UNITED STATES OF AMERICA

CENTERS FOR DISEASE CONTROL

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NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY AND HEALTH

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ADVISORY BOARD ON RADIATION AND WORKER HEALTH

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119th MEETING

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THURSDAY
OCTOBER 5, 2017

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The meeting convened via teleconference at 11:00 a.m., Eastern Time, James M. Melius, Chair, presiding.

PRESENT:

JAMES M. MELIUS, Chair
HENRY ANDERSON, Member
BRADLEY P. CLAWSON, Member
DAVID KOTELCHUCK, Member
RICHARD LEMEN, Member
JAMES E. LOCKEY, Member
WANDA I. MUNN, Member
GENEVIEVE S. ROESSLER, Member
LORETTA R. VALERIO, Member
PAUL L. ZIEMER, Member
TED KATZ, Designated Federal Official

REGISTERED AND/OR PUBLIC COMMENT PARTICIPANTS

ADAMS, NANCY, NIOSH Contractor
AL-NABULSI, ISAF, DOE
BARRIE, TERRIE
BARTON, BOB, SC&A
BUCHANAN, RON, SC&A
CRAWFORD, CHRIS, DOL
FITZGERALD, JOE, SC&A
HINNEFELD, STU, DCAS
LIN, JENNY, HHS
NETON, JIM, DCAS
PRESTER, JOSHUA
RUTHERFORD, LAVON, DCAS
STIVER, JOHN, SC&A

Contents

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

10:59 a.m.

Welcome and Roll Call

MR. KATZ: Okay. Welcome, everyone. Welcome to Advisory Board on Radiation and Worker Health teleconference. Folks on the line, the agenda for today's meeting is posted on the NIOSH website under this program, the Board section, special meeting, today's date.

So posted there is the agenda for today and the only thing special, this is a traditional teleconference except for, you know, continuing the discussion on the SRS SEC, so that's one additional item.

And then I posted for everyone and the public the documents and presentations that we used at that SRS session, the August Board meeting, just for your convenience. And you can also get it from that meetings's date on the Board's website.

Other just administrative note, everyone who is not speaking, please keep your phones muted for the duration of this call.

There's no public comment session. And to mute your phone, press * and then 6. That'll mute your phone if you don't have a mute on your phone and for Board Members to come off of mute press *6 again.

So roll call, we have no Board conflicts for this site, so I don't need to address conflicts of interest with the Members, so I'll just run through the roll call, see who we have among Board Members, and I'll just do this alphabetically. I know a couple of Board Members who will be absent already, but let's go through the list.

(Roll call)

Any others? Okay. Welcome all of you. Let me just check, go back around and check on a couple of Board Members who might be joining. Dr. Poston, John Poston, are you on the line? How about Dr. Richardson, Dave Richardson?

Okay then, that takes care of roll call and administrative matters. Dr. Melius, it's your meeting.

CHAIR MELIUS: Yes. I get to give a

long speech here. Welcome. And then I turn it back to Ted.

August Board Meeting Final SEC Petition

Vote Tallies

MR. KATZ: Thank you, Dr. Melius. So this is now actually to register the completed votes from the August meeting captured the absentee votes. So we had three actions in August.

The first Fernald site was a -- yes, SEC and Site Profile review. The SEC review was completed. The Board voted that the site, that the SEC, well, it voted to deny an additional SEC Class for Fernald for the final period covered by the petition. And the vote was 11 to 2, Beach and Lemen were 2. There was a lot more people. Dr. Lockey, one abstention, Dr. Poston.

INL, the Board voted to support the NIOSH recommendation to add a Class for CPP and that vote was 10 to 2, Dr. Lemen and Melius were opposed. There were two recused votes -- Clawson and Valerio, and one abstention, Dr. Poston.

And finally, Grand Junction SEC. The

Board voted 14 to zero, so unanimously with one abstention, Dr. Poston in support of the NIOSH Board Work Group recommendations that dose reconstruction is feasible and to deny the Class for Grand Junction. And those were the action that were taken up.

CHAIR MELIUS: Okay. Thank you. Should I do the letters now?

MR. KATZ: Sure, yes.

CHAIR MELIUS: Yes. Because we have and forgive me, I said one word before. I get lots of words now. We've got letters to go through.

With that, I'll start with Fernald, which is the Advisory Board on Radiation and Worker Health, the Board has completed its evaluation of Special Exposure Cohort petition 00046 concerning workers at the Feed Materials Production Center, Fernald, Ohio under the statutory requirements established by the Energy Employees Occupational Illness Compensation Program Act of 2000 incorporating the 42 CFR 83.13.

National Institute for Occupational Safety and Health has recommended individual dose reconstructions are feasible for the following two groups of workers.

All employees of the Department of Energy, its predecessor agencies and their contractors and subcontractors who worked in any area of the Feed Materials Production Center, Fernald, Ohio from January 1, 1984 through December 31st, 1989.

And, two, all employees of the DOE, its predecessor agencies, National Lead of Ohio or NLO, Inc. in any area of the Feed Materials Production Center from January 1st, 1979 through December 31st, 1983.

NIOSH found it has access to adequate exposure monitoring and other information necessary to do individual dose reconstructions with sufficient accuracy for members of these two groups of workers and, therefore, a Class covering these groups should not be added to the SEC. The Board concurs with this determination.

Based on these considerations and

discussions at the August 23rd and 24th, 2017 Board meeting held in Santa Fe, New Mexico, the Board recommends that this Class not be added to the SEC.

Enclosed is the documentation from the Board meeting where this SEC Class was discussed. Documentation includes copies of the petition, the last review thereof and related materials. If any of these items are unavailable at this time, they will follow shortly.

That's the first letter. The second letter -- Jenny, have you had a chance to review this letter? Jenny Lin?

MS. LIN: Yes, I'm here. What second letter are you referring to?

CHAIR MELIUS: The Idaho, INL.

MS. LIN: Idaho? Yes, I did review it.

CHAIR MELIUS: Okay, good. So the INL was reviewed. The Advisory Board on Radiation and Worker Health, the Board has evaluated SEC petition 00238 concerning workers at the Idaho National Laboratory under the statutory

requirements established by EEOICPA incorporate the 42 CFR, Section 83.13.

