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NATIONAL INSTITUTE FOR OCCUPATIONAL
SAFETY AND HEALTH

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ADVISORY BOARD ON RADIATION AND
WORKER HEALTH

+ + + + +

118th MEETING

+ + + + +

WEDNESDAY
AUGUST 23, 2017

+ + + + +

The meeting convened at 8:00 a.m.,
Mountain Time, in the Courtyard Marriott, 3347
Cerrillos Road, Santa Fe, New Mexico, James M.
Melius, Chair, presiding.

PRESENT:

JAMES M. MELIUS, Chair
HENRY ANDERSON, Member
JOSIE BEACH, Member
BRADLEY P. CLAWSON, Member
R. WILLIAM FIELD, Member
DAVID KOTELCHUCK, Member
JAMES E. LOCKEY, Member
WANDA I. MUNN, Member
GENEVIEVE S. ROESSLER, Member*
PHILLIP SCHOFIELD, Member
LORETTA R. VALERIO, Member
PAUL L. ZIEMER, Member*
TED KATZ, Designated Federal Official

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WHITTEN, DIANNE
WORTHINGTON, PAT, DOE

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

2 8:01 a.m.

3 **Welcome and Introduction**

4 MR. KATZ: Okay, so this is the
5 Advisory Board on Radiation and Worker Health.
6 Welcome, everyone in the room and on the line.

7 Some preliminaries. The agenda for
8 today and the materials for today, for folks on
9 the line, if you go to the NIOSH website, this
10 program's webpage, schedule of meetings, today's
11 date, you'll be able to find there on today's
12 date the agenda and all the materials that we're
13 discussing and copies of the presentations. So,
14 you can follow along that way.

15 There's also a Skype link which you'll
16 find on the agenda. You can connect by Skype if
17 you want to see the slides that are being
18 presented in real-time, as opposed to you looking
19 through them on your own. You can join that Skype
20 session. The Skype session, again, is specified
21 on the top of the agenda, so that's how you can
22 connect, if you want to, by web.

23 Other notes about the agenda. We have

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1 a very full agenda for two days. We have a public
2 comment session today, only today, from 5:30 p.m.
3 to 6:30 p.m.

4 Folks in the room need to register for
5 that public comment session in the book outside
6 the room. But folks on the line, you don't need
7 to register. Just be in attendance on the line
8 when that public comment session begins at 5:30.
9 And once we get through with the people who are
10 here in the room, we'll go to people on the line
11 and you'll have your opportunity for public
12 comment.

13 Okay. And then the other note for
14 everyone on the line, please, is it's going to
15 help you with the audio quality if you mute your
16 phone except when you are addressing the group.
17 For most of the public, that just means during
18 the public comment session. Of course, the Board
19 Members will address the group at all different
20 points during the meeting.

21 So please mute your phones when you're
22 listening to this session, this meeting. And to
23 mute your phone, if you don't have a mute button

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1 on your phone, press * and then six, that'll mute
2 your phone. Press * and six again and it'll
3 unmute your phone. But please do mute your phone.
4 That'll help everyone, including yourself, in
5 hearing the meeting.

6 And, please, no one put the call on
7 hold at any point, because many people's hold
8 function will cause an audio problem for everyone
9 else on the line. So, hang up and dial back in
10 if you need to leave for a piece, but please don't
11 ever put the call on hold.

12 Okay, so I think that takes care of
13 those preliminaries. I'm going to do roll call
14 now.

15 **Roll Call**

16 (Roll call.)

17 MR. KATZ: And that takes care of roll
18 call. And we have a quorum, so, Dr. Melius, it's
19 your meeting.

20 CHAIR MELIUS: Thank you, Ted. And
21 we'll start right off with the NIOSH Program
22 Update. Stu Hinnefeld. Stu?

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1 **NIOSH Program Update**

2 MR. HINNEFELD: Thank you, Dr. Melius.
3 Morning, everyone. I'm here to give my periodic
4 update on program status.

5 You're very familiar with the format
6 by now. In terms of news items, I always try to
7 put the budget on here and relate what I know
8 about the budget. There is really no news about
9 the budget until the budget is final. There's
10 talk about the budget, you can kind of read the
11 tea leaves a little bit, but this is all just
12 sort of preliminary based on what's happened so
13 far.

14 Clearly, the President's budget
15 proposed a pretty severe reduction to the main
16 NIOSH budget for 2018. But it proposed a steady
17 funding for this program, which is a separate
18 line item on the budget, on the federal budget.

19 It appears that the Congress doesn't
20 have the stomach for the severe reduction in the
21 President's budget. There are House and Senate
22 committees that mark up their view of the budgets
23 for next year. The House has marked up the budget

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1 for HHS, which has a modest reduction, but
2 nothing like the President's. And the Senate
3 markup's not occurred, but the view is it'll be
4 in the same range as the House markup. It might
5 be a little more severe than the House markup.

6 So, the rest of the Institute will
7 have some budgetary restriction next year, but
8 not as severe as originally proposed by the
9 President's budget. At the least, that's the way
10 it looks now.

11 And both of them -- or the markup from
12 the House also left our funding unchanged for
13 next year. And the expectation is the Senate
14 markup will be the same. So it appears that we'll
15 be able to continue at the level we've been going
16 at for the last several years.

17 We expect to still feel the effects of
18 the sequester, which is about a 10 percent
19 reduction from what the budget line says. I don't
20 know why they do that, but they'll say the budget
21 is \$55 million and then they'll sequester away
22 about \$5 million. So, that's about what we'll
23 have, we think, for the coming year.

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1 I put a word on here about new hires.
2 We were actually able to hire a couple health
3 physicists. My fingers are crossed because the
4 start date is the day after Labor Day, from our
5 recruitment, which has been going on for the
6 better part of a year.

7 We've hired a young woman, Megan
8 Lobaugh, who has worked most recently at IAEA in
9 Vienna, the International Atomic Energy Agency.
10 And she also has some experience at Lawrence
11 Livermore. And our second hire is Christine
12 Corwin, who has been a contract dose
13 reconstructor for us for quite a number of years.
14 And so she's intimately familiar with the
15 program.

16 We have a small staff of contractors
17 that actually sit with us and reside in our
18 building, and they do most of the Atomic Weapons
19 Employer dose reconstructions.

20 We continue to participate with the
21 other federal agencies in outreach activities.
22 Since our last meeting, we attended and outreach
23 meeting that was sponsored by the DOL Ombudsman

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1 in Albany, Oregon. That was for the Wah Chang
2 facility.

3 And in April, we attended a joint
4 outreach meeting in Richland with all the other
5 federal agencies that was held in conjunction
6 with the Advisory Board on Toxic Substances and
7 Worker Health.

8 In July, we attended a DOL Ombudsman
9 meeting in Toledo, Ohio. There are actually
10 quite a number of facilities in the general area.
11 We didn't get a lot of attendees that were
12 interested in Part B. There are a lot of
13 beryllium vendors in that area, so that part of
14 Part B. There were a lot of beryllium vendors in
15 that area. And that was most of the meeting, was
16 about beryllium.

17 And the date on this last one is
18 wrong. This should be in August. We attended
19 this last week. We did our one-day Dose
20 Reconstruction Workshop, Dose Reconstruction and
21 SEC Workshop, at Pantex.

22 Our outreach contractor, ATL,
23 organizes usually one two-day conference in

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1 Cincinnati each year, and one one-day conference
2 at a site-specific each year. This year we did
3 Pantex on the site-specific. There was thought
4 of Lawrence Livermore but it didn't work out from
5 both of our schedules, so we went to Pantex.

6 We actually addressed -- we had quite
7 a number of attendees in the Class who started
8 work at Pantex after the Class. The Class there
9 runs, I think, through the '80s, and they had
10 some newer hires who -- probably their
11 introduction to the program.

12 In September, we will do the two-day
13 workshop with ATL in Cincinnati. That invites
14 representatives from several sites around the
15 country.

16 And then a quick run-through of the
17 statistics. These numbers just generally go up
18 each time, so I won't spend a lot of time. I did
19 try to check the arithmetic. I think the
20 arithmetic all adds up. These are the ones that
21 were submitted. Most of the ones we've submitted
22 were dose reconstruction. A few were pulled,
23 quite a number were pulled for a couple of

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1 different reasons.

2 Our active cases, as usual, we have
3 some that are over 200 in the hands of claimants,
4 they have their draft dose reconstruction, but
5 we're waiting for the OCAS-1. That number's kind
6 of standard.

7 Probability of Causation stays pretty
8 much the same, around 28 or 29 percent successful
9 when we do a dose reconstruction. And the DOE
10 records requests are being kept up quite well.
11 Periodically a site may have a little budget
12 difficulty, but Pat and Greg do a good job of
13 getting that resolved and so they stay up-to-date
14 on their responses.

15 And we're doing a summary of the first
16 20,000 claims, not 5,000 or 10,000 anymore. Most
17 of these, of course, are DOL. Some of them are
18 still with us. The vast majority of the claims
19 are still with us. 355 out of 410 are
20 administratively closed, you know, people have
21 opted out of the process.

22 There's one case on here that's called
23 an initial. The reason for that was this was a

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1 claim that was paid through an SEC years ago, and
2 then several years later, the claimant came down
3 with another cancer, claimed the second cancer
4 for medical benefits. They don't get another
5 cash compensation, but to get medical benefits
6 for the second cancer, the non-SEC cancer, they
7 had to have a dose reconstruction.

8 So, that came back over. Since we had
9 never sent a dose reconstruction back to DOL,
10 because we returned it as an SEC return, it shows
11 up as an initial on our system. So that's the
12 story behind the initial in the first 20,000.
13 Are there any questions?

14 CHAIR MELIUS: Board Members, any
15 questions?

16 MEMBER BEACH: I liked your updated
17 slides.

18 MR. HINNEFELD: Okay, well, if you
19 like the format on the slide, that goes to Josh
20 Kinman. He formatted the slides.

21 MEMBER BEACH: Easy to follow.

22 CHAIR MELIUS: Anybody else? Okay,
23 Stu. So, next is the Department of Labor.

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1 **DOL Program Update**

2 MR. KOTSCH: Good morning, this is
3 Jeff Kotsch. Can you hear me?

4 CHAIR MELIUS: Jeff's on the phone.
5 Welcome, Jeff.

6 MR. KOTSCH: Okay, you're a little
7 soft, but otherwise okay. Could I have somebody
8 there advance the slides? Stu or --

9 MR. HINNEFELD: I'm trying. I'm
10 trying, Jeff. I'm having a little bit of user
11 error. Okay, I'm set, Jeff.

12 MR. KOTSCH: Alright, thank you. This
13 is Jeff Kotsch with the Department of Labor. It's
14 been a while since I think I've addressed the
15 group. Chris Crawford is taking a few weeks off.
16 He was looking at the eclipse out in Idaho and is
17 now wandering around the West. So he's probably
18 having a better time than most of us.

19 Alright, after the cover slide, the
20 second slide shows the compensation paid. The
21 Part B compensation, that's \$6.3 billion. For
22 Part E, it's \$4.1 billion. And the medical bills,
23 or the medical bill payments that we pay for these

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1 claims, is \$3.6 billion.

