling again, this -- the time is the same as direct rolling because this is just a contamination from the cloud and the cloud contamination would occur during the rolling itself. Ten hours' exposure for the same time period with doses calculated using the EPA reference noted there.

And then since Superior was really only licensed to have thorium to the end of April '96, 190 hours represents the exposure time that would occur for storage during that two month period.

For post-rolling, this is the time period outside the thorium rolling when normal metal rolling would have occurred. So, NIOSH would assume exposures for the remainder of '56 and all of '57 for both submersion and direct exposure.

Now, let's -- we come to NIOSH's responses to the SC&A review of the environmental report. And I would like to point out that our Work Group, at our Work Group meeting Rose from SC&A, Rose Gogliotti led the discussion on this and covered SC&A responses as well.

So, just kind of summarizing here what Rose covered in the Work Group meeting. So, SC&A reviewed the ER that NIOSH had produced in June, that is they issued a review of it in June of 2019.

It included two findings and four observations. Then you see that in October NIOSH provided their responses and in January 2020, SC&A provided responses to that. The Work Group met in February to discuss the issues and the responses.

At that time, the Work Group voted to close one of the findings and all four of the observations. So, I'll go through these quickly here.

I'll summarize the two findings and their resolutions. Finding 1 was failure to justify process similarities. Let me see if I've got the right slides up here now. There it is, okay.

Here we are. Finding 1, failure to justify process similarities that support the use of Vulcan Crucible billing rate. There's four slides that are going to cover this.

So, let me talk for a minute about what is going on here. This issue really pertains to both the internal and external dose. And it has to do with the use of billing rates for contracts as a method for estimating working times and hence exposure times.

And so, it's the billing rates from Vulcan Crucible billing rate is so much per mill-hour. And based on the contracts you can figure out what the rolling times might be.

You see this sort of laid out here on the slide. And NIOSH, actually what was, what the issue here on the Vulcan was, this was raised by SC&A, why not use this one.

And NIOSH indicated that the billing rates that they used met the five criteria on the use of data from other facilities. This issue of using billing rates as a -- go on to the next slide there for a moment.

So, the -- under this issue of using the billing rates to determine really the source term, if you use a billing rate and you figure out how much time was used you can come up with exposure times.

So, there's some data shown here for different companies, what their billing rates were. And the temporal consideration issue has to do with whether or not this was an appropriate billing rate for that period of time.

It was the 1948 billing rate. So, it's handled in a similar manner to what we do with source term data to say is it appropriate to the time that we're using

it sort of as surrogate data.

This billing rate data becomes kind of a surrogate data type of issue. Let's go on to the next slide.

So, this is looked at here as a bounding scenario. In other words, we're going from a billing rate to say can we get bounding based on starting with the billing rate and ending up with exposure times and making certain assumptions on how long people worked with the material.

And ultimately, what -- going through all this NIOSH said that they would, they stood by the use of the Vulcan billing rate to determine the number of rolling hours. Next slide.

So, SC&A at that point agreed with NIOSH that annual milling hours can be bounded. Go back again. You see here the final approach to calculate billing hours using a certain rate and a certain amount of uranium.

They could estimate the bounding time as 253 hours per year. The Work Group did request additional information on this whole thing because there is a lot of uncertainty in using annual billing rates to determine annual rolling hours.

So, there is an action item here for NIOSH to provide some additional information for the Work Group to clarify this further. So, this particular finding was not closed.

Okay, next slide. Well, this is basically part of the same thing. I think we can just, you can read that over for yourself. This talks about the 95th percentile.

You can think of this in terms of as we, as a distribution issue and where do you select the distribution to represent what is going on. Let's go on to the next slide.

So, Finding 2, this had to do with the possibility that

the 1955 survey distributions may not bound air concentrations. Hang on a second here. I've got to get some more water. Maybe the rest of you need water too. This is a long presentation.

Okay. So, the issue relates here to internal dose. SC&A pointed out that the intake rate was based on the results of four HASL, that's the health and safety campaign.

The Evaluation Report used two intake rates as you see here from '53 data and '55 data. And SC&A actually questions whether this would be bounding.

And so, NIOSH's response was that they would remove the '55 data and use the other three data sets to determine intake rates and that was agreed as being probably a better bounding approach. And SC&A recommended that the Board accept that and they agreed to remove the May '55 data from the data set.

And there on this particular one the Work Group agreed to close that issue. Then there were a number of observations. And these were mainly points that needed clarification.

Observation 1, I sort of referred to this before. It has to do conceptually with whether or not it's proper to use billing as a bounding source.

Does that violate NIOSH's approach where they say if you don't have data you can use other information such as air sampling and area monitoring to bound data? Can you use billing to bound data?

Well, NIOSH really said really we're not using billing to bound data. We're using the billing to determine work times and therefore dose rates.

So, after it was basically clarified that we're not using the billing rate as a source term then that was agreed to and that observation was closed.

Observation 2 -- still good? So, Observation 2 had

to do with the fact that NIOSH said they were going to use the same methods for determining thorium air concentrations as they were uranium.

And those were based on air sample masses. And typically, there is a thorium-to-uranium ratio that's used to make that determination.

In an example here, Bridgeport Brass was an example. The thorium intake rates were found to be 10 percent of uranium. And the question was, why wouldn't you use those kind of ratios?

Well, the fact is there was no air sampling for thorium. There was only air sampling for uranium.

So, the assumption here would be that the amount of mass for uranium air samples would be also provided and are used for thorium air sample masses and using proper conversion tactics there you would calculate thorium concentrations. And that was agreed to.

Observation 3, well, yes, that one we voted to close. Observation 3, this was the issue of whether or not the 500 hours a year storage time is adequate to capture the length of time the material was on site.

The ER, as I indicated before, proposed 500 hours a year. SC&A was questioning whether that was adequate.

In the meantime, NIOSH got comments from petitioners and reviewed the referenced documents and other information. And SC&A proposed 500 hours per year and that issue was closed.

Then finally, Observation 4 had to do with whether or not the medical x-rays were done on site or off site. This was similar to the case we had earlier today where if you don't know the, use the default assumption and assume that there was pre-employment and annual x-rays and that was closed.

I think that's the last slide. What's that? Okay. So, I

think we're open for people to ask questions of Megan.

Member Anderson: This is Andy. I don't recall, have we ever used billing hours as an exposure surrogate before? Certainly not from another facility.