The Board respectfully recommends that SEC status be accorded to all employees of the Department of Energy, its predecessor agencies and their contractors and subcontractors who worked at the Idaho National Laboratory, INL, in Scoville, Idaho and who were monitored for external radiation at the Idaho Chemical Processing Plant (that's CPP -- e.g. at least one film badge or TLD dosimeter from CPP) between January 1st, 1975 and December 31st, 1980 for a number of work days aggregating at least 250 work days, occurring solely under this employment or in combination with work days within the parameters established for one or more other Classes of employees in the SEC.

This recommendation is based on the following factors. The primary function of INL CPP during the period in question was processing spent fuel elements containing enriched uranium in order to recover un-fissioned uranium.

Principal sources of internal

radiation, for members of the proposed Class, may have been included exposures to uranium, mixed fission and activation products (MFP/MAP), exotic radionuclides produced from, or as a result of, reactor neutron irradiation and transuranic radionulides. Potential exposures would likely be from inhalation and ingestion during the processing operations.

Routine monitoring of potential internal intakes of radionuclides was limited during this time period.

NIOSH's review of available monitoring data, as well as available process and source term information for this facility found that NIOSH lacked the sufficient information to allow it to estimate with sufficient accuracy the potential internal doses from exposure to transuranic radionuclides, to which employees working in this facility may have been subjected. The Board concurs with this determination.

And finally, NIOSH determined that health may have been endangered for workers from chronic intakes of the radionuclides during the

time period in question. The Board also concurs with this determination.

Based on these considerations, discussions held at our August 23rd to 24th, 2017 Advisory Board meeting in Santa Fe, New Mexico the Board recommends that this Class be added to the SEC.

Enclosed is the documentation from the Board meeting where this SEC Class was discussed. The documentation includes copies of the petition, the NIOSH review thereof and related materials. If any of these items are unavailable at this time, they will follow shortly.

Finally, the Grand Junction, the Advisory Board on Radiation and Worker Health, the Board has evaluated Special Exposure Cohort Petition 00175 concerning workers at the Grand Junction Facilities site, in Grand Junction, Colorado under the statutory requirements established by the Energy Employees Occupational Illness Compensation Program Act of 2000 incorporating 42 CFR 83.13.

National Institute for Occupational

Safety and Health recommended that individual dose reconstructions are feasible for all employees of the Department of Energy, its predecessor agencies.

So its contractors and subcontractors who worked at the Grand Junction Facilities site, Grand Junction, Colorado during the period from January 1st, 1986 through July 31st, 2010.

NIOSH found that it has access to adequate exposure monitoring and other information necessary to do individual dose reconstructions with sufficient accuracy for members of this group, and therefore a Class covering this group should not be added to the SEC. The Board concurs with this determination.

Based on these considerations and discussion at the August 23rd and 24rd, 2017 Board meeting held in Santa Fe, New Mexico, Board agrees with the NIOSH recommendation that this Class not be added to the SEC.

Enclosed is the documentation from the Board meeting where this SEC Class was discussed. Documentation includes copies of the petition,

NIOSH review thereof and related materials. If any of these items are unavailable at this time, they will follow shortly.

So, I believe that two of the letters that were circulated to the full Board just before the meeting and the third one we will circulate after the call. A little confusion on where the letters were and getting them together. So, okay. Anything else on that?

MEMBER ZIEMER: Question, Dr. Melius?

CHAIR MELIUS: Yes.

MEMBER ZIEMER: Just out of curiosity, do we know who the letters will go to at this time?

CHAIR MELIUS: That's a good question. Ted?

MR. KATZ: Well, it all depends on timing. So for example, our August letters are going to the new secretary. I mean, our letters for the prior meeting are going to the new secretary.

We don't -- it just depends on whether there's an appointment. If there's not an

appointment. I don't -- it's mainly that the Deputy HHS Secretary. The Senate has approved the second DAS, so that person would be in position if we don't have a secretary.

MS. LIN: So we do have the acting secretary for HHS, Dr. Don Wright and so he will be the one that we would talk to during the interim unless they appoint a new secretary.

MR. KATZ: All right. Thanks, Jenny.

MEMBER ZIEMER: That's not stopping this, I guess, right?

CHAIR MELIUS: Yes.

MR. KATZ: It takes a little while to get the background materials together and then the letter goes with that and at that same time when we send it out, that will be decided.

Savannah River Site SEC Petition (1997-2007; Aiken, SC)

CHAIR MELIUS: Okay. Next item on our agenda is the Savannah River Site SEC petition. At the last meeting in Santa Fe, we lost our quorum right towards the end of the meeting due to some travel arrangements for people, and we

were unable to sort of reestablish that.

Bill Field did try to call in from the airport while he was waiting to leave, but unfortunately that was after we had already had to discontinue the meeting for that.

Where we were for those of you that weren't at the meeting or have forgotten is we were in the discussion of the Savannah River Site petition. We had a report from NIOSH concerning sort of a completeness of monitoring data for construction workers during the time period.

And then we had another report from Joe Fitzgerald from SC&A looking at the exposure monitoring period of time of what we, several -- Tim's was focused on one area. Joe's was a little, had a little wider both in terms of time frame and in terms of in the coverage, though most of his time frame was later than the time period covered by Tim.

We had discussions among the Board about that and then we had the comments from the petitioners, representatives about the SEC. And then Brad was about to speak and discovered, at

that point in time, that we lacked a quorum.

So I think what we'll do is I'll start with Brad and at least continue the discussion there, and we can decide what further action and so forth. And so this is part of a -- there's also other parts of this SEC that are under evaluation, but I'll start with you, Brad.

MEMBER CLAWSON: Thanks, Jim, I appreciate that. One of the things I want to put out there is there's an awful lot of information to be able to go through on this. They're covering a long area.

But one thing that I want the full Board to remember when they're looking at this, this portion that Tim is putting out there is one quarter of one year, in one facility.

Now, SC&A did a marvelous capture. They went a little bit broader and everything like that. But, they still came up with that we're about 30 percent short, roughly, basically right in there.