2 That totals, obviously, now it's a
3 little over \$14 billion in total compensation, as
4 well as bills paid. And that's for 195,339 cases
5 that have been filed. This data is as of August
6 6th.

7 The third slide, next slide, is the
8 compensation for the Part B cancers with final
9 decisions to accept. And as you see in the first
10 bullet, there have been 10,262 accepted dose
11 reconstruction cases. That's for a little over
12 \$1.5 billion. The accepted SEC cases are a
13 little over 25,400. That equates to \$3.8
14 billion. And cases accepted for both SEC status
15 and a PoC of greater than 50, that's 970. That's
16 \$145, a little bit more, million. So that totals
17 out to be \$5.46 billion for 36,648 claims.

18 Next slide. This never quite agrees
19 with the Stu's numbers. It's the status and
20 location of NIOSH referrals. We're showing a
21 little over 48,390 cases referred to NIOSH for
22 does reconstructions. We've received back
23 46,460. You see the breakdown there for the --

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1 most of them, obviously, have dose
2 reconstructions, but there were 6274 that were
3 withdrawn because we had issues with claimant
4 data, employment, things like that. And we're
5 showing 1,931 cases currently at NIOSH.

6 Next slide. So, this is just the
7 standard pie chart of the Part B cases with dose
8 reconstructions and final decisions that shows
9 that we have about 65 percent final denials, and
10 35 percent final approvals. We have about 28,846
11 final denials, 11,266 approvals.

12 Next slide. And then this is another
13 one of the other pie charts which basically shows
14 the breakdown of the Part B cases that have been
15 filed. And you can see 34 percent went to NIOSH,
16 12 percent were SEC cases referred to NIOSH, 15
17 percent were SEC cases that never were sent to
18 NIOSH, 9 percent are RECA, which is the totally
19 within DOL. And then the other 30 is the other
20 part of the Part B program. That's the non-
21 cancer part, beryllium sensitivity, chronic
22 beryllium disease, and chronic silicosis.

23 Next slide is just a pie chart of the

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1 Part B final decisions, 52 percent approvals and
2 48 percent denials. Or in numbers, that's 50,675
3 Part B approvals, 45,900-plus Part B denials.

4 Next slide. This is the listing, and
5 I think it's pretty much follows from the other
6 previous meetings for the four top work sites
7 generating new Part B cases. This is between
8 April 1 and the end of July. And you see Hanford,
9 Savannah River, Y-12, and the Nevada Test Site.

10 And the next slide is the monthly
11 percentages from August 6 of 2016, through July
12 17, for the distribution of new cases, whether
13 they're DOE cases or AWE cases. And DOE's always
14 running in the high 80s and low 90s.

15 Next slide, which would be 10, is the
16 SEC Petition Sites that are being discussed at
17 the meeting. And I'm not going to bother going
18 through this data per se, but the table shows
19 Fernald, Idaho, Los Alamos, Metals Control.

20 Next slide is Grand Junction, Area IV
21 of Santa Susana, Savannah River. The next slide,
22 which is 12, is Pantex, Pacific Proving Grounds,
23 and Fernald.

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1 The next slide is 13. This is a slide
2 of the DEEOIC outreach events. And, obviously,
3 in the first bullet, in response to new SEC
4 Classes we conduct town hall meetings and
5 traveling resource center meetings, and in cases
6 of smaller SECs, our BOTA group releases press
7 announcements.

8 The second bullet is hosting
9 informational meetings regarding medical
10 benefits provided under the Act. And sometimes
11 these informational meetings are conducted in
12 conjunction with an SEC town hall meeting.

13 The next slide, which I think Stu
14 mentioned too, and Greg will probably, or DOE,
15 mention too, the makeup of the Joint Outreach
16 Task Group. You can see there it's Labor,
17 Energy, NIOSH Former Workers Program -- well,
18 that's Energy -- National NIOSH.

19 For both our program and NIOSH and
20 their meetings, they have monthly conference
21 calls with all members and they conduct the town
22 hall meetings.

23 And on the next slide, which is 15, we

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1 have a listing of the outreach events for 2017.
2 Again, you see there, we were in Metropolis on
3 June 14th, and you see the number of attendants
4 and the number of claims taken.

5 There was a conference call on May
6 24th, which was a quarterly medical conference
7 call. There was another conference call on May
8 23rd for the same topic, just a different group
9 of participants. There was a meeting on April
10 20th in Pasco, Washington. That was our JOTG
11 outreach.

12 Next slide, San Bernardino,
13 California, on March 16th. That was JOTG meeting
14 and our medical benefits meeting. There was a
15 meeting on March 15th in Simi Valley, California,
16 another JOTG meeting and DOL medical benefits
17 meeting.

18 February 8th, conference call.
19 February 7th, conference call. Both were
20 quarterly medical conference calls for DOE -- I'm
21 sorry, DOL physicians, or physicians that deal
22 with the program.

23 The next slide is 17. This is the

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1 future outreach, but actually this slide, for
2 Shiprock, is actually now in the past. Hopefully
3 yesterday there was a meeting in Shiprock, New
4 Mexico, a town hall meeting. And today there
5 will be one in Monticello, Utah, another town
6 hall. And on September 13th and 14th, there's
7 an authorized representatives workshop in
8 Jacksonville scheduled.

9 And that's it, really, for the
10 presentation portion. The material behind this,
11 which I think is in the handout, maybe not on the
12 slides, which we don't really need to go through,
13 is just standard background material on the B
14 portion and Part E portion of the program. Are
15 there any questions?

16 CHAIR MELIUS: Any questions for Jeff,
17 Board Members? No, no questions for you, Jeff.
18 Thank you very much.

19 MR. KOTSCH: Okay, I appreciate it. I
20 appreciate Stu's help.

21 CHAIR MELIUS: He's getting better.
22 We're impressed this meeting. But there's lots
23 of presentation to go.

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1 MR. KOTSCH: Well, thank you,
2 everybody. Have a good day.

3 CHAIR MELIUS: Next, we'll hear from
4 the Department of Energy. And I see Pat
5 Worthington is coming to the -- the agenda was
6 wrong.

7 (Simultaneous speaking.)

8 MEMBER ZIEMER: Jim Melius, it's Paul
9 Ziemer here. I just wanted to let you know that
10 I could hear Jeff really well but I can barely
11 hear you guys in the room.

12 DR. WORTHINGTON: Good morning. I'll
13 get started while we're working on the slides.
14 Again, it's always a pleasure to come before the
15 Board to show our commitment as well as our
16 interest in the various things that are being
17 discussed here today.

18 I'll follow suit from my colleague
19 from NIOSH and speak just briefly about the
20 budget. For us at the Department of Energy, it
21 remains a very important program. We believe
22 that in 2018, by 2018, that we'll be able to hold
23 our budget without taking reductions. And as we

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1 look forward to 2019, that will still be our goal,
2 to make sure that we have appropriate funds that
3 are available for that program.

4 Greg Lewis is here with us today, and
5 a lot of the success of this program is because
6 of Greg's very aggressive approach in looking for
7 new and innovative ways to fund the things that
8 we need to do to provide the data.

9 Also I think the collaboration that
10 continues to strengthen between the three
11 agencies provides an atmosphere for us to be able
12 to look at this work in a different way in trying
13 to make sure that we're delivering it in a timely
14 manner, as well as in a cost-effective and
15 efficient manner.

16 Again, Greg's actually going to give
17 the stats today. And, again, my pleasure to be
18 here at the Board for this very important
19 meeting. So, we'll have Greg Lewis. I know that
20 you are anxiously awaiting to hear from Greg, so
21 he's coming up now. Thank you.

22 **DOE Program Update**

23 MR. LEWIS: Well, that may be an

1 overstatement, but I'll do my best. Alright.
2 And these are the same slides that we usually do.
3 I've updated them a little bit.

4 So, our core mandate is to work on
5 behalf of program claimants to get all available
6 worker and facility records over to DOL and
7 NIOSH.

8 We do primarily three things. We do
9 the individual claims, we do the large-scale site
10 research requests, as with the Special Exposure
11 Cohort research projects, and then we look into
12 facility coverage. And we always have a few of
13 those facility coverage questions going on at any
14 given time.

15 We do about 18,000 records requests
16 per year. And I'll skip past that because we
17 have the details later in terms of our numbers,
18 our stats. And, you know, our numbers never quite
19 match, as Jeff said, with DOL and NIOSH's because
20 they may go, for one claim, it may go to multiple
21 different sites. And in terms of at each site,
22 the complexity can vary greatly for a
23 subcontractor. We might only be able to find a

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1 few different records, although we may have to
2 search in many different places to find those.
3 Whereas, for a 30-year career employee, we can
4 provide -- I've seen single responses over 3,000
5 pages for one individual. So it can vary greatly
6 in terms of the level of effort and what we're
7 able to find for each claimant.

8 So, these are some stats that I'm
9 going to go through. And these are FY16 stats,
10 so they're a little bit old. Our budget year
11 closes at the end of September, so once we're
12 able to get all of those stats and pull them
13 together for your next meeting, I'll have the
14 updated 2017 stats.

15 So we did 18,621 individual records
16 requests for over 25 different major DOE sites.
17 The average number of pages for an employment
18 verification was 14. For a NIOSH request, it was
19 50. And for a DAR -- and what we call a DAR is
20 what we send to the Department of Labor. And
21 that's everything.

22 So the employment verification is just
23 typically the HR records, maybe a little bit

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1 more. The NIOSH request is the dosimetry, the
2 radiation monitoring is sometimes part of a
3 medical file if the dosimetry records are in
4 there. And the DAR is going to be everything.
5 So that's going to be IH, medical, incident and
6 accidents, human resources. So that's pretty
7 much everything.

8 And there is some overlap there. So
9 in a DAR we would typically probably have some of
10 what was included in the employment verification,
11 and much of what was included in the NIOSH request
12 as well. So there is some overlap. So that's
13 why the average number of pages per claimant is
14 about 214. But, again, that's the middle number.
15 Realistically, a lot of times, for subcontractors
16 we'll have less and for career employees we'll
17 have more. And we'll update those numbers again
18 as we get our final FY17 statistics at the end of
19 September.

20 And so for last year we had a 95
21 percent on-time response rate, or responding in
22 less than 60 days. And I think that's pretty
23 close to what Stu showed as our current stats.

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1 We'll update that for FY17 but we expect it to be
2 pretty similar. We've been over 90 percent for
3 some years now, so it fluctuates here and there.

4 And there were a fair number of our
5 sites that had almost perfect record for the
6 year. So, last year, K-25, Richland, and
7 Savannah River had well over a 99 percent
8 response rate. So they had very, very few late.
9 Typically, the sites that have lates, it's due to
10 some issue that arises. In fact, this year, at
11 Y-12 we ran into some challenges.

12 So you'll see that on next year's
13 stats, Y-12 was probably our most difficult site
14 this year. And that was because they moved their
15 records storage facility. So they closed it
16 down, boxed up everything, and shipped it to a
17 different location.