Member Ziemer: I can't answer that. I don't know, Grady, if you're able to answer that. I don't recall any, but certainly I know there were cases that people have looked at billing hours to gather information.

Member Beach: GSI comes to mind. Doesn't it, Paul?

Mr. Calhoun: I'm not sure. I would have to refer to LaVon or Tim on that one.

Mr. Rutherford: Yes, this is LaVon. I was trying to think of that myself. I know that Megan, she might be able to answer part of this too because when she researched the billing hours she looked back into a couple of different sites. But I can't remember.

Dr. Lobaugh: This is Megan. So, specifically for Superior Steel in the current TBD we actually quote this billing rate and calculate the exposure time for using this billing rate for Superior Steel.

But what, we don't use that exact exposure time in the current TBD. So, this information was used in the TBD as more, to prove it was bounding.

I can't speak for certain. But I think typically when we use a billing rate it's more as, to bolster other assumptions we're making, if that makes sense.

I think this will be the first time that we proposed using it to actually calculate exposure time and not just support other assumptions.

Member Ziemer: Yes. The bounding number was bigger than you calculated from exposure rate, as I recall.

Dr. Lobaugh: Yes. So, the bounding number that was quoted here in this presentation and in the responses came from other information.

So, in this case for Superior Steel we were using the billing rate as the main assumption. And then we looked at the other information we had in terms of uranium shipments, other information about uranium rolling, data that we have from like the technical areas versus actual radiation safety areas.

We (audio interference) in Table 7.1. And we use that information to kind of say hey, we're bounding it better with this billing rate approach.

Member Anderson: I was just looking. Is there some other site or information we can use just as a validation exercise?

And I just don't have any familiarity with how different billing rates would be from different companies, how competitive the billing rates would be.

Dr. Lobaugh: Yes. So, if we could go back to the chart.

Member Anderson: Do they charge more for uranium than -- most of these are rolling facilities and they're rolling a lot of steel or other metal. And --

Member Ziemer: Well, there is one other part to it, you know. And, Josie, when you mentioned that it sparked my memory.

For general steel industries we did have a look at some billing rates. And one of the issues is sometimes these are contract amounts and you can't tell what is, how much of it is covered or what they're paying towards the rolling, what they're paying towards some administrative charges.

There is, the contract may not spell out exactly or tell you exactly how many hours people are

spending doing this or that. So, it gets a little, it can get a little bit nebulous in terms of trying to do a one to one relationship between hours spent doing a particular task and the price of a contract.

Member Anderson: Right. Well, that's the concern.

Member Ziemer: But see, in the sense you could bound it by saying well let's assume that all of the work was, you know, you didn't have any administrative charges and so on.

In a sense, you could bound it and say okay, I'm paying this much money and the amount of time it takes to do that job is a certain amount based on the billing hours or the bill you could attribute it all to the work that you do.

Member Kotelchuck: Dave, this is Dave.

Member Ziemer: In that sense, I think you could bound.

Member Kotelchuck: Paul, Dave. You showed a slide where you had the billing rates for four different companies. I don't remember which slide it was.

If we can go back to that slide. Were all of those, let's see, there we are.

Member Ziemer: There it is. There it is.

Member Kotelchuck: Were all of those for uranium and thorium? They didn't include billing rates for just regular roll, iron rolling?

Member Ziemer: I don't know the answer to that. Megan, do you know?

Dr. Lobaugh: Yes, I can answer that. So, here on Slide 17 for those who aren't on Skype, we found four billing rates that are for radioactive material billing, specifically uranium rolling.

So, if you see the first one here is Simonds Saw and Steel at $110.53 per rolling hour. So, for each of

these we found enough information to know kind of how they were charging or how they were being paid either by rolling or per pound, for example.

So, we found only four of all of our searches. So, we searched several different databases through Hanford, all of our Site Research Database and we did data captures, any billing rate we could get.

Member Kotelchuck: Very good. So --

Dr. Lobaugh: These four are the ones we have, yes.

Member Kotelchuck: -- all four, sorry. All four were for uranium, were uranium rolling?

Dr. Lobaugh: Yes.

Ms. Gogliotti: I just want to point out that the Superior Steel at the bottom was found after the initial ER was reviewed.

Dr. Lobaugh: Yes, thank you.

Ms. Gogliotti: When we went back and looked at it they found this additional billing rate. So, it kind of invalidates some of the finding because the actual billing rate was found.

And this was an early contract and it was probably modified.

Member Kotelchuck: Well, can we -- can you use that here to modify the number? We know, because we know the size of the rolling, the pieces that were rolled and therefore the weight.

Dr. Lobaugh: So, this is Megan again. So, as part of our response to the Work Group, the Work Group requested additional information on this finding.

As part of our response to the Work Group we pulled together information we had to be able to use the Superior Steel Corporation modification numbers. So, this dollar and one penny per pound.

So, that would mean information on the pounds that they rolled as well as the money that they were paid and actually let me pull up the document. It will be easier to speak directly from the document.

So, we provided a document to the Working Group March 19. That went through all of the data that we had to answer that exact question.

And then actually our, the statistician that, one of the statisticians that works at ORAU actually pulled together and came up with the distribution. So, if we go to, let me find this slide. I think it's the next two slides, so Slide 19, no, Slide 20.

So, this is just a summary of our March 2020 response. So, we pulled together all that data and used the statistical simulation to actually review available slab weight and rolling through-put data because those were the two kind of variable inputs to this calculation.

And from that we proposed using the 95th percentile.

Member Ziemer: And I didn't mention this. I, in fact forgot to mention that particular slide, Slide 20. We did not have that information when we met in February. I'm hearing echoes.

Anyway, that is, that particular slide that's new information to the Work Group, actually.

Member Kotelchuck: Very good, okay. It certainly validates going down from 800 to 500 and this calculation is significantly less than 500. So, when you review that or will the Working Group review that at upcoming?

Member Ziemer: Well, we haven't yet. And here's, there is -- I suppose we need to have a response also from SC&A.

But at this point, what we really have before us and we didn't have a formal motion on this from the

Work Group because at least this issue was open. But in essence we have an SEC petition for which NIOSH has said we can reconstruct dose.

And that, and the NIOSH Evaluation Report has been reviewed by SC&A. And everything was basically closed except this final thing here which is that uranium rolling hours per year.