The problem that I have with this is we just found out about this notice of violation

in there. Now, to correct this notice of violation, they did a hundred percent check of everything.

Now, picture this. This is in the time period that the people are there. They have followed the RWPs. They have all the safe work permits. They have all the information. They're not trying, like us, to be able to come back 20 to 30 years later and try to reconstruct this.

And they basically came up that there was a 69 percent to 79 percent -- Joe was it 69 percent that they were off or was it --

MR. FITZGERALD: For that survey, it was 79 percent nonparticipation.

MEMBER CLAWSON: Seventy-nine percent of the people were nonparticipation to the bioassays that they were being required. I have said this from the very beginning of this, and I am not, understand, I am not saying in any way, shape or form that, you know, this wasn't done right. We are dealing with the information that we have. And I think everybody has done a very good job.

One of the things that impressed me about this was that Tim took this one facility and he did what he did with it, and we came out with about 30 percent.

Joe did a much broader spectrum and hit several of them, a few later years and stuff like that where he could get some fairly good information, and he come up basically about the same, 30 percent.

But what bothers me is the notice of violation. The corrective action is go back a hundred percent check and everything else like this, but we're sitting there at 79 percent weren't done. I do not think that there is any way, shape or form we're going to be able to come off with a decent coworker model.

Now, even the papers that Tim sent out here on the SRS, the comparison that he did on this at the bottom of Page 2, see right down there between the years and stuff and like that, you've got between '77 and '89 we were questioning for Dr. Kotelchuck the difference between the DuPont construction trades and the DuPont workers. And

we've got a 2 percent to 5 percent higher percentage for plutonium through there.

I just really have a hard time believing that we can come up with a decent coworker model for this. And we have been going at this for years. I believe that we're onto the fifth year for this coworker model, and I'm really getting to the point to where enough is enough.

You know, we can't make up data or anything else like that. But, we can connect a lot of dots and that's wonderful, but the thing is, as we're -- as what has been shown to me with this notice of violation, we can only deal with what the information that we have on this, but we don't have what it takes.

These people were in the time frame. They pulled everything that there was. They were right there, and they're showing 79 percent nonparticipation. I don't think there's anything else that we can do. This completeness of this data to me is, it's off.

And I don't think -- I think we ought

to quit messing around with it, and we ought to get to the SEC process. That's just my personal opinion. I have other Board Members that are hearing the same stuff with me, but this just, there's no place else to go with this, in my eyes.

So all right, Jim or Stu or Joe, did I mislead in any way in any of this?

MR. HINNEFELD: Well, this is Stu. I'll comment that the NOV, the notice of violation, the 79 percent noncompliance was an evaluation of a job-specific bioassay, which was a subset of the total bioassay.

I mean, there were far more people on routine, far more samples were collected in the routine bioassay program than under the job-specific bioassay program.

I think that gets, you know, the excerpts from the SC&A review say that like 95 percent of the bioassay requirements and samples were from the routine program and that those were compliant. And that the nonsubmittal or the nonavailablility is in the 5 percent that were job-specific bioassays.

So I think the question that I think needs to be firmly decided is what population are we describing here by the job-specific bioassays that are 79 percent noncompliant. Now, what work population is that? Because that seems to be the population then that would be affected if there's an SEC decision.

MEMBER CLAWSON: Well, you know, right now, to me, we're looking at the construction trades. And that --

MR. HINNEFELD: I think that's probably right, I mean, but you know, there's subcontractor construction and then there's sort of in-house construction or maintenance or however they're described, I think.

Now, I'm trying to get smart on this kind of late in the game since Tim's not here this week. So I think it's kind of important to understand exactly what population are we talking about when we're talking about the people who are on the job-specific bioassay program and thereby are not, you know, submitting samples in a great frequency.

So to me that's the question I think I -- my feeling is, I would like to, you know, it seems like the Savannah River Work Group might have a little bit of work to do to kind of decide, okay, what's the Class we're going to define here and what are the years of it.

I mean is '98 a good ending year, because that seems to be when corrective actions were put in place from the NOV. And then as far as I know we didn't find anything, a recurrence later than '98. We certainly saw the same situation or same comments similar to the ones from the '97 NOV.

We see those in some earlier assessments too, so it's not strictly a 1997 issue, but better they know what's the time that we're defining and what population are we defining, I think, are the key questions here.

MEMBER CLAWSON: Well, another key question too, and Stu correct me if I'm wrong on this, the '89 time period is when Westinghouse came in, and we saw a dramatic change from DuPont and how DuPont was doing business at that time.

MR. HINNEFELD: Yes, that comports with what's in the SC&A report and that there seemed to be quite a lot more, I think there were four subcontractor construction workers engaged in the radiological work after that.

It may have been an operating philosophy of the different contractor or it may also have been the actual work that was going on, which is the restart of the K reactor, which involved a lot of construction workers.

So at least, now I'm only -- I'm trying to quote from the SC&A report, because I haven't researched this independently. I was just looking at that. So my only thought was let's make sure we know what population we're talking about and what years we're talking about when we go down, you know, when we do this.

MR. FITZGERALD: Yes, and this is Joe Fitzgerald. I think the other consideration, too, is, you know, we're basing a lot of the analysis on the 256 workers, this '97 sampling that Westinghouse had done.

And the challenge going back in time

before that '97 time frame is the missing RWPs and job plans. I think we made that very clear, I think Tim did as well that, very surprisingly, we were unable to find or locate a lot of these RWPs, most of them, for the preceding years.

You know, Tim only found the construction job plans for that one facility for those five or six years in the early '80s. We only found something like 14. Fourteen RWPs for the 20-year period from the early '80s through the '90s. So clearly there's a lot missing. So in trying to even demarcate what cohort you're talking about, it's going to be a challenge.

The other issue, and I know Tim was pursuing this with Savannah River, was to establish if there were any other samplings, any other follow-up reviews, anything that would provide alternate monitoring data, as you may, similar to what was done for the '97 sampling. And I think what we got back in terms of some of the documentation was it does not appear to be the case.