18 So, as that was happening -- it didn't
19 all happen at once, it happened in waves. So,
20 they had probably four or five different waves
21 where they were pulling the boxes, putting them
22 on pallets, wrapping them up, putting them in a
23 truck, and moving them.

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1 So, obviously, as that was happening,
2 the packing and unpacking movement, we were
3 unable to get to certain records. And it wasn't
4 as if one person's record would be in one
5 shipment. It might be that a person's medical
6 record happened to be in transit at that
7 particular time. So we might have everything all
8 ready to go, but the medical record was in
9 shipment so we had to wait until that was unpacked
10 to be able to send it over to DOL.

11 In some cases, we sent partial
12 responses. But in many cases we didn't because
13 they weren't going to be able to work on it until
14 they had the full file anyway. So we held them
15 and we shipped it as soon as we could.

16 So, again, typically, when we run into
17 problems with timeliness, it's because of
18 something like that. There's some action or
19 there's something that's going on at a site that
20 presents a problem. And we try to deal with that
21 or overcome it as best as we can. But as you
22 see, most of your sites have very, very few claims
23 that go over 60 days.

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1 So, for the large-scale records
2 research projects, again, they're driven by DOL
3 and NIOSH. We try to work to your schedule and
4 your request as best as we can, particularly
5 given budget challenges.

6 These are some of the projects that
7 we've been working on recently, particularly Los
8 Alamos.

9 Obviously, in preparation for this
10 meeting, we've been working with NIOSH and SC&A
11 on quite a number of requests. They were smaller
12 and more targeted in nature but those can be
13 challenging, too, trying to find something more
14 specific. We believe we're able to respond to
15 everything within a reasonable timeframe, and
16 hopefully have everything that you need for this
17 meeting.

18 And document reviews, due to the
19 sensitive nature of some of the documents, that's
20 always a challenge. In terms of the NIOSH written
21 reports and the Board's reports, we're usually
22 able to return those in about a week or in about
23 eight working days.

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1 The source documents can be a much
2 bigger challenge because those could be hundreds
3 of pages or hundreds of documents requested. But
4 we try to work with you and set a timeframe that's
5 achievable and that works for your schedule.

6 And then facility research, again, we
7 always have a few facility questions that come
8 in. Some of those are generated by NIOSH
9 research, when you find records of documents that
10 show that maybe one of the AWE facilities was
11 doing work outside of what's on the listed
12 timeframe, or vice versa, that wasn't doing DOE
13 work during what we have as a covered timeframe.
14 So we do research and try to resolve those as
15 best we can.

16 And then outreach, I'll skip past
17 this. I know both Stu and Jeff covered it. But
18 we are very active in the JOTG. The JOTG, Joint
19 Outreach Task Group, is going to be having an
20 annual internal meeting this fall where we're
21 setting our agenda for next year, trying to
22 determine what locations and how many meetings,
23 that sort of thing. So we're looking forward to

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1 that and doing that in the October or early
2 November timeframe. And we'll be participating
3 in the upcoming meetings, including the
4 authorized representative workshop in
5 Jacksonville.

6 And then I always mention our Former
7 Worker Medical Screening Program. So, for those
8 of you on the Board or in the audience that work
9 with claimants, even if they've already filed for
10 EEOICPA or if they've already been diagnosed with
11 an illness, they're certainly still eligible to
12 participate in our screening program.

13 And if they've participated in the
14 past, every three years they're eligible for a
15 re-screen. I was actually at the end. That's
16 fine. But, you know, I would encourage folks to
17 pass on that information to any claimants that
18 might be interested in the screening. It's free,
19 we can accommodate them close to their home. We
20 look for things in the early stages. The goal is
21 to not wait until you feel sick to come in for a
22 screening. You come in when you feel healthy,
23 and hopefully, if we catch anything, we'll catch

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1 it in the early stages where the treatment will
2 be more successful. So I really encourage you
3 to look into that program or get the word out to
4 folks you interact with.

5 And here, you know, it'll be online on
6 my presentation but there's contact information
7 for our Former Worker Program. And with that,
8 I'll take any questions you have for me, or for
9 Dr. Worthington.

10 CHAIR MELIUS: Questions, Board
11 Members? Brad, none today?

12 (Laughter.)

13 MR. LEWIS: So enthusiastic.

14 CHAIR MELIUS: Okay, thank you very
15 much, Greg and Pat. I appreciate it.

16 MR. KATZ: Paul, could you hear Greg
17 fine? Did that work out okay?

18 MEMBER ZIEMER: Greg was very clear.

19 MR. KATZ: Okay, great, thanks.

20 CHAIR MELIUS: So, next up, Brad.
21 Pantex Site Profile Review.

22 **Pantex Plant Site Profile Review**

23 MEMBER CLAWSON: Okay, my name's Brad

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1 Clawson. I'm the Work Group Chair for Pantex.
2 And the Members of the Work Group are myself,
3 Josie Beach, John Poston, Sr., and Phil
4 Schofield.

5 A little bit of background on it.
6 November 20th, 2007, the petition qualified.
7 August 8th, 2008, the NIOSH Evaluation Report was
8 issued. October 20th, 2011, the Advisory Board
9 recommended an SEC for 1958 through 1983 for
10 inadequate information necessary to complete the
11 individual dose reconstruction.

12 On August 28th, 2013, the Advisory
13 Board recommended an SEC for 1983 to 1991, lack
14 of sufficient information to establish internal
15 dose for potential exposure to uranium, thorium,
16 related to the disassembly of weapons systems
17 during the time period of 1984 through 1990, and
18 for the thorium into the 1991.

19 The Board concurs with NIOSH that dose
20 reconstruction for 1951 to 1957 could be done.
21 NIOSH concluded, the Board agreed, that the dose
22 reconstruction is feasible for the early years,
23 1951 through 1957, based on the depleted uranium

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1 contents from weapons components.

2 The petitioner appealed this decision
3 to HHS. An Administrative Review Panel was
4 appointed. The Panel concluded the petitioner
5 appeal had merit based on the potential depleted
6 contamination presence of radionuclides beyond
7 the U onsite activities that could present
8 exposure potential to the worker.

9 The SEC designated by HHS Secretary,
10 January 1st, 1951, December 31st, 1957. It was
11 noted in the Federal Register on January 19th,
12 2017.

13 Site Profile issues that have been
14 addressed and talked about is adequacy of
15 internal dose. This was closed in the Work Group
16 January 2013.

17 Internal dose models for uranium was
18 closed June 2013, at the Work Group. Dose
19 estimate approach for plutonium was closed. Dose
20 estimate approach for thorium was closed, on June
21 2013 Work Group meeting.

22 Internal dose approach for metal
23 tritides, closed. Interpretation of external

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1 dose was closed on August 4th, 2016 Work Group
2 meeting.

3 The neutron-to-photon ratio not
4 bounding was closed, pending verification on
5 August 4th, 2016 Work Group meeting.

6 Completeness of exposure sources
7 closed on August 4th, 2016 Work Group meeting.
8 Incidents cited limited, incomplete, was closed
9 on September 4th, 2014.

10 Inadequate consideration given to
11 firing sites was closed on June 2013 Work Group
12 meeting. Validation of whether most exposed
13 workers badged was closed.

14 Accuracy of plant exposure data,
15 petitioner's issue, was closed. Too few workers
16 monitored for valid dose reconstruction,
17 petitioner's issue, was closed on September 4th,
18 2014 Work Group meeting.

19 Records incomplete for
20 subcontractors, temps, short-term employers,
21 petitioner's issue, was closed.

22 Exposure from tritium leaks,
23 petitioner's issue, was closed on August 4th,

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1 2016 in the Work Group meeting. Badge placement,
2 petitioner's issue, closed on September 4th, 2014
3 in the Work Group.

4 Efficiency of health physics and
5 industrial hygienist program, petitioner's
6 issue, this was merged with Other Matrix Issues
7 and was closed on June 2013.

8 Final TBD issue resolution, ORAU-
9 TKBS-0013-6, Rev. 2, External Dose TBD, issued on
10 11/24/2015. Rev. 2 included revisions for Issue
11 8, additional information added accounting for
12 work-for-others. And this was closed by the Work
13 Group in the 8/4/2016 meeting.

14 Issue 6, clarification needed for
15 zeroes in database, closed by the Work Group at
16 8/4/2016 meeting. And Issue 7, basis for NTA
17 film correction factors needs more
18 substantiation. This is still open.

19 ORAUT-TKBS-0013-5, Rev. 4, Internal
20 Dose TBD, issued 6/1/2015. Issue 15, tritium
21 exposure, limits used versus actual minimum
22 detectable activities, MDA. NIOSH agreed to
23 revise the tables and the text in the Internal

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1 Dose TBD to reflect actual Pantex MDA values and
2 simplified dose assignments. This was closed by
3 the Work Group on 8/4/2016 meeting.

4 Last Work Group meeting, pending
5 closures. Issue 7, Work Group closure pending
6 SC&A's review of correction factors, including
7 4/18/2011 White Paper (Ruhter et al.) describing
8 technical basis for NTA film neutron dose
9 correction factors. SC&A provided evaluation of
10 TBD Rev. 2 and ORAUT-OTIB-0086 NTA film
11 correction factor issues on 10/19/2016. SC&A
12 found the NTA film correction factor of 2.9
13 reasonable. With pending closure verified by
14 SC&A, all TBD issues for Pantex have been
15 resolved.

16 So that brings to an end Pantex Site
17 Profile issues. Is there any questions?

18 CHAIR MELIUS: Board Members have any
19 questions?

20 MEMBER FIELD: So, Slide 5, Number 7.
21 And I just want to clarify on that: it said
22 neutron-to-photon ratio not bounding, closed
23 pending verification. So I assume it was

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1 verified?

2 MEMBER CLAWSON: Yes, it was.

3 MEMBER FIELD: That makes it sound
4 like it's still pending. But it's been verified?

5 MEMBER CLAWSON: Yeah, it's pending
6 their verification of what they've done.

7 MEMBER FIELD: I see.

8 MEMBER CLAWSON: Right, but we're
9 waiting for SC&A's review of that, if I remember
10 right. Is that correct, Joe?

11 MR. FITZGERALD: Yeah, we reviewed it
12 and actually issued a report on October 19.

13 MEMBER CLAWSON: Here, come over here.
14 Use this.

15 MR. FITZGERALD: Yeah, SC&A reviewed
16 this issue and issued a report October 19th,
17 2016. And what it was is a comparison study
18 looking at the various correction factors.

19 And, certainly, we've verified -- or
20 not even verified but agreed with NIOSH's
21 conclusion that 2.9 was a reasonable correction
22 factor in this particular case.

23 And so that basically was it, except

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1 there was a clarification, and as I recall, an
2 additional publication. And that was what was
3 cited on the next page, which was this 2011 White
4 Paper, that in terms of the basis, there was some
5 additional discussion in the Work Group about
6 clarifying that a little further and taking a
7 look at it.

8 And I say pending here because it was
9 one of these situations where as long as we didn't
10 have any problems with this additional White
11 Paper and the clarification, then it would be
12 assumed by the Work Group that this issue, in
13 fact, was closed as of that last Work Group
14 discussion.