So, that's the only change. But I think if there is a Board action, the action and this wouldn't change the action per se, the Board action would be to agree that NIOSH can reconstruct dose and in effect that would say that the SEC would not be accepted.

Member Kotelchuck: Right, right.

Member Ziemer: But I think also we need to hear from, if the petitioner is online --

Mr. Rutherford: Dr. Ziemer, this is --

Member Ziemer: -- we probably need to hear from the petitioner.

Mr. Rutherford: Dr. Ziemer, this is Lavon Rutherford. Just a little clarity here. I wanted to remind a couple that from the Work Group meeting, we had actually, NIOSH had actually proposed the rolling number.

SC&A came back with another rolling number and then both parties agreed and the Work Group agreed that this was a TBD issue, that what the right number came down to whether it was 267 or 253 is what, you know, SC&A proposed or the 500, either way it was a TBD issue.

Ultimately, Megan went back and looked at this closer and did some additional calculations and we came back with the 267 which was very near the SC&A. So, as for an SEC issue this was not an SEC issue.

All parties had agreed during that Work Group meeting that this was a TBD issue which is the right

number to use.

Member Ziemer: Yes. And that's why I say that part doesn't matter because the issue before us is whether or not we accept that dose can be reconstructed.

Dr. Roberts: Right. And as you pointed out though, we do need to open it up to hear from petitioners maybe before we get to that point.

So, are there any petitioners that would like to present at this time? I believe you've been, petitioners are given about ten minutes or more to make a presentation.

Member Beach: Rashaun?

Dr. Roberts: Yes.

Member Beach: I don't think they're limited to ten minutes during this portion. It's during the public comment session that they're limited.

Member Ziemer: Yes.

Dr. Roberts: Okay, all right. Well, presentation by a petitioner if present.

Mr. Palastro: Yeah, my name is John Palastro.

Dr. Roberts: Hi.

Mr. Palastro: I'm the son of John A. Palastro who worked at Superior Steel. I don't think you've given any consideration to the contamination of the equipment.

You said earlier in your presentation that you still got readings in the buildings. Well, right after rolling that, the shell would fall through the conveyer.

It would go through the mill. It would go through the shearers. It would be cut off. I was in that mill many, many times. I'm a first-person witness, okay.

That was picked up by a magnet and put into a

gondola car. That car set there until it was full. When they weren't running uranium or thorium, they were running other steel.

That went on the car too. I can even give you the name of the person that bought the scrap from Superior Steel. That sat right there.

Plus the shell that fell through the conveyer was there until it got full enough to be shoveled out by hand, put in a hopper and loaded in the car. Now, if you've still got readings today in those buildings, I'm sure that all that equipment was contaminated forever.

The other thing is there is an awful lots of assumptions and I listened to all of them. This is probably the third call I was on.

And a lot of them are really incorrect. I just think that if Superior Steel is a good quality company, and as far as ventilation goes they had the same fans with the windows when they were running any other metal.

There was no special ventilation. My father worked there. He never had a badge. I never remember him having x-rays before or after. So, some of your information is questionable.

If you have any questions for me, you're welcome to ask them.

Member Ziemer: Yes, thank you for those comments. This is Paul Ziemer again. Let me mention on the medical x-rays what the assumption there is that NIOSH will actually assign dose as if the person had medical x-rays even though they may not have.

In other words, they will credit them with radiation exposure for that. There is air sample data that will be used.

I guess I need to ask, Megan, if there is any new

information that you've heard from this petitioner that you didn't already have in terms of residual contamination?

Dr. Lobaugh: Thank you. This is Megan. So, I would like to provide a little more information on how we're doing the residual contamination calculation.

So, specifically with terms to the storage of the scrap in the rail car, for this we would be calculating external dose from anything that was stored on site. And this is actually closely related to Observation 3 that SC&A provided in their review.

And this was regarding the uranium storage time assumptions that we had in the, had proposed in the ER, the Evaluation Report. So, in our (audio interference) what we had initially proposed to year round minus rolling times.

So, Dr. Ziemer discussed that a little bit when he was going through the slides that we have an assumption of the total amount of time worked per year, so 2500 hours per year is our TBD-6000 assumption for overtime work.

And then we would subtract the rolling hours from that to come up with the amount of time that we think the employees would have been exposed on site to either residual contamination or contamination from work that had been done during the operation period and storage of uranium on site during the operation period.

So, how we specifically assign dose from that is we use the one meter external dose rate from the TBD-6000 site profile or the information that we have for establishments.

So, we used the one meter external dose rate to calculate the dose for the storage of uranium metal on site and that's what we are assuming is the 2500 hours per year minus the hours actually spent rolling uranium.

So, here that would be, you know, this is still kind of hasn't been finalized because of the discussion of the hours, the uranium hours per year for rolling that has to do with Finding 1 that you can see here on the slide actually.

So, just to reiterate. We use a specific dose, external dose rate that has been agreed upon in TBD-6000, specifically one meter from any uranium that would be stored on site. And we're going to apply that dose rate for the number of hours, 2500 minus the rolling hours.

In terms of other contamination that we can think about. So, there is the submersion dose that we talked about for external and other surface contamination like uranium falling from the conveyer to the floor.

What we typically do here is we are, we do assign dose from that from the post-rolling surface contamination. And we use specifically the EPA-FGR-12 dose conversion factors for that.

So, again the kind of discussion that we're having here is more specifically about the exposure time and how many exposure hours we're applying for that. And again, it's that same discussion of the 2500 hours minus rolling will be assigned.

And that exposure time will be used to assign dose from that post-rolling surface contamination. So, the uranium (audio interference) equipment itself being contaminated after the uranium rolling.

Mr. Palastro: I would have to question that. That's pretty much all I have to say. My father died of cancer and his older brother worked in the mill as a shear man and he died of cancer.

And I sent a letter in to my attorney and he presented it to NIOSH from the doctor who treated my father. But I don't know what type of cancer that my uncle died from.

I did, I told her I disagree with the hours. That train car could have set there for forever. Who knows how long it sat there?

Well, you had -- I think you had 12 hours a day. Am I right, on there, Megan? Megan?

Dr. Lobaugh: Sorry, yes.

Mr. Palastro: Didn't you have 12 hours a day --

Dr. Lobaugh: What was the question?

Mr. Palastro: -- or something like that?