One of our questions for Tom LaBone

was to frankly confirm that, because based on the enforcement conference notes and other documents, it appears they did the resampling only for the '97 missing data, but not for the '96 and before that.

So you know, as far as trying to get your arms around the scope of this, you know, I think that that's going to be hard. I think you can probably back-extrapolate from the '97 workers, you know, who are they, as Stu was pointing out establishing, you know, if they're CTWs or the subcontractors within that group.

But that's all you have. I mean, essentially that's probably the best data that you do have in that time period other than what we sampled earlier in the '90s. So that's kind of the configuration at this point.

CHAIR MELIUS: Any other comment? Yes, I would just add I think following what Joe was saying, I just agree it would be nice to have a better, you know, definition, but I don't see it going beyond subcontracting construction workers.

I mean, I don't know how we'd pin it down in the absence of work records or detail, because we'll never know what we're missing. And the scope of who was missed in terms of monitoring seems to be very high.

And therefore, again, without good records, how do we, you know, define the narrower Class so to speak?

MEMBER CLAWSON: Well, correct me if I'm wrong, but for Savannah River the only petition out there is for the construction trades. Correct?

CHAIR MELIUS: Correct, yes.

MEMBER CLAWSON: And that's why we have been focusing on this. But I can tell you that there was a lot more out there than '97 construction trades workers. So to me, the amount of people that are missing out of this is just astronomical to me, especially in this time period.

Because, remember, this is the time period where K reactor was trying to come back up online, and they were trying to bring everything

into compliance. And I gather -- you know, if you go back and look at the manpower in that time period, it's a third higher, and we've got less data.

So that's part of my issue and, you know, I agree with what Joe and Stu are saying and what you're saying too. It's just it's been a long time coming to this, and data completeness to me should have been along a lot sooner.

MEMBER MUNN: There still is the problem existing though with the cherry picking of data when you're trying to establish a certain Class in an SEC, and it appears that that actually is what we're doing.

We're saying that -- I guess what I'm trying to say is 80 percent of 5 percent is still a small number and to make the assumption that this, by definition, was a group of people whose exposure was far outside the limits of those that we have does not seem to compute.

Understandably, construction workers do have counterparts inside the governmental structure of the permanent facility itself, and

those folks are included in rather good records.

So we can't just say all those people were exposed in some way that was far in excess of the good record that we have of permanent workers. It flies in the face of common sense, I think.

And the lack of the work permits is a different question entirely. But, you know, we need to be careful about using the right language here if we can.

CHAIR MELIUS: Yes, but -- it's Jim Melius -- again, the test is can we do individual dose reconstruction with sufficient accuracy? And with so much missing data, I think that sort of belies the ability to do individual dose reconstruction with sufficient accuracy for people within whatever the defined Class may be.

So it, you know, it's just that we don't know. We know there was some potential for exposure and without monitoring and without, you know, work records that would allow us to see that kind of comparison, how do we know?

And is it, you know, fair given so

much missing data to make the assumption that we can do that whether through, you know, a coworker model or whatever?

MEMBER CLAWSON: And, Jim, I want to point out so that everybody understands that Savannah River is a unique facility and a whole unique site in itself.

They are certainly one of the first ones that you keep hearing us talk about DuPont construction workers and then CTW workers. This is one of the first sites where I've seen that they actually use the trades in there as their own and separating these out.

If you remember years ago, Tim was trying to separate these out from the construction trades by using codes and that got blew down because we couldn't do this because they could also be used for overtimes in other areas and everything else like this.

But this is also unique from the standpoint how they would also use construction trades to be able to come in and do some of the hotter jobs to be able to do this because their

operations personnel were getting burnt out on this and they were too high. We've seen many references to this, and there are a lot the interviews this was talked about.

But this is why this makes this site so unique and so very hard to be able to pin it down to say a pipefitter. Okay, this pipefitter probably would be able to get this.

This site is unique in this process, the way that it has been set up with the construction and everything else. And this time period that we're looking at right now is the startup of K reactor.

They were trying to get the K reactor online, and they were going into this hot and heavy. This was when they came into it, and their construction went up dramatically through these time periods.

And this is a very difficult site, and I understand what you're saying, Wanda, but also too I have to look at what the SEC is shooting for, because we have enough things from the other side. We're looking at construction trades and

anyone in the service. And that's why we're looking at this point too.

MEMBER MUNN: I understand that, but I really don't see anything unique in what you said. It's not uncommon at all to bring in additional subcontractor people to avoid overexposure of individuals that you have, but it's not for the purpose of overexposing the construction workers, for goodness sake.

And that's -- we've all had situations around the country where especially in restart our reconfiguration of major facilities it's been necessary to have large construction groups. That's what these folks do. That's what they sign up for.

And this doesn't mean that they are ignored in terms of exposure potential, but it does mean that some will refuse, actually, to do the kinds of administrative functions and safety functions that are often, that are required for permanent employees in long-term situations.

I just don't know of any excess cancers shown in these populations. And, because

of that, it's very difficult to accept that the possibility that one person or a small group of people may be overlooked in such a way that their exposure would far exceed that of what is routinely recorded is a stretch. It's an imaginative stretch.

MEMBER CLAWSON: Being imaginative like that, we really ought to be able to have all the data then. You know, that would be what would be really nice, if we could have all the data.

MEMBER MUNN: Well, that would --

MEMBER CLAWSON: But we don't.

MEMBER MUNN: We never have and we never will.

MEMBER CLAWSON: Right so we have to be able --

MEMBER MUNN: We've known that from day one.

MEMBER CLAWSON: Yes. But, for you to say that they couldn't, just is very broad then. This is the thing, we're coming back and this is what this notice of violation to me showed.

We're here with -- we're a small

amount of the data, and we're trying to make this work. I know that this is what we've been given, so you know --

MEMBER MUNN: There's nothing new in the argument that if you don't have perfect information then you can't make a decision that is scientifically valid.

And that is, frankly, a flawed definition, but it's one on which we've operated for 15 years, so I can't see that there's any probability of our changing that now.

CHAIR MELIUS: Any other comments?