15 And we did review it and did not find
16 any issues, and sent an email out. But it was
17 one of these things where we could have closed it
18 at the last Board meeting, but again, it was sort
19 of one of these, if no one said anything, it was
20 effectively closed. So, it wasn't really clear
21 and that's one reason we're doing it now.

22 DR. NETON: Joe is exactly right on
23 that point, but I'd just like to issue a point of

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1 technical clarification. We ended up not using
2 the neutron-photon ratio at Pantex for a variety
3 of reasons. And at the end of the day, we ended
4 up using the log-normal distribution of all the
5 neutron doses and used the 95th percentile of the
6 monitored neutron doses. And that was acceptable
7 to the Work Group.

8 MEMBER CLAWSON: Any other questions?

9 MEMBER ROESSLER: This is Gen on the
10 phone. Am I on mute?

11 MEMBER CLAWSON: No, we can hear you,
12 Gen.

13 MEMBER ROESSLER: Okay, I just wanted
14 to report that for those of us -- for me on the
15 phone, I can hear the speakers, the presenters
16 really well, but I can barely hear Melius. And
17 I think Bill Field was talking. I couldn't hear
18 that. So it seems the mics around the table don't
19 work very well for us on the phone.

20 MEMBER CLAWSON: Gen --

21 MEMBER ZIEMER: I'm having the same
22 experience also. This is Ziemer.

23 MEMBER CLAWSON: Jim Lockey and Bill

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1 were trying to figure out how to turn the mic on.

2 MR. KATZ: Yeah, but the other issue
3 is, Paul, I assume you can hear me well. You
4 have to literally put your mouth up right close
5 to the mic.

6 MEMBER ZIEMER: I can hear you well,
7 Ted, yeah.

8 MEMBER ROESSLER: And I can hear you
9 too.

10 MEMBER CLAWSON: Are there any other
11 questions for Pantex?

12 CHAIR MELIUS: I have a comment. I
13 just want to make sure that we documented all of
14 this. The only documentation that was sent out
15 was for some of the latter period. And some of
16 this goes back. And I heard one thing is resolved
17 by an email, which can disappear into never-never
18 land at some point. Then there's changes to the
19 methodology and so forth.

20 I just want to make sure that we have
21 a record of all that the Work Group has done and
22 the resolutions that have been reached. And
23 these resolutions stretch out back I think to at

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1 least 2013 and maybe longer than that. And I
2 really think it's important that we make sure
3 there is an adequate record of all of this. And
4 I don't necessarily see that from what's being
5 presented.

6 Now, I'm not going to go back through
7 and search through every report going back six
8 years trying to figure out where all this stuff
9 is.

10 MEMBER CLAWSON: The biggest one that
11 came down was the neutron-photon, and that was a
12 little -- when we first started down that path,
13 we were, like Jim said, at the very end of it is
14 when we changed. We were looking at one neutron-
15 photon ratio that would be able to be used for
16 everything. And we came out that it had to be
17 site-specific.

18 So, I'll work with Joe and Jim to make
19 sure all this is documented and go from there.

20 MEMBER BEACH: I have a comment on
21 that.

22 CHAIR MELIUS: Okay.

23 MEMBER BEACH: This should all be

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1 documented. I'm not sure if it is yet, but it
2 should be on the BRS system, which would
3 encompass all of the different issues and the
4 comments. Is that not correct? Because I don't
5 know if this one's actually made it to the BRS
6 system.

7 MEMBER CLAWSON: Come on over.

8 MR. FITZGERALD: Yeah, BRS was
9 updated, but I would add that we need to go back
10 and just make sure that the very last actions are
11 included.

12 I was going to say, on the important
13 issues, which Brad referred to, neutron-photon,
14 some of the real key issues, they're documented
15 in the reports, formal reports that were issued.
16 But some of the discussions in the Work Group and
17 also this final, "yes, we didn't have any
18 problems" type of thing, I agree that we've got
19 to make sure that the BRS is complete as we wrap
20 up this site. So, I think that's a good admonition
21 anyway.

22 CHAIR MELIUS: Anybody else?

23 MEMBER BEACH: So, is that a tasking

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1 or is that just something you'll do
2 automatically, Joe?

3 MR. FITZGERALD: No, I think we do
4 that normally. But I think this is a good thing,
5 when we're wrapping up the site in total, to go
6 back and make sure that the BRS reflects all the
7 different reports as well as the Work Group
8 closures.

9 These Work Group closures are in the
10 transcripts. But I think the BRS needs to point
11 to where the closure took place to make sure that
12 you can trace it, because traceability's what
13 you're saying, in the future.

14 So I think that's a good thing to
15 maybe use just as an example of making sure that
16 all those are tied into the BRS before we close
17 it out completely. So we'll take that action
18 just to connect the dots to make sure
19 everything's there.

20 CHAIR MELIUS: So, therefore, so
21 tasked. Josie?

22 MEMBER BEACH: So, that brings to mind
23 Kansas City. We closed out all of Kansas City's

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1 TBDs. So that should be looked at to make sure
2 it's updated. Just going forward, I think it was
3 a good catch, Jim.

4 MR. KATZ: Right, but in a lot of cases
5 we're doing that in the BRS. So it may have
6 fallen through the cracks with Pantex in the last
7 step, but that's what the BRS is for, and we've
8 been doing that for at least a number of the work
9 sites.

10 CHAIR MELIUS: Yes, but have we done
11 it going back to 2011, 2013 for the work sites?

12 MR. KATZ: No, but what we have for
13 the older ones is we have the matrices, which
14 were updated at the tail-end. We had final
15 matrices that showed all the resolutions.

16 CHAIR MELIUS: But then I would ask
17 that our DFO please provide those to us before we
18 do a close-out like this, so we have it.

19 MR. KATZ: Right.

20 CHAIR MELIUS: So we can reference it.

21 MR. KATZ: And I have in other cases,
22 like Fernald, you have the matrices.

23 CHAIR MELIUS: Yeah, I understand. I

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1 think the Board needs to be able to see that,
2 because this is something that's stretched out
3 over a long period of time. And we're being asked
4 to sort of approve something or review something.
5 And, again, it's not counting the work of the
6 Work Group and SC&A and NIOSH and so forth. But
7 I just think we need to make sure we've documented
8 that.

9 Any other comments or questions?

10 MEMBER CLAWSON: I'd just like to add
11 one thing into this. Being the Work Group Chair
12 with this, we have spent countless hours debating
13 this. I'd just like to thank NIOSH, Stu, Mark,
14 Jim, all the Work Group Members because there was
15 an awful lot of work that went into this, a lot
16 of Site Profile issues.

17 DOE got us into Pantex, one of the
18 most secure facilities around. We had an
19 excellent tour on this and that's what brought a
20 lot of this to closure. I'd just like to thank
21 them all for it.

22 CHAIR MELIUS: Okay, thank you.

23 MEMBER BEACH: Jim, do we need a

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1 motion to close those or is it just --

2 CHAIR MELIUS: We should have a
3 motion.

4 MEMBER BEACH: So, I make the motion
5 that we accept the Work Group's recommendation to
6 close the TBD issues for Pantex.

7 CHAIR MELIUS: And do I have a second?
8 Second from Jim Lockey. Brad was a bit slow.
9 And all in favor just say aye.

10 (Chorus of aye.)

11 CHAIR MELIUS: Opposed? Abstain?
12 Okay. I'm sorry, I was skipping over a thing.
13 Pacific Proving Grounds, back to Lockey.

14 (Pause.)

15 MR. KATZ: While we're waiting, when
16 you update the final PPG on the BRS, let's just
17 also put a final matrix out that we can post for
18 today's date. That way people can go to the
19 website and actually get that documented. It
20 will be documented there, too. Okay, thanks.

21 (Pause.)

22 MS. K. BEHLING: Ted, this is Kathy
23 Behling. Are you available?

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1 MEMBER ZIEMER: Kathy, I think they may
2 be looking over something on the slides. I'm not
3 sure.

4 MR. KATZ: Paul, Stu's still working
5 on getting the slides up.

6 MEMBER ZIEMER: Yeah, that's what I
7 was telling Kathy. I think she was wondering if
8 anybody was there.

9 MS. K. BEHLING: Yeah, Ted, this is
10 Kathy Behling. I just wanted to let you know
11 that the BRS has been updated with the
12 resolutions to the findings for the PPG.

13 MR. KATZ: Thanks.

14 (Pause.)

15 MR. KATZ: Kathy, just as with Pantex,
16 I mentioned to John Stiver here, let's get the
17 PPG matrix finally, since it's updated on the
18 BRS, let's get it printed out and posted for
19 today's meeting. It'd be after the fact, but
20 that's fine, but it means people can come and
21 find it down the road.

22 MS. K. BEHLING: Okay, I'll make sure
23 that happens.

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1 MR. KATZ: Thanks, Kathy.

2 MS. K. BEHLING: You're welcome.

3 DR. H. BEHLING: Ted, this is Hans.
4 We were not able to pull up data slides that
5 should have been available to me through this
6 presentation for the TBD. I don't know why
7 they're not on my Skype.

8 MR. KATZ: I don't know. I asked
9 Stiver to give you access to the Skype. I don't
10 know what's happened. I can go and check with
11 him.

12 (Pause.)

13 MR. KATZ: So, Hans, there's some sort
14 of technical bug that's a problem with Skype
15 right now. So, I think that's what's going on.

16 DR. H. BEHLING: Okay, thank you for
17 the information.

18 (Pause.)

19 **Pacific Proving Grounds Site Profile Review**

20 MEMBER LOCKEY: So, I want to thank
21 the Committee Members for their help with this,
22 as well as Hans, as well as NIOSH, for all their
23 hard work. I appreciate the spelling of my last

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1 name. At times, I'm called that so it doesn't
2 -- anyway, Pacific Proving Grounds is very unique
3 and is a very interesting site to review for a
4 lot of different reasons.

5 The main issue here is that you can't
6 really do adequate dose reconstruction. But in
7 relationship to the Technical Basis Document, it
8 needed to be reviewed and updated in regard to
9 the fallout issues that took place at that site
10 over a number of different years. And so that's
11 really what was being addressed by this
12 Subcommittee.

13 So, as an overview, the Pacific
14 Proving Ground activities and locations. This is
15 for background information. Between '46 and '62,
16 the U.S. Atomic Energy Commission conducted 105
17 atmospheric and underwater nuclear tests at
18 several locations, including Bikini, Enewetak
19 Atoll, Johnston Island, Christmas Island, as well
20 as other Pacific locations.

21 And from a perspective on this -- Hans
22 did a great job putting these slides together.
23 This may be difficult to read because it's

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1 relatively small. But in comparison to the
2 Nevada Test Site, the thermonuclear weapons that
3 were detonated in Pacific Proving Grounds were
4 100 times the magnitude in comparison to the
5 nuclear test site.

6 And the best way you can look at that
7 is in the lower part of the slide. In the
8 continental U.S., there was 107 nuclear
9 detonations of a total megaton yield of 1.38. In
10 all the Pacific Proving Ground locations, there
11 were 105 with a total megatons of 151. So you
12 see there's a magnitude of difference in
13 relationship to weapon size.