Dr. Lobaugh: So, how we assigned, yeah, how we assigned dose is typically on a per year basis. So, we have the 2500 hours per year that we assumed the employee worked.

Mr. Palastro: Well, that's a little over a 40 hour week. Is that correct? Approximately, 28 is 40 hours a week. They worked, oftentimes they worked three shifts.

There is a good many inaccuracies in there. And I would just like to correct the record, that's all. Anybody has any questions for me I was in that mill many, many times.

I did projects for school and the people that worked there would explain what they were doing to me in great detail. So, I know exactly what I'm talking about. Thank you for listening to me.

Dr. Roberts: Are there any questions for the petitioner?

Member Schofield: The labor rate for the Vulcan, does that come from another facility that is doing the same thing or very, very similar or is that from their actual records?

Mr. Palastro: Are you talking to me?

Member Schofield: I'm asking about the Labor rate

so that they calculate the hours. I was wondering if they actually have any records anywhere they found where they billed AEC?

Dr. Lobaugh: This is Megan. I can --

Mr. Palastro: Go ahead, Megan.

Dr. Lobaugh: Go ahead. So, as Rose pointed out, the Vulcan Crucible billing rate actually will not be used anymore because after the discussion with the Work Group in February, we are actually using the Superior Steel billing rate.

So, on the previous slide it showed that billing rate of a dollar and one penny per pound. And so, in response to the Work Group and to provide additional information to the Work Group we, NIOSH, reviewed all of the data that we had to be able to use that billing rate, Superior Steel's specific billing rate and calculate the number of hours using that.

So, the (audio interference) proposed exposure time of 253 or 267 hours which is still being discussed with the Work Group is calculated using the Superior Steel billing rate.

The initial Evaluation Report did not, proposed method did not use that. So, that's -- does that make sense?

Member Schofield: Yes, it does. Thanks.

Mr. Palastro: This is John Palastro again. Did that take into consideration at all the radiation from the equipment?

Dr. Lobaugh: The, so the dose that would be assigned does take into account the contamination of the equipment. So, if we can go let me pull up -- I have to find the specific slide.

The way to kind of look at this is on Slide 13. So, Slide 13 lists the different external exposure types that we're talking about. So, direct rolling. So,

exposure from handling the uranium as it's being rolled or prepared to be rolled.

Submersion rolling is the submersion within the contaminated air that occurs from the actual rolling. Direct storage includes the storage of material on site as well as if it's a one meter dose rate it also includes any kind of exposure that would be received from material, you know, falling to the floor or sitting around the work site there.

And then post-rolling is that time -- is the time after the radioactive material happens when there is still potential for radioactive material to be in the air. So, this accounts for submersion in that contaminated air after rolling.

So, this kind of is just a quick summary of the different exposure types that we considered in our review.

Mr. Palastro: Most of that is an assumption though. Am I correct?

Dr. Lobaugh: The assumptions are based on, so the assumptions that we're talking about here are the exposure time, so the amount of time that an employee would be working doing specifically the rolling of the uranium.

And then the other assumptions are really the exposure rate. But that's set. We have a programmatic set exposure rate in this Battelle TBD-6000. Does that answer your question?

Mr. Palastro: It did. But I'm not satisfied with the answer.

Member Kotelchuck: Dave Kotelchuck. Can I ask a question?

Mr. Palastro: Yes.

Dr. Roberts: Sure.

Member Kotelchuck: I'm actually, with Dr. Ziemer in

his report our, what we have to fundamentally decide is whether it's an SEC or it isn't. If it isn't an SEC then there are a lot of individual aspects of this that could possibly be changed later, I don't know.

But so, Paul, Dr. Ziemer said that the Union and the Working Group had met. You mentioned before that you had talked with the Union and there was an agreement that this is a TBD.

I wondered if you could just clarify a little bit or someone could?

Member Ziemer: Well, the Work Group hadn't actually made a motion on it being a TBD or I'm sorry, being an SEC or not partially because of the way things were developing. We originally didn't have this last piece of data.

And the Work Group or the Board was going to meet in April, you may recall. And our April Board meeting got cancelled. So, in April we were going to present this as more of a progress report.

Then in the meantime the information on the actual billing rate was discovered and that basically is new information. But I think everything else had been closed.

And the only open issues in this sense are TBD issues and not SEC issues. So, I believe it's appropriate that we have a motion, if the Board is ready for it, a motion to -- and this doesn't come from the Work Group directly because we didn't make this motion.

But it would be appropriate if it's okay with the moderator to ask for a motion to approve this as -- or to deny the SEC I think would be.

Member Kotelchuck: Right. But the Working Group, that was not, okay. I thought we were, I thought the Working Group had asked for a determination on the SEC today. And you're, on behalf of the Working Group, suggesting that it's time.

Member Ziemer: I'm suggesting the motion could be made by the Board. The Working Group hadn't made that determination because at our last meeting we didn't have all of this information.

Member Kotelchuck: Yes. I would say why not let the Working Group finish its task and then bring it the Board as a request for an SEC.

Member Ziemer: Or not.

Member Kotelchuck: Yes. That would allow a little more time if there are any other issues to be thought about or this last one dealt with. Well, we'll hear from other Board Members.

Member Ziemer: This last one is only an issue of which number on the, based on the billing rate is the right number and they don't differ by very much as Megan pointed out.

Member Kotelchuck: Right.

Mr. Calhoun: This is Grady. Let me just ask a question to clarify here. It's my understanding from listening to all this that the Work Group and SC&A and DCAS, we've all kind of agreed that all of the issues are closed with the one exception of which number to use.

It's not an issue of whether or not we have a number that's usable. And so, it seems to me that this is clearly a TBD issue at this point.

Member Ziemer: Yes.

Mr. Calhoun: And it's just a matter of which number of hours to use. I don't think there is any other -- somebody has got to turn their phone off.

It's not a matter of whether or not we can do dose reconstruction. It's just what number to choose. And I don't know if any additional time for the Work Group is needed other than to clarify the TBD issue.

I just want to make sure I'm understanding that

correctly. Is that right?

Member Ziemer: That would be my understanding, Grady, that we have dealt with all the SEC portions of this.

Member Beach: Yes, Paul. This is Josie, and I agree. Our last Work Group meeting although it was quite a while ago was that we were going to recommend, I believe that all the SEC issues were taken care of.

Dr. Taulbee: This is Tim Taulbee. If I may interject here. I just pulled up the transcript from that February meeting and there was a motion at the end by the Work Group to bring this before the Board.