MEMBER ZIEMER: Question, this is Ziemer. I'm asking here is Tim on the line or is --

CHAIR MELIUS: No, Tim's on vacation this week.

MEMBER ZIEMER: Well, maybe then Joe can answer this. On the specific work orders where we do not have the bioassay, do we normally have routine bioassays on those workers or are they -- I just don't remember whether we have other bioassays done on the workers for these

specific jobs.

MR. FITZGERALD: I think I caught most of that. This is Joe. First off, I think I made it clear in my presentation, the RWPs were flawed. There were three or four different types of formats, some of which did not even include a check-off for a bioassay even though the job entailed bioassays.

For the RWP job-specific requirements, if the bioassay was required, we found, and this is in our survey, found about two-thirds of the workers complied, and we could find a bioassay, you know, following the job.

But, I think, you know, there's an inherent problem just with the way the system worked and the fact that the job plans and the RWPs were not very well done and not uniform so that it's hard to track that down.

And that was corrected, by the way, following the NOV. That was one of the findings in the NOV was the -- one of the source issues with the RWPs themselves.

MEMBER ROESSLER: Jim, this is Gen.

CHAIR MELIUS: Yes.

MEMBER ROESSLER: I'm not sure if we're heading for a vote today, but I feel pretty uncomfortable with making any decision on it today without Tim being here to respond, because he's for NIOSH probably the most knowledgeable about this.

And I also, although I certainly understand what Brad is saying that it's been around for a long time. It seems to me the Work Group ought to reconvene on this. I think somebody mentioned that maybe they have some work yet to do on this. So that's kind of where I stand.

MEMBER CLAWSON: And Gen, I agree with you wholeheartedly, but the thing that we're trying to do right now because we this is very -- it's been a long drawn process, and to be able to get to this point where we're at, we're trying to make it so that the full Board is aware of where we're at and what we're dealing with so that when it does come to a vote, that we have all the information that we can.

And I wanted to say one thing -- and, Joe, I'm trying to find that notice of violation here in my paperwork and I can't. But one of the reasons why I really like their statement at the bottom of it where they were talking about that they kind of risked so much in their routine bioassay.

Do you remember that statement in there? I can't find my paperwork right now.

MR. FITZGERALD: I think the Department of Energy's conclusion was that, even though they acknowledged that Westinghouse had a pretty thorough skilled indicator program, which included air sampling and other, you know, management systems, the bioassay was ultimately necessary as a means to verify that these systems were working and that there were no perhaps errors or unexpected occurrences on the job.

And that without the bioassay, you didn't have that safety net. So that in fact, and they cited one example, and I think that was from the routine bioassay program, one example where it was the bioassay that picked up on a

significant intake.

The other thing I'd like to add, and I think, Brad, you touched on this earlier is that, in response to Dr. Kotelchuck's question, Tim sent an email to Brad and Dr. Melius just basically regarding a comparison of subcontractor versus CTW bioassay results.

And this was sort of the DuPont era, and I thought it was probably the best comparison we've seen yet on that question of -- and this has come up a couple of times this morning, on you know, CTWs and this is in-house CTWs versus subcontractor CTWs.

And to make a long story short since you have the memo, the conclusion was that there's no systematic difference between DuPont, and this is DuPont now, construction trade workers and subcontractor CTWs.

But, I have a problem with that conclusion, and it goes to the findings that actually Tim and his staff had come up with, so for six years from the late 70s through the 80s, essentially half of the 12 years that marked the

end of DuPont's tenure at the site, six out of 12 years, the subcontractors actually showed at the 95th percentile, a factor of two to five higher bioassay results, this is on plutonium, than did the in-house CTWs.

And I think Tim and his crew were opining that that may have been because the subcontractors were brought into save the exposure of the on-site CTWs.

In other words, to bring in the subcontractors to absorb this additional exposure to keep the exposures down for the in-house CTWs. And this is pretty telling.

I mean, you're talking two to five times. And if you look at the graph, it stands out. And this is the kind of issue I think that one is concerned about with the subs, that very, you know, very clearly they're not necessarily going to have the same exposure profile as the CTWs.

And in this instance, which has been analyzed for the last 12 years of DuPont, essentially in the 12 years the subcontractors

were two to five times higher.

So I wanted to point that out but I think that's certainly useful review, even though I think the conclusion is otherwise. But I think that's something as sort of a cautionary note on looking at, you know, what the potential might be for subs versus in-house CTWs.

MEMBER KOTELCHUCK: This is Dave Kotelchuck. I asked that question at the Board meeting. I don't recall having seen -- I shouldn't say, I don't recall. I did not se the result or the letter that you're talking about, report that you're talking about.

CHAIR MELIUS: It --

MEMBER KOTELCHUCK: I would love to see it. Did I miss it?

CHAIR MELIUS: You missed it. It went to everybody on the Board. It went to your CDC address.

MEMBER KOTELCHUCK: Okay.

MR. KATZ: Yes, and I actually -- this is Ted, and I distributed it beyond that too, because a number of Board Members don't have CDC

emails. So everybody should have gotten it. But, you just received it, because it was just I think it was the end of last week, and I probably just sent it out to the non-CDC addresses early this week.

MEMBER KOTELCHUCK: Okay. I looked over and I thought I reviewed all of the things that you sent. Perhaps, I made a --

CHAIR MELIUS: I think it was sent separately.

MEMBER KOTELCHUCK: Okay.

CHAIR MELIUS: And I don't think, it was not included in what was attached with the agenda.

MR. KATZ: Correct.

MEMBER KOTELCHUCK: Okay. Then I will double-check and go back to it. I don't want to interfere further. I just hadn't seen it. Okay. Please go on.

MEMBER LOCKEY: Jim Melius?

CHAIR MELIUS: Yes?

MEMBER LOCKEY: Jim Lockey. Jim, I'd like to ask you question. When I reviewed that

yesterday, Ted was saying that the model would include all combined CTW coworkers, but that would include both DuPont, as well as subcontractors. Correct?

So that data you were talking about would be included in regard to the application of the 95 percentile. Is that correct?

MR. FITZGERALD: I'm not quite sure what you're referring to. I'm just looking at the comparison.