14 In relationship to resolution of the
15 PPG Technical Basis Documents, on August 30th of
16 2006, NIOSH issued ORAUT-0052, the Summary Site
17 Profile for PPG. In June of 2012, SC&A was tasked
18 to conduct a review of the PPG Site Profile.

19 In November of 2013, SC&A issued a
20 review of the Summary Site Profile for PPG, which
21 identified nine findings and one observation.
22 And we'll go through that today in the
23 presentation. In response to the SC&A's findings

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1 and observations, NIOSH did issue an Issues
2 Resolution Matrix in 2014.

3 Okay, so, in January of 2015, we had
4 a Work Group teleconference. We discussed the
5 findings, as well as the observations. We
6 concluded that NIOSH's proposed resolutions
7 really addressed the SC&A issues, and then they
8 were put in abeyance awaiting revision of the
9 Site Profile.

10 In July of 2016, NIOSH issued
11 Revision 01, and on August 9th and 10th, the Full
12 Board directed the SC&A to do a limited review of
13 the NIOSH Revision 01.

14 (Pause.)

15 MEMBER LOCKEY: Okay, so, in December
16 of 2016, SC&A issued its review of the NIOSH
17 Revision 01 to the Site Profile, and concurred
18 with the revisions and recommended closure for
19 all the findings and the one observation.

20 The Working Group had a teleconference
21 call in April of 2017, and we discussed the SC&A
22 review. And we concurred with their
23 recommendations, and we thought that all findings

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1 and the observation should be closed at that
2 point.

3 So, to review the summary of the
4 findings and the resolutions, that's what the
5 next number of slides will go to.

6 And Hans, so you know, we're on Slide
7 Number 7 right now.

8 DR. H. BEHLING: I'm watching and I'm
9 right with you.

10 MEMBER LOCKEY: Very good, okay.
11 Finding No. 1 was update the ORAUT-0052 Revision
12 00 regarding the 250-workday requirement for SEC
13 Class inclusion, based on Bulletins 06-15 and 07-
14 05.

15 And that was one of the issues about
16 Pacific Proving Grounds. The people were there
17 24/7, 7 days a week. So it's not an eight-hour
18 workday. It's really equivalent to a 24-hour
19 workday.

20 So, NIOSH's resolution to Finding No.
21 1. The Site Profile was amended. And it was
22 amended in a way that any 24-hour period working
23 or living on the Pacific Proving Ground was

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1 equivalent to three eight-hour workdays for
2 establishing the 250-day workday requirement for
3 potential inclusion in the SEC.

4 So if you worked there for a week,
5 that's equivalent to three weeks of a typical
6 eight-hour workday.

7 So, the status of Finding 1, the Work
8 Group agreed with SC&A's recommendation and
9 closed Finding No. 1.

10 Finding No. 2, in regards to Section
11 4.0, Occupational Environmental Dose, that really
12 ignores the environmental doses for all PPG
13 locations from fallout. And fallout was, of
14 course, one of the primary issues for this
15 location.

16 NIOSH's resolution to Finding 2:
17 SC&A's concern regarding exposure to fallout
18 before 1955 was acknowledged in Section 4.0,
19 Occupational Environmental Dose, and they
20 provided definitive guidance for assigning
21 unmonitored external exposure to fallout before
22 1955, as provided in revisions to Section 6.2 and
23 Section 6.3 and Attachment A of the PPG Site

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1 Profile.

2 So, the status of Finding 2: Section
3 6.0 revisions provide the necessary guidance to
4 account for unmonitored external exposure to
5 fallout before 1955. And the Working Group
6 recommended closure for Finding No. 2.

7 So, Hans, we're on Page 9 now of the
8 slides, "PPG Findings and Their Resolution."
9 This is continued. There are four findings that
10 were summarized together here, in Findings 3, 4,
11 8 and 9.

12 Finding 3, DOE records may be
13 incomplete or inaccurate and may also not include
14 unmonitored exposures associated with cohort
15 badging, exposure to fallout, et cetera.

16 And then Finding 4, ORAUT-0052 does
17 not provide a definition for an unmonitored dose
18 as it applies to PPG participants, or any
19 specific guidance in regards to that issue.

20 Finding No. 8, use of the 50th
21 percentile coworker dose is not justified for PPG
22 participants for operations up to and inclusive
23 of Operation Castle.

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1 And Operation Castle, most of you
2 probably already know, but that was during the
3 timeframe that I think they tested the highest-
4 yield thermonuclear weapons at the Marshall
5 Islands. And Castle Bravo, I think, was 15
6 megatons, which was the highest-yield nuclear
7 weapon tested by the U.S. In comparison, I think
8 the Soviet Union tested a 50-megaton weapon at
9 one point, which was their highest yield.

10 And there was significant fallout
11 contamination over a large area from Castle
12 Bravo. I think over 5,000 square miles or
13 something, a rather large area.

14 Finding No. 9, operation-specific
15 dose distributions defined by the Defense Nuclear
16 Agency must be adjusted to account for the
17 minimal detectable activity value of film
18 dosimetry, regardless of what percentile value is
19 employed.

20 So, NIOSH'S resolutions for 3, 4, 6,
21 and 8, were as follows. Limitations of personal
22 dosimeters, their limited use, and other
23 procedural practices were well recognized by

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1 NIOSH as deficiencies, and these are really
2 intractable issues. To overcome these
3 deficiencies, NIOSH proposed the use of the 95th
4 percentile coworker doses defined in Attachment
5 A of the Revised PPG Site Profile.

6 In relationship to SC&A, they
7 recognized the deficiencies that NIOSH faced in
8 dose reconstruction of PPG personnel. And given
9 the intractable nature of such limitations, SC&A
10 believes that the use of the coworker values
11 cited in Attachment A of Revision 01 of ORAUT-
12 0052 is a reasonable resolution. And the Working
13 Group concurred with that and we closed findings
14 on 3, 4, 8, and 9.

15 Finding No. 5, the average photon
16 energies for fallout are well above 250 keV.
17 Depending on the exposure geometry, a default
18 photon energy of 30 to 250 keV may not be
19 claimant-favorable.

20 NIOSH's resolution to Finding No. 5:
21 while NIOSH acknowledged the photon energies
22 above 250, its choice of 30 to 250 photon energy
23 in AP geometry represents claimant-favorable dose

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1 conversion factors for all but four organs. They
2 were the lung, the esophagus, red bone marrow,
3 and bone marrow.

4 For these four organs, revisions to
5 Section 6.3.3 suggests that an AP-to-ROT geometry
6 ratio should be considered for claim-
7 favorability, with ISO geometry for cases
8 requiring best estimates.

9 The status of Finding 5: because the
10 lower photon energy and AP geometry generally
11 yields higher DCF/PoC values, SC&A agrees that
12 NIOSH should retain its best practice to provide
13 DCF yielding the highest PoC. And we concurred
14 and we felt that Finding No. 5 could be closed.

15 Finding No. 6, assignment of external
16 dose from PPG fallout for skin cancers requires
17 that beta-to-gamma dose ratio that is defined by
18 the distance to the skin cancer location above
19 the source plane. A second variable affecting
20 dose is the age of the fallout.

21 NIOSH's resolution to Finding 6: in
22 Section 6.1 in the revised PPG Site Profile,
23 NIOSH eliminated the default Nevada Test Site

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1 beta-to-gamma ratio of 1:1 and revised guidance
2 that included beta-to-gamma ratios by Barss and
3 Weitz, along with efficiency ratios that include
4 the effects of weathering.

5 The status of Finding 6: revisions
6 incorporated into Section 6.1 fully address the
7 critical variables that include age of fallout,
8 distance, and weathering impacts on the beta-to-
9 gamma ratios that must be used to derive the beta
10 dose contribution for select tissues. The
11 Working Group agrees with the revisions of
12 Section 6.1 and recommended closure of Finding 6.

13 Finding 7, NIOSH's guidance for
14 assignment of missed photon dose is based on
15 assumptions that are not supported by facts and,
16 in the face of uncertainty, are not claimant-
17 favorable.

18 NIOSH's resolution to Finding 7: to
19 account for unmonitored exposures and
20 uncertainties of recorded film badge data prior
21 to 1955, NIOSH revised Section 6.0 of the PPG
22 Site Profile as follows.

23 Number 1, 95th percentile coworker

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1 doses should be assigned when data are incomplete
2 or non-existence. Pre-1955, recorded doses
3 should be compared to the 95th percentile doses
4 and assigned the larger of the two doses.

5 And the second point, Section 6.1,
6 6.2, and 6.3 were revised to address exposures to
7 Operation Greenhouse fallout in 1951.

8 The overall status of Finding 7,
9 therefore: SC&A has assessed all revisions to
10 Section 6 of ORAUT-0052. In context with the
11 stated findings, the Working Group concludes that
12 the current guidance adequately addresses Finding
13 7, and recommended its closure.

14 There was one observation, and that
15 was more definitive guidance was needed for
16 assignment of occupational medical dose in behalf
17 of claimants with no formal affiliation with the
18 DOE or Atomic Weapons Employer facilities.

19 NIOSH's resolution to Observation 1:
20 to address this finding, NIOSH revised Section
21 3.0, which substituted protocols defined in
22 "Occupational X-Ray Dose Reconstruction for DOE
23 Sites," which is NIOSH 2004, for guidance

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1 provided in "Guidance on Assigning Occupational
2 X-Ray Dose under EEOICPA for X-Rays Administered
3 Off Site." And that was NIOSH 2011. The Work
4 Group concurred with this text revision in
5 Section 3.0 and recommended closure of
6 Observation 1.

7 So, in regard to path forward, there
8 has to be an issuance of a Progress Evaluation
9 Report addressing changes incorporated in
10 Revision 1 to ORAUT-0052. This has to be reviewed
11 by SC&A, and then resolution and approval of the
12 Progress Evaluation Report by the Working Group.

13 And just as important, selection of a
14 the sample of dose reconstructions for review and
15 compliance by SC&A, particularly in relationship
16 to the dose reconstruction for skin cancer, which
17 is plenty applicable here.

18 And I want to thank Hans for preparing
19 the slides, he did an excellent job. Any
20 questions?

21 DR. H. BEHLING: Just a comment, Dr.
22 Lockey. Your name is not misspelled. We
23 corrected that error about a month ago, and if

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1 you go on the website, you will find your name
2 properly spelled. And I apologize that somehow
3 it didn't get to you in time.

4 MEMBER LOCKEY: Hans, I don't take it
5 personally. I looked at the website and it was
6 spelled correctly. I'm going to blame this on
7 Stu.

8 (Laughter.)

9 MR. HINNEFELD: There, I fixed it.

10 DR. H. BEHLING: Also, I do want to
11 mention a correction here for Finding 5. We
12 mentioned that they were four different tissues
13 that would benefit from an assumption of a higher
14 photon dose; that is, the lung, esophagus, red
15 bone marrow. And here is an error that I will
16 take credit for, because the last one is not bone
17 marrow. We had red bone marrow and bone marrow,
18 but it's bone surface.