And it says, I'm reading here from Chairman Ziemer. We can certainly bring to the Board an action on the petition itself at the Board meeting.

Mr. Katz, yes, we haven't made a motion on the petition in its entirety. But you made a motion basically that it's feasible. So, you've made a motion that corresponds to the findings that would have related to our basis to add a class.

It goes on and there is an actual motion here to add or to deny the SEC. If you read from Pages 54 and 55 in that in that transcript.

Member Kotelchuck: Okay, thank you. That's helpful.

Dr. Roberts: Okay. So, Paul.

Member Ziemer: I didn't recall that either. And since it wasn't on the slides, okay.

Dr. Roberts: So, Paul, I just wanted to circle back around to the motion and go from there. So, did you want to restate?

Member Ziemer: That doesn't even require a second then. That can become a motion from the Work Group to, TBD-6000 Work Group to deny the SEC.

Is that the proper terminology to use?

Member Kotelchuck: The actual terminology in the -- is to not accept an SEC.

Dr. Roberts: Right.

Dr. Taulbee: The actual terminology used during the discussion was to concur with NIOSH's recommendation that dose reconstruction be found to be feasible for the period covered by the petition.

Member Ziemer: That's exactly my motion.

Dr. Roberts: Okay, perfect, perfect.

Member Schofield: Sounds good.

Dr. Roberts: Okay. And therefore, do we need to have further discussion of it? Are we ready to do a roll call vote?

Member Anderson: Just a clarification. We've had quite a discussion here about using the surrogate billing information and I think that's a method that I have concerns about.

But it sounds like NIOSH is saying they're not using that billing rate to calculate the numbers using the Vulcan data. If that's the case, you're using only data from Superior Steel then that would fit with how we've done it in other cases so I'm comfortable with that.

I just want to confirm that's the case.

Member Ziemer: I think it removes that.

Member Anderson: It was in the original, got more information. So, now you're really -- you presented that because it was there.

But it's not going to be a method, you know, that we're setting a precedent for future just using somebody else's billing rates to try to bound something with confidence in how -- you can always

bound something but is it a realistic bound or not becomes the issue.

Member Ziemer: Yes.

Member Anderson: So, I'm happy if we're not going to use that billing rate from Vulcan to come up with a number.

Member Ziemer: Right. Did you hear the motion?

Dr. Roberts: Yes. Okay. Are we ready to vote by roll call?

Member Ziemer: So, let me mention that, on this vote we have to get, we have to obtain the votes of the persons who are absent from the meeting.

Dr. Roberts: Right.

Member Ziemer: And this information would go on to the Secretary of HHS.

Dr. Roberts: That's correct, okay. Well, starting with Anderson.

Member Anderson: Yes.

Dr. Roberts: Okay, Beach?

Member Beach: Yes.

Dr. Roberts: Field?

Member Field: Yes.

Dr. Roberts: Kotelchuck?

Member Kotelchuck: Yes.

Dr. Roberts: Lockey?

Member Lockey: Yes.

Dr. Roberts: Richardson? Richardson? Roessler?

Member Roessler: Yes.

Dr. Roberts: Schofield?

Member Schofield: Yes.

Dr. Roberts: Okay, Valerio?

Member Valerio: Yes.

Dr. Roberts: And Ziemer?

Member Ziemer: Yes.

Dr. Roberts: Okay. All right. And as was pointed out, I will need to get the votes for Clawson, and also Richardson was missing.

All right. I think okay, so the -- it looks like the next thing on the agenda is the public comment period which is supposed to start at 5:15.

I think what I'll do since we do have a few minutes, if no one objects, is I'd like to go ahead and read -- I can hear background. If we can get back on mute, please.

The Board received some correspondence ahead of this meeting that I would like to read. The first is correspondence from Joe Kennedy, III, the Congressman's office. And I will go ahead and read that into the record.

It concerns Metals and Controls. And this is a correspondence that was distributed to all Board Members and also was posted on the NIOSH DCAS website before the meeting.

So, the correspondence is dated August 11, 2020. It's addressed to Ms. Josie Beach who is the Chair of the Metals and Controls Special Exposure Cohort Working Group.

And it reads as follows. Dear Ms. Beach, I represent the Fourth Congressional District of Massachusetts which includes the City of Attleboro.

Since the 1950s and 60s, Metals and Controls

Corporation performed government sponsored work as a nuclear fuel plant and some of that work included Atomic Weapons Employer operations.

Texas Instruments Incorporated merged with the Metals and Controls Corporation in 1959. Work on nuclear fuel and AWE operations continued until 1967 and work on nuclear fuel in a small area of one building continued for a government research reactor until 1981.

As the government contracts ended, the radioactive materials were removed and the plant was declared decontaminated. Further records show the M&C facility was not properly decontaminated until 1997.

For 30 years during the so-called residual period, and that's 1968 to 1997, M&C repurposed the buildings where the nuclear operations had historically been performed for non-nuclear manufacturing activities.

Consequently, many non-nuclear M&C workers were exposed to high levels of residual radioactivity during the residual period and have had or still experience cancers due to their exposures.

In 2001, the Energy Employees Occupational Illness Compensation Program Act or EEOICPA was created by the federal government to compensate qualified workers or worker's families for their exposure to radioactive materials and for their related cancers.

Under the standard individual claim process, each worker's claim is evaluated on the basis of a dose reconstruction to determine if the Probability of Causation of the illness suffered is greater than 50 percent, more likely than not caused by one's occupational exposures.

Under the Special Exposure Cohort provision no dose reconstruction is required to show the Probability of Causation. The worker is eligible if he or she can demonstrate that they are a member of a class of workers recognized under the SEC and

have developed one of the covered cancers.

The enabling statute specifies that the Advisory Board on Radiation and Worker Health under Section 7384 of this title shall advise the President whether there is a class of employees at any DOE facility, AWE facility who likely were exposed to radiation at that facility but for whom it is not reasonable, it is not feasible to estimate with sufficient accuracy the radiation dose they received.

Now, that's the first page. Moving on to the second page. Since taking office in 2013, I've sought to assist in the distribution of benefits to former TI employees who have fallen ill as a result of working at the site in Attleboro.

I have met several of these employees and have heard many stories about the pain they and their families have experienced as a result. My office organized the resources to improve outreach to former employees, and thanks to our efforts, an additional $45 million was awarded in individual claims submitted after 2013.