MEMBER LOCKEY: I saw the comparison, but you know, at the end of the -- at the lowest number of years, the subcontractor plutonium levels were definitely higher. There's no question about that. It started in '96 and then went on again in 1990, I mean 1980.

MR. FITZGERALD: Yes. Figure 3 shows --

MEMBER LOCKEY: Correct. I have that. So --

MR. FITZGERALD: Yes.

MEMBER LOCKEY: But Ted was going to include all that data, you know, right, in

relationship to dose reconstruction.

DR. NETON: This Jim Neton. Yes, that's correct. All data would be combined into one pool.

MR. FITZGERALD: I think the point on that one was just simply looking at the two groups, the subs versus --

MEMBER LOCKEY: No, that I understand, I understand your point.

MR. FITZGERALD: Okay versus the in-house CTWs. That's, you know, so.

MEMBER LOCKEY: Right. I understand your point. The other question I had, are the 20 percent and maybe, bad news, it's I just can't recall, the 20 percent of where there's a specific reason, a specific incident that workers should have been sampled, 20 percent of the workers were sampled, 80 percent were not. Is that correct, Brad?

MEMBER CLAWSON: I'm sorry, what? I was --

MEMBER LOCKEY: We know about the 79 percent of the 5 percent who never had any

bioassays done. Correct?

MEMBER CLAWSON: Right.

MEMBER LOCKEY: What about the 20 percent that did have bioassays done? I just don't recall the distribution of their bioassays. Does anybody recall that, the results?

CHAIR MELIUS: That's a later time period. I'm not sure that NIOSH have ever reported on that. I don't think they have a report on the post-'89 coworker model on that. Am I right on that, Jim Neton?

DR. NETON: Yes. I'm not sure what we're talking about here. The 20 percent missing --

CHAIR MELIUS: Is '97, right?

DR. NETON: Well, '97 was the notice of violation where they found that probably 16 percent of the people left samples. Right? But that was on job-specific samples.

CHAIR MELIUS: Right, yes. I mean, it's -- we're looking at apples and oranges, but --

DR. NETON: Right. And the

completeness analyses were done by SC&A and NIOSH in two separate time periods.

CHAIR MELIUS: Yes.

MR. FITZGERALD: I think what he's asking is for the 20 percent that in fact gave samples in '97 --

DR. NETON: Right.

MR. FITZGERALD: -- what were the actual results. I know the follow-up sampling showed no intakes. I don't know what the original showed.

DR. NETON: I don't know this for a fact, I think I know this for a fact, but I'm not 100 percent certain, I don't think there were any positives in 1997 for any job-specific bioassay samples.

MEMBER CLAWSON: Well, this is for that one quarter.

DR. NETON: For all of 1997?

MEMBER CLAWSON: No, that -- remember when Tim did this and this notice of violation, they only went back, my understanding was for one quarter and checked and had everybody give the

bioassay.

DR. NETON: No, I'm not talking about the follow-up samples being not positive. I think for the entire year of 1997, I don't think there was a positive bioassay sample among all the actinide bioassay samples for job-specific purposes taken. I would have to verify that, but that's my recollection.

MEMBER CLAWSON: For job-specific?

DR. NETON: Yes.

MEMBER CLAWSON: Not routine?

MR. FITZGERALD: Yes. And a sort of question would be, there would be an incompleteness issue prior to the second quarter. From the second quarter on, they went back and re-verified, but I'm not sure they re-verified for all of '97.

The enforcement conference notes indicate that they did verification samplings on the second quarter and for the rest of '97. So that's the juncture where you have some of this verification going on.

But before the second quarter of '97,

there's uncertainty because, again, the same issue of incompleteness would be there, and there's no verification samples for those apparently.

DR. NETON: I'm not talking about verification samples. I'm just talking about actual samples taken.

MEMBER LOCKEY: That's what I'm talking about.

DR. NETON: Samples that were taken and analyzed.

MR. FITZGERALD: Oh, as far as what was in fact taken?

DR. NETON: Exactly.

MR. FITZGERALD: Yes, okay.

DR. NETON: And I don't think there were any positive exposures among the samples that actually were taken in 1997.

MEMBER LOCKEY: And that's what I'm asking.

DR. NETON: Yes, again, I would not take that to the bank, but I'm pretty sure that I think Tim is trying to track this down.

MR. FITZGERALD: Yes.

DR. NETON: But that's my impression is what the situation is.

MEMBER CLAWSON: Well, you know, okay. Let's take a look at '96. It's in this notice of violation for DOEs. They're talking about -- because Westinghouse is trying to put a log on their margin or error samples and everything else.

It says, for example, at this blank facility in '96, one worker received an unexpected intake of redacted material that resulted in an organ dose exceeding specific amounts redacted, a dose that far exceeds DOE regulatory limits of 50,000 millirem.

The dose to this worker was not identified by the Workplace Monitoring Field Indicators Program, but will be verified through the Bioassay Program.

I would really be surprised, Jim, to say, in 1997, that we didn't have any that had positives, especially with the K reactor going on. I think I'd run that in the ground, but I

think that would be kind of pretty surprising.

DR. NETON: We need to verify that.

MEMBER CLAWSON: Yes, we do. I agree with you.

MR. FITZGERALD: Well, there's no way to verify it. You can verify that which was collected, but that's maybe 20 percent to 30 percent of the total if you want to back-extrapolate. There's always going to be some missing bioassays.

MEMBER MUNN: Well, we can't shrug that small figure off just because it doesn't fit the biometric concept of what the total was and that's, you know, if we're going to look at it, we have to look at it all.

No positives means no positives unless you want to argue about how all the ways that you can show that it might not be no positives.

MEMBER CLAWSON: So Wanda, help me understand on this the no positives. So you've got 30 percent that show no positive and 70 percent that we can't even find.

MEMBER MUNN: Yes.

MEMBER CLAWSON: So that's kind of a stretch on that one, but we'll have to run that in the ground, though.

MEMBER MUNN: My point is if knowing it is not acceptable, but we've done a lot of that and it really isn't acceptable.