19 So, I'll take blame for that error in
20 the slide. I didn't catch it until just now when
21 you went through it. And we may have to correct
22 the record for that slide. But for the tissue
23 question, it's not, again, bone marrow. It is

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1 bone surface.

2 CHAIR MELIUS: Board Members, any
3 questions? Then I'll go.

4 So, my question is, I think I noticed
5 it in one other presentation later on, which is
6 it says it deals with the resolution of Findings
7 3, 4, 8, and 9. And there's a series of issues
8 there. And then it sort of goes into, given the
9 intractable nature of these deficiencies, we're
10 just going to call it, give them the 95th
11 percentile.

12 And my question is, so where's our
13 judgment between that? I mean, we're saying that
14 there are issues with individual dose
15 reconstruction for these -- that are intractable,
16 unless we apply a 95th percentile for the
17 coworkers.

18 And my question is -- again, I'm not
19 arguing maybe with the conclusion, but based on
20 what we're seeing, I looked at the SC&A report
21 also, which is all I had, was the question, well,
22 what's the difference between -- what is
23 intractable? How does that relate to being able

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1 to conduct dose reconstructions?

2 DR. H. BEHLING: Dr. Melius, if you
3 give me a few minutes, I will explain.

4 CHAIR MELIUS: Well, if you'll give me
5 two minutes to finish my question, then you can
6 explain, or at least try to.

7 Okay. So, we're supposed to do dose
8 reconstructions with sufficient accuracy and it
9 must be plausible.

10 So, now, go ahead, Hans, and respond.
11 Thank you.

12 DR. H. BEHLING: Okay. There are so
13 many factors that, obviously, contribute to this
14 particular issue of intractability.

15 One has to realize the timeframe.
16 We're talking about the '40s and '50s. This is
17 when our scientific knowledge about the impact of
18 radiation on human health and so forth, and the
19 ability to even monitor it, were in their infancy
20 stages.

21 And then you realize, also, the
22 remoteness of the Marshall Islands and PPG, I
23 mean we're talking about thousands of miles

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1 removed from the mainland.

2 And the reason we chose it, obviously,
3 or our government chose the Marshall Islands, was
4 because we could test thermonuclear devices, such
5 as Braco, at 15 megatons, which is 1,000 times
6 greater than, obviously, the nuclear devices that
7 we detonated at Hiroshima and Nagasaki. You
8 couldn't do that on the continental United
9 States.

10 So, those are the circumstances. And
11 of course, the pure volume, I'll just talk about
12 the quantity of people that have to be assessed.

13 For the first operation, Operation
14 Crossroads, that involved Able and Baker, the
15 smaller ones, but the ones that were detonated in
16 1946. There were 42,000 people at the PPG
17 facility. And of course, when you talk about the
18 ability to monitor people, you have to be
19 selective.

20 And then I'll get to the real issues,
21 the dosimeters that -- first of all, there's no
22 internal exposure monitoring capabilities there.
23 And for external, we had to deal with these huge

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1 numbers of people.

2 So, what was in fact done? We used,
3 obviously, mission badges. And mission badges
4 were only assigned for a select number of people
5 who had to go, for instance, after detonation,
6 off to an island. And they were clocked to make
7 sure that they were only for a very brief time.
8 And the exposure on those badges were confined to
9 the very short time periods that they would
10 retrieve, for instance, an instrument or certain
11 measurement.

12 Those are mission badges. In
13 addition, there were always instances where
14 people didn't have enough badges to go around, so
15 they had cohort badging. So you may have had a
16 single person who was badged, and that badge
17 reading was obviously to represent the exposure
18 people received, and it may have been hundreds of
19 people.

20 And so the records were not always
21 there, and we can't be sure of records -- the
22 dosimeters used in that time period were not very
23 reliable for the beta component.

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1 And so this is why we had one of the
2 findings of the beta-gamma ratio that had to be
3 corrected. And that was obviously corrected as
4 well.

5 So there are many, many deficiencies
6 and I could go on and on. And sometimes, for
7 instance, they wanted to measure just the
8 exposure that a person received for a specific
9 mission.

10 And so when a badge was read, they
11 used to subtract always the background, and this
12 is the very reason why we needed to obviously
13 institute a protocol under the SEC that says you
14 are exposed 24/7. In other words, the exposure
15 you received may have been mostly or largely due
16 to fallout, which was usually always subtracted
17 from the badges.

18 In addition, there were other
19 problems. But I spent six years of my life, from
20 1998 to 2004, at the Marshall Islands. I was
21 there on locations where all these tests took
22 place. I was there at Enewetak, Bikini, and many,
23 many other locations, and I understand the

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1 problem associated with trying to actually assess
2 exposures. And we're not talking about a DOE
3 facility in the conventional, we have to realize
4 we were in the middle of nothing out there.

5 There were, obviously, no facilities.
6 When the people came there, there was no
7 infrastructure. Many of these people had to live
8 in tents and so forth, and they were exposed to
9 radiation that was not monitored. This is why
10 the environmental exposure is not really
11 appropriate even as a term.

12 And this is why before 1955, Operation
13 Greenhouse, many of the people during a period of
14 a few weeks were exposed to background radiation
15 up to 4 rem. And so that was never captured in
16 any of the dosimetry.

17 Anyway, as I mentioned, I'm fully
18 sympathetic to the problem NIOSH faced in doing
19 dose reconstruction. And I'm fully concurrent,
20 you cannot restore information that doesn't
21 exist.

22 And so in the process, I believe NIOSH
23 did the admirable thing in taking a higher dose,

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1 the 95th percentile dose, of doses that were in
2 fact captured, and assuming that 95th percentile
3 covers all of these exposures that were never
4 recorded or never even monitored, et cetera, et
5 cetera.

6 So, based on my experience, and I have
7 lots of experience, six years' worth, of looking
8 at the data, because I did a lot of work for the
9 Marshallese, and I understand why it's very
10 difficult.

11 And if you're going to do anything,
12 you have to at least aim high, and I believe NIOSH
13 did that. And I believe that, hopefully, the
14 95th percentile and the other provisions that
15 were made do, in fact, at least take into
16 consideration these deficiencies.

17 And for those people do not qualify
18 for a SEC, it is at least one good chance to
19 perhaps get compensation. And this particularly
20 prevalent for the one cancer that is not covered
21 under SEC, and that is namely skin cancers.

22 So, I hope, at least as I could talk,
23 try to provide you some basis for the concept of

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1 intractability and why I believe that term is
2 correct.

3 CHAIR MELIUS: So, Jim Neton, do you
4 want to say something?

5 DR. NETON: Well, I was just going to
6 mention exactly what Hans finished up with, was
7 that this decision arose in the context of the
8 site: Pacific Proving Grounds is an SEC for an
9 all-covered period.

10 And so the decision was either to say
11 we can't reconstruct external dose with
12 sufficient accuracy, and assign people with non-
13 presumptive cancers zero exposure. Or we could
14 use the 95th percentile, which we believed at the
15 time, and I believe if you look at the record of
16 our discussions, it would be bounding under
17 plausible circumstances.

18 You have two choices, you can either
19 use the 95th percentile or zero. And we felt the
20 95th percentile was adequate.

21 CHAIR MELIUS: But I think we have to
22 be consistent in terms of how we're making these
23 determinations. So, if we want to use it, we say

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1 it's intractable, and if we don't --

2 DR. NETON: Well, I don't recall the
3 word intractable being used in the discussion.
4 Maybe I've forgotten that. But, yeah,
5 intractable might not be the best choice of words
6 to characterize that. Because if it's
7 intractable, it's intractable, right? I mean,
8 that's true.

9 CHAIR MELIUS: Yeah.

10 DR. NETON: We believe that there were
11 issues and nuances associated with whether you
12 assigned environmental, the 50th percentile at
13 the full distribution, or the 95th percentile.
14 And we felt the 95th percentile was the best
15 choice, given all the uncertainties associated
16 with the exposure conditions.

17 CHAIR MELIUS: And is that documented
18 in the records?

19 DR. H. BEHLING: I will --

20 CHAIR MELIUS: Hans, I'm asking Jim.

21 DR. NETON: I can't be certain, I have
22 to go back and look. But my feeling is it is.

23 DR. H. BEHLING: If I may, I will go

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1 back to the issue Resolution Matrix.

2 And we have Finding Three, NIOSH
3 states the following: NIOSH understands there are
4 serious deficiencies related to film badge
5 dosimetry data, and procedural practices
6 identified by the NRC, SAIC, etc., and Perkins.

7 In light of these deficiencies, NIOSH
8 finds it, quote, intractable to achieve more
9 accurate dose assessment than those provided by
10 the DNA and reduced in Attachment A.

11 So, the word intractable was
12 incorporated in the Resolution Matrix that was
13 issued by NIOSH.

14 DR. NETON: All right, I stand
15 corrected. I didn't recall that but I would still
16 submit that that's probably an improper choice of
17 words for that characterization.

18 CHAIR MELIUS: Any points, Dave?

19 MEMBER KOTELCHUCK: Yes, it just seems
20 like choosing 95th percentile, if we're forced to
21 make a decision about an individual claim, it
22 would seem arbitrary. Why 95? Why not 99?

23 And also, another issue to me is it

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1 seems sensible in an individual case to say if
2 you have 24 hours exposure, it's equivalent of 3
3 days of exposure.

4 But for that, where's the scientific
5 evidence that that makes sense, or there should
6 be 4 days equivalent for 24 hours?

7 DR. NETON: I think that's a separate
8 issue.

9 MEMBER KOTELCHUCK: It is?

10 DR. NETON: I think if you have the
11 95th percentile, I think it's our feeling that
12 it's bounding, in the sense that you have 95th
13 percentile of all the modern workers, and the
14 exposure for the people where we have unmonitored
15 sections of their history.

16 It's a bounding scenario.

17 We can go back and re-look at the
18 record I suppose and come to a different
19 conclusion, but I think this is --

20 CHAIR MELIUS: Does anybody recall how
21 we handled Amchitka? Or have we in that regard?

22 DR. NETON: I don't recall.

23 CHAIR MELIUS: I don't either. I

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1 don't know.

2 DR. NETON: Well, Amchitka, of course,
3 was added as one of the original SECs.

4 CHAIR MELIUS: Yes, but I would look.
5 It'd be on the Site Profile.

6 DR. NETON: I don't know that we have
7 monitoring data for Amchitka.

8 CHAIR MELIUS: Jim knows more about
9 it.

10 DR. NETON: Very limited. See, we had
11 quite a bit of monitoring data for Pacific
12 Proving Grounds. It's not like we have zero.

13 We have a fair amount of monitoring
14 data, it's just are those gaps so egregious that
15 there are huge exposures that won't be captured
16 by the 95th percentile?

17 That's the question you're asking.

18 CHAIR MELIUS: Yes, right. I don't
19 know.

20 DR. NETON: I'd be happy to go back
21 and re-look at this issue and --

22 CHAIR MELIUS: I want to underline the
23 work -- I think it's important that we try to

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1 make sure we have something on the record that
2 does indicate that and we've looked at that
3 issue.