Unfortunately, the same cannot be said of this claim submitted by former workers whose exposures occurred exclusively during the residual period.

As I understand it, the problem is that the standard residual period dose reconstruction model which assumes that exposures are lower and diminish at a predictable rate after the end of the operational period is entirely inadequate for certain classes of residual-period workers at the M&C site.

I'm aware that a group of former M&C maintenance workers filed an SEC petition in August 2016 for exposures they received during the residual period. I can hear interference, if you could mute.

1968 to 1977 these workers came in direct contact and disturbed high levels of radioactive materials that had been released during the operational period into subsurface drains, soils and trenches

and to overhead areas and had gone undetected until the site was fully characterized and decommissioned between 1992 and 1997.

During the entire 30-year residual period these workers were exposed without knowledge of or training for the hazards to which they were exposed. Their exposures were never measured or monitored and they were not compensated when they became sick from their exposure.

As I previously stated in my letter of November 20, 2018, it is my hope that the Work Group and by extension the entire Advisory Board takes a broader view and considers the original purpose and intent of the EEOICPA when considering the SEC petition for M&C maintenance workers under evaluation.

Thank you for your work and consideration of this request. Please do not hesitate to let me know if I can at all, if I can be at all helpful. Sincerely, Joseph P. Kennedy, III, Member of Congress.

So, that is the end of the letter. I did want to point out that we do have a work, an M&C Work Group session scheduled for next week. It is scheduled to occur September 2nd, which I believe is next Wednesday, at 10:30 a.m.

And that will give the Work Group an opportunity to talk and process in more detail this particular correspondence. The other correspondence that I did want to mention is that there was a petitioner who submitted a report in anticipation of this meeting of the Advisory Board.

And it's in support of SEC-00250, the Y-12 plant in Oak Ridge, Tennessee. And she had co-authored the report and that report was forwarded to all the Members of the Board in advance of this meeting.

And I do again, I want to note like I did with the Metals & Controls Work Group that there is a meeting of the Y-12 Plant Working Group currently scheduled for September 24, 2020, at 1:00 p.m.

Eastern Time, again where that report can be discussed in more detail.

Okay. So, it is about 5:15 p.m. So I wanted to go ahead and open it up to the public for any comments that they wish to speak at this point.

Public Comment

Ms. Barrie: Hi. This is Terrie Barrie.

Dr. Roberts: Hi, Terrie.

Ms. Barrie: Hi. Thank you so much. And good afternoon, Members of the Board and welcome, Dr. Roberts.

Officially, my name is Terrie Barrie and I'm with the Alliance of Nuclear Worker Advocacy Groups. I'm also the co-petitioner/authorized representative for SEC Petitions 192, 250 and 257.

I would like to provide the Board with a few firsthand observations from someone who is active in the petition process and strives to work by the rules. Recently, NIOSH did not qualify the Rocky Flats Petition 257.

I don't think the Board is privy to NIOSH's internal deliberations or communications about petition requirements, the qualification process, providing advice for corrective action and so forth.

But I think it's important for the Board to understand these steps and I believe it's well within their purview to assess and provide recommendations in these matters.

An official request for administrative review of that decision was placed in the mail and received by NIOSH this week and it also has been uploaded to the docket for today's meeting. However, I thought I would use some of these examples from NIOSH's letter to help you better understand the problem.

The documents I reference have been provided as

exhibits in the petition and in the request for review. First, the petition qualification notification letter was extremely difficult to understand.

It was so difficult it literally took me days to compose these comments in the hope that I could adequately explain the problem clearly to you. Allow me to elaborate on the content on the letter.

For background, the original petition was based on lack of monitoring for metallic U-235 during the periods from 1984 through 1989. Shortly after the petition form was filed, I received an incident report that I requested from Department of Energy through FOIA a couple of years ago.

After consulting with NIOSH, I added that incident report as another example of inadequate monitoring and possible falsification of records. Now, this is the easy part for me to explain.

Despite that I mentioned this verbally and twice in writing, the notification letter ignores the possible falsification of records. The letter simply does not give a reason for the denial.

They could have just as easily said NIOSH has carefully reviewed the possibility that records were falsified but found this was not true. They didn't do that.

The notification reads like the reason the petition didn't qualify was because I checked the wrong boxes on the form. There was no real explanation why the evidence supplied was not sufficient.

For instance, NIOSH said that using Line E-5 of the form as the basis for the petition did not qualify because E-5 must be, and I quote, discrete incidents likely to have involved exceptionally high level exposures such as the criticality, end quote.

When I first read that I assumed they were talking about the incident report, which involved a glovebox explosion releasing plutonium. And by the way, that

section of the regulation deals only with health endangerment and not whether the petitioner provided the minimum amount of documentation to qualify a petition.

I continued to read the entire paragraph and NIOSH states that, quote, the basis was provided in the form of the cover letter submitted with the SEC Petition Form B and pertained to the inability to reconstruct uranium doses with sufficient accuracy, end quote, and that NIOSH found Rocky Flats did monitor for uranium exposure.

I didn't understand what they were talking about. You go from glovebox explosions to uranium. There was no coherent explanation whatsoever.

But, and it took me days literally to finally figure out what NIOSH meant. This next item is one that may be an issue with other petitions that did not qualify for the Board's review.

Submitted with the Rocky Flats petition was one page of a 174 page DOE document which supported one assertion that NIOSH cannot reconstruct dose with sufficient accuracy for uranium.

What was NIOSH's response? We have that document in our database. It doesn't provide new information.

But there was a specific reason for submitting this one page. It supported the fact that U-235 was found on a lathe which is used to machine metals during that time period.

NIOSH failed to respond to the petitioner's arguments and explain exactly why this particular document was not relevant. Instead, they dismissed it outright because they had that entire document in their database.

How many times has NIOSH used that explanation, excuse me, for other petitions that did not qualify? My request of the Board is to review past and future

petition qualification denials and provide recommendations to facilitate communication with petitioners.

I could not find anything in the statute or the regulations which prevents the Board from creating a Work Group to review the documentation submitted for petitions which did not qualify and review NIOSH's explanations why they did not qualify.

A report similar to the one sent to the Secretary on dose reconstruction reviews could be submitted to the Secretary too. I think this should be done.