CHAIR MELIUS: Any other comments? Questions? So Brad, is the plan then that the Work Group will reconvene before our next meeting?

MEMBER CLAWSON: Yes, we are going to try to come to grips with all of this. I think, and I'm going to be honest with you, I'm going to probably be pushing for a face-to-face, because there is too much stuff that we need to be able to go through and go over. But we've got to sit down with SC&A and the Work Group and try to set this up.

MEMBER LOCKEY: Jim Lockey. I agree. I think it has to be face-to-face.

MR. KATZ: So this is Ted, Brad. I'm open with that. I'll have to schedule that. I'm just a little concerned, you're going to be away

for quite a while. So before you leave, can you --

MEMBER CLAWSON: Yes. I was --

MR. KATZ: If you can just give me your good days before you hop on a plane today, I will work to get that scheduled for you.

MEMBER CLAWSON: Right. What I was looking at Ted was mid-November.

MR. KATZ: Okay. I don't recall exactly when you're coming back. I know, Josie doesn't get back until mid-November.

MEMBER CLAWSON: I come back November 7th.

MR. KATZ: Okay. Josie comes back a little later. Okay.

MEMBER CLAWSON: That's fine. Okay, thanks.

MR. KATZ: Okay. I'll work on that, Brad.

MEMBER CLAWSON: Okay.

CHAIR MELIUS: Okay, thank you. Okay. And we'll continue this discussion in Albuquerque, as well as the Work Group.

MEMBER CLAWSON: Sounds good.

CHAIR MELIUS: Thanks. LaVon?

Special Exposure Cohort (SEC) Petition Status Update

MR. RUTHERFORD: All right, let's see if I can get this right. Thank you, Dr. Melius.

CHAIR MELIUS: Yes. But you can thank Dr. Ziemer. He's on the phone also, though.

MR. RUTHERFORD: Thank you, Dr. Ziemer, too. All right. Dr. Ziemer and I will discuss this after the meeting.

MR. RUTHERFORD: All right. For the December Board meeting, NIOSH plans to present one new SEC Petition Evaluation at the meeting and that's an 83.14 for the Ames Facility.

We did a data capture in June hoping to find the information necessary to finalize that report, but we still have some little open ends. We had a couple of interviews scheduled, and we're working to have the report tied up in time to present at the December meeting.

We also intend to present an update on where we are with the Sandia Petition Evaluation.

We are working as scheduled to complete this report by the April 2018 meeting.

So all's we have at the December meeting is the Ames Facility presentation, that is an 83.14 presentation, and an update on Sandia, and that's it. Any questions?

CHAIR MELIUS: That's all you're going to get done in the next two months?

MR. RUTHERFORD: Well, that's it, you know.

CHAIR MELIUS: But that was a question.

MR. HINNEFELD: Bomber, this is Stu. Do we have any hope to have on INL to have some finalization of the dosimetry records for the earlier CPP Class? Is there any hope of that wrapping up?

MR. RUTHERFORD: You know, I'm not sure on that. I know, you know, there were some things that we were waiting from INL, and I'm sure that with, you know, the budget shouldn't really be an issue.

I believe I've heard from DOE budget

shouldn't be an issue, so you know, I don't know. I don't know the final word on that. Jim may remember.

DR. NETON: No, I don't. I'm sorry.

MR. RUTHERFORD: I can check on that, though.

MR. HINNEFELD: Okay, it was just a thought that if things come together there, there might be time for a Work Group meeting and some discussion of that prior to the next Board meeting.

MR. RUTHERFORD: Yes.

MR. BARTON: This is Bob --

MR. HINNEFELD: I would be able to help on that a little bit.

CHAIR MELIUS: Bob?

MR. BARTON: Yes, I think what we're referring to is the earlier period of 1963 up to the beginning of 1970. And I think one of the major things still on the table was an expanded V&V study about some missing records, particularly temporary badge reports.

And what we did is we have a sampling

plan together, and we have made requests through the normal dose reconstruction channels that NIOSH uses for individuals. And last I checked, which was about mid-last week, those had not come in yet for the first set of 30 claims.

But as soon as those come in, we're in a position to immediately get the results of that. So the first wave of V&V studies are those. And so I think that was one of the major items left to discuss about that earlier period.

MR. HINNEFELD: Okay, Bob, this is Stu. You described that as a first layer of samplings, so there will be -- the 30 cases doesn't represent the entirety of the sample that needs to be looked at?

MR. BARTON: That is correct. What we decided in the Work Group was we were going to sort of take a graded approach. We'd send 30 in. When we got those 30 back, we'd immediately send a second batch of 30.

And I think the plan then would be we'd certainly look at the first wave and see what we got and then if we really needed to look

at that second wave of claims, then we'd wait on those results.

Again, until we see what we get back and how well the recording effort of that temporary badge report, I don't know what could really be concluded out of the first wave or if we'll really need the second wave.

And all these document requests are actually part of the normal dose reconstruction requests, because regardless of any SEC determinations, these were people that would require at least a partial dose reconstruction.

MR. HINNEFELD: Okay, so it may be the entirety of the sample, but it may not be the entirety of the sample is needed?

MR. BARTON: I think that's accurate.

MR. HINNEFELD: Okay, thank you.

CHAIR MELIUS: Okay. So we'll move on. You might have more to report.

MR. RUTHERFORD: Well, at this time, I don't have any more to report on.

Updates from Work Groups and Subcommittees (as necessary)

CHAIR MELIUS: Oh, okay. Okay. Updates from Work Groups and Subcommittees. Anybody want to volunteer?

MEMBER MUNN: This is Wanda, but she just has no report except that we do have a meeting scheduled in November prior to the next Board meeting.

CHAIR MELIUS: Okay. Very good.

MEMBER KOTELCHUCK: The DRC, we have a meeting scheduled in January. We also have a report from Rosanna, that she, it looks like we may actually get up to date after the next two or three meetings so that by summer or fall, we might be ready to move on to another set, which has to be assigned, according to Ted, after our December Board meeting.

CHAIR MELIUS: Very good.