4 DR. NETON: Well, I think Hans went
5 through a lot of discussion that I think was
6 captured in the Work Group discussions.

7 We can go back and try to recapture
8 all the points and try to more definitively
9 demonstrate why we believe the 95th percentile is
10 bounding.

11 That's what you're asking?

12 CHAIR MELIUS: And why is it
13 plausible?

14 DR. NETON: Yes, sure, that's fine.

15 Dr. H. BEHLING: Can I make a quick
16 comment here? The reason I identified this
17 particular finding is that the actual data that
18 we used in the initial Rev 0 was based on people
19 who obviously received it, in terms of who was
20 included in that pool of monitored people.

21 And as I said before, there was
22 obviously a lot of uncertainty.

23 Because it basically involved only

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1 mission badges, where a guy got a badge and they
2 said, you will wear this badge until you come
3 back to us.

4 It could be an hour or two where he
5 retrieves some instrumentation, the nature of
6 which was heavily radioactively-contaminated.
7 The mission badge was taken away from him and was
8 scored as an exposure.

9 But what it's not going to capture are
10 exposures that will continue 24 hours a day from
11 fallout. And we're talking about a pretty
12 extended timeframe.

13 Prior to 1955, the people would shoot
14 a badge that they were wearing 24/7, which means
15 that you have an integrated exposure for the full
16 duration of the 24-hour day.

17 Beforehand, as I said, you were either
18 by a mission badge or by a cohort badge, which
19 may not even be in your record.

20 And this is I came to the conclusion
21 that if you look at the data, to the extent it
22 works, the 50th percentile will not give you a
23 true 50th percentile due to over-deficiencies.

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1 And as a result, prior to 1955, NIOSH
2 said we will use that very data, which we know is
3 deficient.

4 But they use the 95th percentile value
5 and, hopefully, those deficiencies will fall by
6 the wayside.

7 This is my interpretation and I think
8 it's a reasonable one.

9 CHAIR MELIUS: But it doesn't address
10 the question. So, thank you, and I think -- any
11 further discussion on this? Dave?

12 MEMBER KOTELCHUCK: Yes, I'd like to
13 ask a question on procedure. As we approve this
14 TBD, are we making a decision about the SEC
15 applications?

16 CHAIR MELIUS: We've already done
17 that.

18 MEMBER KOTELCHUCK: That the SEC has
19 already then --

20 CHAIR MELIUS: Yes.

21 MEMBER KOTELCHUCK: -- decided and
22 done? Okay.

23 CHAIR MELIUS: Yes, this is just the

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1 -- yes.

2 MEMBER KOTELCHUCK: Pardon? This is
3 just?

4 CHAIR MELIUS: What can be done for
5 people who are not in the SEC.

6 MEMBER KOTELCHUCK: Aha, okay, that
7 was not clear to me anyway. Thank you.

8 MEMBER VALERIO: Can you hear me all
9 right? So, I guess I'm needing a clarification
10 because reading through the material again, the
11 implementation of around-the-clock badges wasn't
12 in place until May of 1956.

13 So, wouldn't the 95th percentile apply
14 to people, to the workers, through May of 1956,
15 rather than 1955?

16 DR. NETON: I don't recall the exact
17 dates of the application of the 95th percentile
18 at this point. Hans may be able to help me out?

19 DR. H. BEHLING: Well, anytime after
20 the period of time when mission badging, cohort
21 badging, or just plain instruments, in fact that
22 was another issue when in the absence of a mission
23 badge or a cohort badge was sometimes used it was

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1 strictly an instrument, they had a dose rate
2 limit, meaning that you could stay there
3 obviously for a long time without any
4 acknowledgment or no records.

5 But people said you may come in here
6 if you're less than so many millirems per day,
7 and they were no record of it -- anyway, I believe
8 the transition between obviously the 95th
9 percentile and the cohort terminates at the time
10 when you introduce a badge that was worn by a
11 given individual for the full duration, 24/7.

12 That was his badge, like you would
13 expect today. And that occurred somewhere after
14 1955. This was the time Operation CASTLE started
15 when, obviously, the large megaton devices were
16 tested.

17 CHAIR MELIUS: So, again, can we
18 address this issue and then come back to the Board
19 and we can close this out?

20 DR. NETON: We can do that.

21 MEMBER LOCKEY: So, Jim, just so we're
22 clear, the issue is Y-95? Now there are 99
23 indications? Is that what you're asking?

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1 CHAIR MELIUS: Well, I think whether
2 it's 95 or 99, as much as why -- is it plausible,
3 are these dose reconstructions at the 95th
4 percentile plausible, sufficiently accurate?

5 And I think it probably has to do with
6 what Jim is explaining, that there's adequate
7 data for making this judgment.

8 I don't think it's clear from what
9 we've been given so far. And I haven't gone back
10 and looked at all the transcripts or anything.

11 So, our next item on our agenda is
12 Fernald, I believe.

13 **Feed Materials Production Center SEC**
14 **Petition (1979/1984-1989; Fernald, OH)**
15 **and Site Profile**

16 MR. STIVER: Good morning, Dr. Melius,
17 Members of the Board. I'm John Stiver from SC&A.

18 Today I'm going to be giving an update
19 on the Fernald SEC Petition 0046 and the Work
20 Group's recommendation regarding that, and also,
21 an update on ongoing Site Profile Activities.

22 What I would like to do is go ahead and go
23 through the SEC first, and then entertain any

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1 questions the Board has regarding that, before
2 launching into the Site Profile side of things.

3 So, with that, we can get started
4 here. Following on after Hans is always a tough
5 gig, but I'll go ahead and do my best.

6 A little bit of background about
7 Fernald, which is also known as the Feed
8 Materials Production Center.

9 It's located about 20 miles from
10 Cincinnati. It covers a fairly large area, about
11 10 to 50 acres, with the production area
12 centrally located, about 136 acres in that.

13 It began operation in '51, 1951, and
14 it was fully operational by the end of 1954, and
15 produced product, mainly uranium, some thorium,
16 up until 1989.

17 As you can see here in bold on the
18 Slide Number Two, primary function was to convert
19 uranium ore concentrates and recycled materials
20 to either uranium oxides or highly purified
21 uranium ingots and billets for machining, or
22 extrusion into tubular forms and assorted uranium
23 enrichment.

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1 The facility has included nine
2 separate plants, along with waste storage areas,
3 two earthen berms, concrete silos that contain
4 the K-65 residues, which were also called
5 raffinates.

6 And let me move on here. As far as
7 the review of the Site Profile in the SEC, this
8 is probably one of the longest-lived of all,
9 maybe with the exception of Hanford and Savannah
10 River.

11 A Site Profile Review was conducted
12 back in the early days, in 2006. A total of 33
13 findings were identified. About that same time,
14 SEC Petition 46 was qualified.

15 The qualified Class was all employees
16 of DOE, DOE contractors and subcontractors,
17 employed at Fernald from January 1951 through
18 December 31, 1989.

19 Our SEC Evaluation Report Review
20 identified six principal SEC issues, first being
21 the classic completeness and adequacy of the
22 coworker model for uranium internal exposures.

23 Kind of with that or related to that

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1 is the validation of the electronic database that
2 took the hard-copy records that went into
3 creating that model and put it into electronic
4 format.

5 The third is the issue of recycled
6 uranium, how to deal with the impurities in
7 recycled uranium, principally, plutonium,
8 neptunium, and technetium-99, but also,
9 americium-241.

10 Issue Four was the use of the radon
11 breath data for reconstructing doses from
12 inhalation of radium-226 and thorium-230.

13 Issue Five was a review of radon
14 emissions from the K-65 silos and associated
15 exposures.

16 Issue Six was reconstruction of
17 internal exposures from inhalation of thorium-
18 232, based on time-weighted air concentration
19 data during the first period and also, chest
20 counts at a later period of time.

21 And this SEC 4.5.1 was kind of an
22 orphan issue from way back in the beginning. And
23 this had to do with the absence of performance

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1 standards and quality assurance for external
2 doses, based on film badge dosimetry.

3 Our latest iteration of the Fernald
4 Issues Matrix captures in detail all of these
5 findings, the resolution points to the various
6 transcripts where they're resolved.

7 I believe it was sent out to the Board
8 a couple of weeks ago, and it should be available
9 on the DCAS website.

10 We'll continue with the historical
11 review for just another slide here. There are 22
12 Work Group meetings that took place over a 10-
13 year period, a vast number of White Paper
14 exchanges and Work Group discussions.

15 The last meeting was July 28, just
16 last month, and as of that date, three Classes
17 have been added to the SEC.

18 The first were all employees of DOE,
19 their contractors and subcontractors, basically
20 anybody who worked at FMPC from January 68
21 through December 31, 1978, based on the ability
22 to reconstruct internal doses of thorium from
23 chest count data that were reported in units of

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1 milligrams of thorium.

2 And I have the lengths there to the
3 HHS designations, so anybody who wants to can go
4 review those.

5 Then the next year, in 2013, another
6 group was added to the SEC.

7 And this was basically all the
8 subcontractors employed from January 1, 1951,
9 through December 31, 1983, based on insufficient
10 internal monitoring data for other than prime
11 contractor DOE employees at that time.

12 The third also came about in 2013, and
13 this was all employees from January 1, 1954,
14 through December 31, 1967, based on the inability
15 to construct internal doses of thorium from these
16 time-weighted airborne radioactivity
17 concentrations, called daily weighted exposures.

18 Next slide. We go through the SEC
19 issues, kind of a 10,000-foot view. Any one of
20 these could have been the topic of an all-day
21 meeting, and I'm sure nobody wants to go through
22 that level of detail right now.

23 This is basically, like I said, the

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1 completeness and adequacy of the uranium bioassay
2 data for dose reconstruction, to support OTIB-
3 78. This issue was actually not resolved
4 until 2014, I believe it was, December, 2014.

5 OTIB-78 was actually revised three times,
6 and the coworker model was eventually
7 incorporated into the Occupational Internal Dose
8 Revision Three, which came out just last year.
9 And the OTIB was cancelled.

10 The issues we raised, the
11 applicability of the coworker model, with the
12 basis for the addition as that second Class of
13 workers to the SEC that we just went over.

14 Issue Two is directly related to the
15 coworker model as well. It's mainly validation
16 of the accuracy with which the hard-copy records
17 were transcribed into electronic format.

18 That was, let's see, as of December in
19 2010, NIOSH had delivered a complete validation
20 study that resolved all of our concerns. And the
21 February 8, 2011 Meeting, it was recommended that
22 subpart A be closed out.

23 2B was concerns about the integrity of

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1 the hard-copy bioassay data itself, as raised by
2 a petitioner.

3 And this is really more related to
4 there had been some falsification, or I don't
5 know if that's the right term. The methodology
6 for calculating off-site emissions from the
7 scrubbers was called into question.

8 And so, there was still some concern
9 about whether the bioassay data might also have
10 issues related to that.

11 There was also, I believe, in the
12 Fernald annual reports, there was some
13 boilerplate in there, and the bioassay data
14 shouldn't be used for a dose assessment.

15 And the reason for that we believe was
16 that at the time, that data was really used for
17 assessing chemical toxicity. The plant was
18 really run as a heavy metals plant.