Ten years ago Dr. Howard, NIOSH's director, initiated the ten year review. Recommendation Number 21 states and I quote, NIOSH should continue and expand its efforts to cooperate with petitioners. Such efforts increase petitioner's knowledge of what is needed to gain SEC approval and should aid NIOSH in more quickly obtaining what information petitioners have about exposures of practices at potential SEC sites. End quote.

This potential Work Group should also assess the formal and informal guidance provided by NIOSH to the petitioners and the value of that assistance.

Lastly, one final issue. I'd like to comment on NIOSH's new or HHS's new redaction policy. I only heard bits of the Argonne-West Work Group meeting in July.

But I did read SC&A's report and saw how it was overly redacted. The Board Members, as I remember, requested the unredacted version. The petitioners need that version too.

Both NIOSH and SC&A have years of experience with protecting the privacy of the individuals. And I believe this new policy inhibits the transparency of the process.

Thank you again for allowing me to call in my

comments. Thank you.

Dr. Roberts: Thank you so much. Are there other members of the public that would like to issue a comment?

Mr. Hicks: Yes. My name is Stephen Hicks.

Dr. Roberts: Welcome.

Mr. Hicks: Hello.

Dr. Roberts: Yes, yes, can you hear me?

Mr. Hicks: Yes.

Dr. Roberts: Mr. Hicks, you can go ahead with your comment.

Mr. Hicks: Okay, thank you. Hello, Members of the Board. My name is Steve Hicks, and I am the SEC petitioner for Y-12 Petition Number 250.

Thank you for your time to submit these public comments. I filled this petition on November 1, 2018, to include all workers employed at Y-12 from 1980 and who worked in the uranium areas.

NIOSH qualified the petition on March 25, 2019, but extended the class to include all workers employed between 1977 through 1994. However, in their Evaluation Report issued July 2019, they determined they could not reconstruct dose for only 18 months.

January 1, 1977, through, and this was only thorium exposure, I still don't understand that. But I am thankful for the Board recommending that the 18 months was included in the SEC and that they will still investigate the uranium issue.

It has been a year since I last addressed the Board about this petition. There has been zero Work Group meetings.

I have read all the reports issued so far by NIOSH

and SC&A on this petition including NIOSH's response to SC&A's comments on the Evaluation Report issued on June 3rd of this year.

Right off the bat, I noticed that the introduction of this response, this statement, and I will quote, NIOSH determined that dose reconstruction was feasible for potential uranium, external metal x-ray exposures for the entire evaluation period.

There was no mention of NIOSH could reconstruct dose for internal exposure. Why is that? NIOSH admits in the report that the uranium coworker model is flawed as mentioned in Finding 3 on Page 3 of the report.

And actually they meant the same thing for internal thorium exposure after the third quarter of 1981, or could the reason NIOSH did not mention internal exposure in the introduction of the June 3rd response is because I submitted DOE documents which showed that Y-12 bioassay program was deficient in many respects, including the fact that before 1999 Y-12 did not routinely monitor fecal samples for the exposure to insoluble U-235?

This petition is almost two years old. NIOSH already admits in the June 3rd response they do not have all the data they need.

In fact, during the June 24, 2020 Board teleconference, NIOSH informed the Board that they discovered a data glitch which with regards to how Y-12 pulled the data, pulled its data.

In a following up email on June 29, 2020, NIOSH mentioned something about amend them and how it's now undergoing the evaluation process. I don't understand, why is there another evaluation process?

NIOSH also explained that the pandemic is slowing down the record retrieval process. But they already issued an Evaluation Report in July of 2019, more than a full year before the pandemic, and should

have had all the relevant records before they reached the July 2019 Evaluation Report.

Is this going to be another fiasco like Savannah River Site petition? The one that's over ten years old? I urge the Work Group to immediately schedule a meeting and get some answers.

Thank you for your time and the opportunity to bring these concerns to your attention. Thank you.

Dr. Roberts: Thank you, Mr. Hicks. Thank you so much for those comments. And I don't know if you've heard before, but there is a Y-12 Plant Working Group scheduled for September 24th at 1:00 p.m. should you care to join.

And the information, the meeting details and information for that Work Group will be posted in advance of the meeting on the NIOSH website.

Mr. Hicks: Okay, thank you.

Dr. Roberts: Thank you. Would anyone else like to comment from the public?

Ms. Cisco: Yes, I would. My name is Jeanne Cisco. I work at the Portsmouth Gaseous Diffusion Plant.

And I was just listening to Mr. Hicks and I'm wondering why Y-12 is having, they have all of these records when the three gaseous diffusion plants did not and they were SEC from the beginning, from the 50s, the very early 50s?

It's hard for me to believe those people were monitored at Y-12 and they weren't at the Oak Ridge Plant or Paducah or Portsmouth. That's just a comment there.

I know they caught them zeroing badges. That's how we got legislated to be SEC and it's very sad that Y-12 has to fight like they do to get an SEC from the beginning.

I just feel that I need to say that. And I also want to

commend Terrie Barrie for representing all of us in her comments. And we support everything that she said. Thank you.

Dr. Roberts: Thank you so much. Anyone else like to comment?

Ms. Vinson: Yes. My name is Kathleen Vinson.

Dr. Roberts: Hi, welcome.

Ms. Vinson: Thank you. So, I am a resident of Oak Ridge, Tennessee and I'm an EEOICPA Y-12 survivor claimant. My mother, Elise Meadows, worked at Y-12 from 1981 through 1994 as an outside laborer and died in 2016 of pancreatic cancer.

At risk of repeating information that has already posted to the docket and that is available to all the Board Members, I would like to read a bit of a summary statement into the record just to make sure we cover all bases.

So, after my mother's death I resubmitted her longstanding EEOICPA claim and it was denied again with the probability of causation at six percent. This didn't make any sense to me because I had heard all of the stories that she had told me about working without training or protection or monitoring, either external or internal.

And she, as an outside laborer, was required to work in dirty and contaminated conditions in every building at Y-12 including the enrichment areas, the protected area, doing work that made it possible for skill trades to come in after the labor crews and for management to avoid submitting incident reports.

In other words, she was doing the jobs that were too dirty for more skilled workers to do and she was not protected or monitored. And then after I sought out coworkers and wanted to get more information about what her experience had been, I found out that it was way worse than she had even conveyed to me.