MR. KATZ: Yes, just to add to what Dave just said. What I had suggested to Dave is that after we have the Methods Work Group meeting when it gets its report from NIOSH then we'll

know sort of what our path forward is, and at any point after that I think we could, with the Board's agreement, the Work Group's recommendations, then I think it might be the new assignment.

CHAIR MELIUS: And this is Jim Melius for the Dose Reconstruction Review Methods Work Group. We will be planning a meeting I think before the December meeting with or without Mark's report. I suspect it will be done and be ready.

I think we need to sort of move that issue along and get prepared at least in terms of what we want if any changes, but probably some changes we may want to make in terms of at least some of the dose reconstruction reviews that we need to do and that needs to really be discussed with the whole Board.

So I think we'll plan on a Work Group meeting before the December meeting and then come back and a make recommendation. Hopefully, we'll have Mark's report in time for the Work Group meeting.

MEMBER KOTELCHUCK: Excellent.

CHAIR MELIUS: Yes. Any other Work Group chairs, who wish to make --

MEMBER ZIEMER: Dr. Melius, this is Mr. Ziemer. I have a report on TBD-6000.

CHAIR MELIUS: Go ahead.

MEMBER ZIEMER: TBD-6000 effort that the reports --

MR. KATZ: Sorry. Paul? Paul?

MEMBER ZIEMER: Yes?

MR. KATZ: Paul, I'm sorry, but you're very garbled as if you're on the bottom of a fish tank or something.

MEMBER ZIEMER: Is this better? So then on September 25th, TBD-6000, I had two items on the agenda. One was to review the Program Evaluation Report PER-63, which is Alcoa, Pennsylvania and the other to review PER-65, which is Anaconda.

So actually we looked at the evaluations on both those PERs. All the internal comments and concerns were taken care of, and we have instructed SC&A to proceed with the dose

reconstruction for each of those PERs working with NIOSH.

There will be ten samples from each of those PERs, so that's underway and probably report to the full Board on the final results in December. That's it.

CHAIR MELIUS: Okay. Thank you. Others? Okay. Very good. Plans for the December Board meeting. Ted?

Plans for the December 2017 Board Meeting

MR. KATZ: Yes, so this has been -- it's a little bit more difficult planning in this case, because we haven't really had enough time from the last meeting, so some of these are fairly uncertain, some of these items that I'm going to run through here.

But here's what I have as the possibilities right now. And in terms of timing, I have right now a day and a short half basically. But let me run through not the routine business, but the special items. And this is, by the way, beginning on December 13th.

So as Dr. Melius mentioned, we have

the Dose Reconstruction Review Methods Work Group. I have them slated for the morning that day to report out.

Then it's a little bit uncertain about whether everything is buttoned down, ready, but we should in all likelihood be ready for a Work Group meeting on Weldon Spring Site Profile, long time in coming, but most of the work has been done back and forth between the two technical staffs. So I'm hopeful that that will be ready to report out assuming there's no snarls in the final issues to be resolved.

So Weldon Spring Site Profile review. Also Pacific Proving Grounds Site Profile. As you may all recall, we discussed this and largely covered it at the August meeting, but there's a remaining matter, and NIOSH is working on that, and we're hopeful too, but that one will be ready to bring to ground.

So we would have a Work Group meeting and then that could be presented as well. And then, as LaVon said, we have the Ames Laboratory SEC petition. So those are all things for the

morning of the first day.

In the afternoon, I have SRS SEC, a big item. And then you have, late in the day then we have again LaVon mentioned, we'll have an update on the Sandia SEC petition and hopefully that might even be useful in attracting comments from some of the local people related to what they're trying to do but not necessarily and SEC Petition Evaluation. And that takes care of the first day, a bit of a long day, but it works.

The second day, what I have as a possibility is the Area IV Santa Susana Field Lab SEC petition. I'm not sure whether that will be ready or not. I'm not positive about that, but SC&A report will be ready in November for its review. And I'm hopeful that we can have a Work Group meeting before the Board meeting and then it, of course, depends on whether there's any difficult issues to resolve that don't get resolved at that Work Group meeting, but I have that slated for the morning.

And that's the other major item, and that's not a work session. But that's what it

looks like right now. I have it right now as adjourning at 11:00 a.m., so that would be the latest.

And the only thing I don't have accounted for here but that might substitute for something else if it does get buttoned up, of course, is the INL petition, the element that was discussed earlier today, and we could swap that in for something else that falls off if it does or what have you. So that's a possibility too that I'm aware of.

CHAIR MELIUS: Any questions on that? So again, I think we can plan a day and, you know, at least fill a mid- or late morning the second day. Ted and I talked and if this appears to change in the next, you know, couple of weeks, you know, if LaVon changes his mind on finishing up or whatever or suddenly discovers they can finish something up, we'll let everybody know. You can always make travel arrangements for that.

MEMBER ROESSLER: Jim, this is Gen. I think I missed it. Where is the meeting being held?

CHAIR MELIUS: At Albuquerque.

MEMBER ROESSLER: Okay. I heard that. I wasn't sure.

CHAIR MELIUS: Yes.

MEMBER ROESSLER: Okay, thanks.

CHAIR MELIUS: So it should be a little, hopefully it will be better in terms of flight arrangements, more flexible. It's not a major airport. Okay.

And then you have an item on here Board Correspondence. What's that?

Board Correspondence

MR. KATZ: That's a standing item. --

CHAIR MELIUS: Okay.

MR. KATZ: -- if you happen to have any correspondence to address. We do have -- we just received a letter to Dr. Melius from someone from Fernald, and it was I think an individual who had spoke at the last meeting, and it really covered the same issue that you had spoke to at the last meeting.

But we may have correspondence back to him just to explain, look, I think Dr. Melius

covered a response to him at that meeting.

CHAIR MELIUS: Yes, that's been, it basically reiterated what was said at the meeting.

MR. KATZ: Yes.

CHAIR MELIUS: Okay. Thank you. Any other business?

MR. KATZ: That takes care of it.

Adjourn

CHAIR MELIUS: Anybody else? If not, I believe we can adjourn.

(Whereupon, the above-entitled matter went off the record at 12:14 p.m.)