I submitted an SEC petition that did not qualify and because apparently it was redundant to other petitions that had been filed on the same issue. So, apparently as the previous commenter had mentioned, the Y-12 workers had been fighting for years to get SECs established to no avail.

So, we persist. I then began working with Steve Hicks who had commented previously and together we produced a report called the Analysis of Working Conditions, Worker Exposures and Monitoring 1980 through 1994, Y-12 Plant, Oak Ridge, Tennessee, August 15, 2020, which has been distributed to the entire Board.

I just wanted to touch on a few highlights that are in that report that would indicate that NIOSH is prohibited from binding dose for uranium and thorium for 1980 through 1994.

Number one, there were discrepancies found between the hard copy filed for worker exposure records that were produced for the Center of Epidemiological Research for the purpose of studying exposures and eventually for use to perform dose reconstructions.

There was a study done to rectify this discrepancy that was found in 1991. But there was only a small sample of workers, 210 worker records used even though the population at Y-12 numbers in the thousands.

This was never reconciled and I wanted to bring to the Board's attention that in the report referenced there is an attachment copy of the memo that was sent in 1991 that outlined the discovery of this discrepancy.

And this also ties in with the change in standards for computing bioassay data in 1999. And so, this memo refers back to that.

Number two, thorium work was conducted at Y-12 through 1999. However, routine lung count testing

was only used at Y-12 and was discontinued in 1984. And the test that was used to monitor Thorium-232 and 230 did not meet ANSI standards that was used at Y-12.

Number three, in spite of the adoption of DOE Order 5480.11 to mandate the implementation of the DOE Rad Con Manual in 1989 and the issuance of ICRP 3054 and 78 in 1979, ‘88 and ‘97 respectively, Y-12 was not able to implement any routine and soluble bioassay monitoring program until 1989 and then soluble and fecal monitoring later on in 1999.

This means that workers who were in continuous risk of contamination as a result of normal operations were not internally monitored.

Number four, external on site monitors were installed in 1983 and discontinued in 1994. It has been determined that the ambient air monitoring at Y-12 to 1983 does not represent a representative measure of air concentrations and cannot be used to estimate on site doses.

Number four, inside building air monitors were not placed near the machinists and machining areas because of large cranes over the machines. Thereby, smoke from the daily uranium chute fires which were inhaled by the machinists were not monitored.

There were inconsistencies in the collection and reading of filter cards from the building air monitors where high readings were ignored, especially when the exhaust fans had been turned off for those buildings. Because there were no bioassay weekly, particle size readings from the filter cards were the only way to identify exposures.

Number six, prior to 1989 DOE regulations did not require computation of E50 and HT50 values from bioassay and workplace monitoring data, and was expressed in fractions of maximal permissible body burden or MPBB.

There was no simple and straightforward general method to convert MPBB values to E50 values and therefore it is impossible for NIOSH to reconstruct dose for uranium prior to 1989 at Y-12.

Number seven, there are at least ten radionuclides processed and worked with at Y-12, according to site experts, which are not included in the current NIOSH dose reconstruction models for unmonitored radionuclides.

They are Helium-3, Strontium-90, Polonium-210, Thorium-232, Plutonium-241, Uranium-233, Americium-241, Uranium-232, Plutonium-238 and Plutonium-240.

Number eight, Y-12 has been out of compliance with DOE monitoring standards up to at least the time of cessation of operations in 1994 and possibly after.

This was noted by senior DOE Oak Ridge Field Office and Martin Marrietta Energy Systems Radiological Controls managers and the Defense Nuclear Facility Safety Board in various reports submitted in the 1990s.

It was stated by DNFSB in 1994 that although the Y-12 management appears willing to change the existing operational structure they clearly have not implemented the changes effectively.

The DNFSB staff believes it is a clear indication of an institutional culture that lacks the appropriate level of rigor and formality associated with conduct of operations.

Despite the DNFSB recommendations, site-specific reporting requirements, publicly issued trip reports, and numerous staff reviews, recent events indicate that the personnel at the Oak Ridge Y-12 plant still have not integrated several fundamental concepts supporting safe operations into their daily routines.

These fundamental concepts include providing adequate procedures, ensuring the workplace is

properly trained, expecting compliance with requirements, and conducting nuclear facility operations formally.

All these concepts are necessary in an integrated systems engineering based health and safety management strategy required of a modern DOE defense nuclear facility. This long term, persistent state of non-compliance eventually necessitated the cessation of operations at Y-12 from 1994 through 1998.

And then finally, the EEOICPA claimant is responsible for proving their cancer was at least as likely as not to have been caused by their work at a DOE facility. Many times, the only way to prove this is by accessing employment records, which have proved almost impossible to obtain either through Y-12, NNSA or FOIA.

This puts an undue burden on the sick workers who provide to the outside quasi-government agency NIOSH what exactly was the worker experience at Y-12, what areas of the plant they worked in, what was the nature of their work and most importantly, were they given adequate protective gear and were they adequately monitored internally and externally.

Given the fact that dose reconstruction assumptions used by NIOSH return many denied sick worker claims, in spite of the worker communicating essential information about their experience to them in verbal interviews that indicate NIOSH is using inaccurate assumptions in their dose modeling.

I urge the Board to review the report posted on the docket for this meeting. It will provide detailed information and references the highlight these unacceptable circumstances with the intent to illustrate to the Advisory Board the current and historical problems that indicate the impossibility of reconstructing dose for Y-12 workers for uranium and thorium from 1980 to 1994.

I appreciate the time of the Board and everyone

present today. Thank you very much.

Dr. Roberts: Thank you, Ms. Vinson. And I feel that your report needs to get the attention that it deserves.

So, both SC&A and NIOSH as well as the Board Members in anticipation of the Y-12 meeting next month will have the opportunity to look at that report in more detail.

Ms. Vinson: Thank you. Thank you very much. I appreciate your consideration.

Adjourn

Dr. Roberts: Sure. Okay, anyone else from the public here to comment at this time? Is someone wanting to comment?

Okay, hearing none, I think we've heard from everyone that I was aware wanted to comment today. So, I want to just go ahead and close out the meeting and thank everyone for your hard work and for a good meeting.

We do have our session beginning tomorrow again at about 1:15 p.m. Eastern Time. So, please join us at that time and we will work through the rest of the agenda.

So, without further ado, I will go ahead and adjourn the meeting.

(Whereupon, the above-entitled matter went off the record at 5:41 p.m.)