19 And also, at the time, we didn't
20 really have the detailed bio-kinetic models to
21 assess organ doses from intakes.

22 And so this was the topic of quite a
23 bit of discussion back in the time, and based on

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1 our experience with NTS, which have taken a
2 tremendous amount of resources and time. And the
3 results turned out to be inconclusive.

4 We decided, the Work Group decided,
5 that it was not worth pursuing that at this time.
6 So, that was closed out.

7 Issue Three, recycled uranium, the
8 concern was that the default concentrations that
9 were on a uranium mass basis of plutonium-239,
10 neptunium-237, and technetium-99.

11 They're associated with recycled
12 uranium at Fernald. It may not be bounding for
13 certain Classes of workers and activities and
14 time periods.

15 Plutonium is quite significant from a
16 dosimetric standpoint with two to five times
17 uranium dose with certain concentration in organs
18 is listed there.

19 We have three real periods of interest
20 here that span the time from 1953 to 1985.
21 Actually, from 1953 to 1960, there were some
22 amounts, about 45 metric tons that were in
23 storage, but there was no processing going on.

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1 From 1961 to 1972, recycled uranium
2 was processed, but most of the data that are
3 available suggests that the levels were within
4 specifications, which was an anomaly, 10 parts
5 per billion plutonium, as I said, on a uranium
6 mass basis.

7 From 1973 to 1985, however, RU was
8 received. It was out of specification, mostly
9 from the gaseous diffusion plants.

10 This was termed plutonium out of
11 specification, or POOS is the acronym applied.

12 And then in 1986, Westinghouse
13 Materials Company of Ohio took over as the M&O
14 from National Lead of Ohio, and instituted
15 comprehensive improvements in the HP program.

16 And from that period forward, we felt
17 that we probably didn't have an SEC issue
18 regarding recycled uranium.

19 Six Work Group Meetings took place, a
20 lot of exchanges, a lot of discussions.

21 And as of February, 2012, the Work
22 Group and NIOSH reached an agreement on the RU
23 contamination concentrations that are listed in

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1 this table in here, which was from 1961 to 1972.

2 100 parts per billion for plutonium,
3 3500 parts per billion for neptunium, and 9000
4 parts per billion for technetium.

5 And from 1973 to present, 400 parts
6 per billion, plutonium; 11,000 parts per billion,
7 neptunium; and 20,000 parts per billion, uranium.

8 And this was actually incorporated
9 into NIOSH's Report 52, which cataloged all of
10 their Fernald-related internal dose
11 methodologies.

12 Let's fast forward to 2017. TBD-5 Rev
13 3 was issued in March, 2017, and in that document,
14 NIOSH actually proposes lower concentration
15 levels for the constituents than what were agreed
16 upon by the Work Group.

17 For 1961 to 1972, plutonium was taken
18 from 100 parts per billion down to 10, neptunium,
19 down to 400, and technetium-99 down to 6000 parts
20 per billion.

21 And in the July Work Group Meeting,
22 NIOSH stated that they don't believe that the
23 data really support the original concentrations.

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1 That factor of ten was kind of applied
2 administratively to begin with to ensure
3 claimant-favorability and dose reconstruction
4 methodologies have changed and improved. They're
5 now done differently than they were in 2012.

6 However, SC&A remains concerned that
7 some of these new defaults might not be
8 adequately bounding to some workers who might not
9 be covered by the SEC. Say, those exposed for
10 less than 250 days.

11 The main reason for that being this
12 magnesium fluoride process loop that had an
13 impact on the workers in Plant Five and the
14 millwrights in Plant One.

15 And they had a reduction bomb where
16 they put the green salt, the magnesium, in there,
17 and then converted it to metal.

18 This refractory material, what used to
19 be dolomite, but the mag fluoride, would absorb
20 a good portion of these constituents.

21 And as it was recycled, you'd get kind
22 of a concentration effect such that what was
23 actually in the feed material, that ten parts per

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1 billion, could be concentrated quite a bit higher
2 than that.

3 Which was really the reason that we
4 felt 100 parts per billion was really more
5 claimant-favorable and probably plausible upper
6 bound to use during that period.

7 NIOSH has agreed to provide a detailed
8 explanation for these default levels for 1961 to
9 1972. And the issue remains active.

10 We're back. Okay, I recall that this
11 issue was transferred to the Site Profile side of
12 the house back in 2012. And so that relates to
13 TBD Findings 9 and 11 and SEC P3.

14 That component that was related to
15 americium-241 was actually closed out at the July
16 28, 2017 meeting.

17 We felt that NIOSH's methodology as
18 laid out in Rev. 3 of TBD-5 was more than adequate
19 and claimant-favorable.

20 Issue Four, this is the use of radon-
21 breath data for reconstructing doses from
22 inhalation of radium-226 and thorium-230.

23 We agreed that breath analysis is a

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1 valid method for reconstructing intakes of radium
2 and thorium.

3 These two isotopes and the intake
4 ratios of the radionuclides are known and it can
5 identify the worker populations.

6 The remaining issue was how to
7 reconstruct does from thorium-230 that were poor
8 in uranium or radium. So, you didn't have the -
9 - you really detect it either using bioassay or
10 a chest count.

11 You're not going to detect lead-212 or
12 any of the daughter products. So, you might end
13 up with a thorium intake, but you had no way that
14 you could monitor it.

15 As of August, 2017, again, lots of
16 White Paper exchanges and discussions. NIOSH at
17 this point believes that there really is no
18 exposure potential.

19 This would be on the, quote, clean
20 side of the Refinery Plant 23, now on the site of
21 the gulping station, which is where they actually
22 dumped in the ore and then milled down in Plant
23 One.

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1 And actually, we didn't feel there's
2 a problem there in constructing doses, but it was
3 over on the other side where there might be some
4 potential for some intakes that we wanted to look
5 at this.

6 NIOSH is going to provide their
7 official written position on this, so again, this
8 remains active. This relates to TBD Issues Seven
9 and Eight.

10 Issue Five, this is radon emissions
11 from the K-65 silos and associated exposures.
12 Now, prior to the SEC, from 1954 through 1967 and
13 then 1968 to 1978, this was a pretty hot topic of
14 discussion because some of the doses that could
15 be received here were quite high.

16 We felt that the radon-release rates
17 from the K-65 silos, proposed by NIOSH, based on
18 the Radiation Assessment Corporation study, were
19 too low.

20 And we felt that the method used to
21 drive the source term dispersion factors was
22 scientifically flawed. A lot of papers were
23 exchanged again.

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1 As a practical matter, though, at this
2 point, since the SEC has been granted, there's
3 only a six-month period here where this radon
4 dose would apply.

5 And since lung is a presumptive
6 cancer, the only non-presumptives would be skin,
7 prostate, and then if there's some segment of the
8 250-day period in there.

9 So, based on that, we felt that if
10 NIOSH was willing to go ahead and apply the 95th
11 percentile of their model, that we would go ahead
12 and accept that and, as of December, 2015, TBD-4
13 Rev 1, which is the environmental TBD.

14 NIOSH has indeed incorporated the 95th
15 percentile, and as agreed upon by the Work Group,
16 the issue was closed. This relates to TBD Issues
17 25 to 26.

18 Now, we're getting to thorium-232.
19 This was Issue 6A, the point being, how do you
20 reconstruct thorium doses based on breathing-zone
21 data and general air sampling, and associated
22 time-weighted air concentrations?

23 Pre-68, July, 2013, the SEC was voted

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1 for all workers from '54 to '67 based on an
2 inability to reconstruct these doses with
3 sufficient accuracy and plausibility, I might
4 add, for this Class of workers.

5 We just didn't have the ability to
6 place workers in particular facilities at
7 particular times, and the highest numbers were
8 often just implausibly high, assigned to
9 everybody.

10 So, the decision was made just to go
11 ahead with an SEC for that period.

12 Also, note that most of the DWE air
13 sampling is based on gross -- all of it's based
14 on gross alpha activity, and wasn't really
15 focused on thorium work, but uranium.

16 And so, you have the situation where
17 a sample could contain unknown portions of
18 uranium and thorium.

19 And I said earlier, workers could not
20 be reliably placed for their facilities
21 sometimes.

22 6B was the reconstruction of thorium
23 intakes based on chest count data, and there are

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1 only two period of interest here, '68 to '78.

2 Results are reported in milligrams of thorium.

3 As I said earlier in the presentation,
4 an SEC was voted for all workers from '68 to '78,
5 based on inability to place a sufficiently
6 accurate upper bound on these intakes, recorded
7 in milligrams of thorium.

8 This process, or the equation they
9 used, is an empirical equation, you get
10 milligrams of thorium from count data.

11 It was applicable to one particular
12 thorium source term of a certain equilibrium
13 value.

14 And it really wasn't applicable to the
15 forms and conditions of Fernald, and contained
16 very large uncertainties.

17 From '79 to '88, these values were
18 reported inaccurate to thorium, based on lead-
19 212 measurements.

20 And the Work Group did accept NIOSH's
21 methodology as a sufficiently accurate and
22 claimant-favorable, based on activity
23 measurements of lead-212.

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1 This Finding, 4.5.1, that's kind of an
2 orphan issue. Really, it probably should not
3 have been in the SEC Evaluation Report, but more
4 so in the Site Profile.

5 And this was just, basically, we
6 didn't feel that there were sufficient rigor in
7 the film badge dosimetry program, that there
8 could be more uncertainties involving human
9 error, based on control badges, or whatever,
10 being processed with badges worn by workers.

11 And they didn't really have an
12 official training program for the technicians who
13 assessed the badges.

14 So, we felt that there might be more
15 uncertainties associated with these film badge
16 readings than, say, some other site where they
17 had a more rigorous program.

18 Because there was really no way to
19 rectify the deficiencies, the Work Group agreed
20 to close this out at the September, 2014 Meeting.

21 And so this brings us to where we are
22 on the recommendation, on SEC 46. I'll just read
23 this into the record.

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1 The Fernald Work Group recommends that
2 the Board find radiation doses can be estimated
3 with sufficient accuracy for National Lead of
4 Ohio and the parent company, NLO Incorporated,
5 and Westinghouse Materials Company of Ohio,
6 employees from 1979 through 1989, and for covered
7 employees other than NLO and NLO Inc., from 1984
8 through 1989.

9 This would basically be the
10 subcontractor population. And this would then
11 complete the Board's consideration of SEC
12 Petition 46.

13 So, at this point, if you like, we can
14 go ahead and take a break, and I can take any
15 questions you might have before proceeding on to
16 the Site Profile side?

17 CHAIR MELIUS: So, anybody have
18 questions on what John's presented so far?

19 PARTICIPANT: I have a question.

20 CHAIR MELIUS: All right. No public
21 comment, I'm sorry. Are you a petitioner? No,
22 okay. Any Board Members with questions?

23 MEMBER ZIEMER: Jim, we're still

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1 having trouble hearing you. I heard John Stiver
2 very clearly.

3 CHAIR MELIUS: Well, we got a new
4 microphone. It doesn't seem to work any better,
5 so I don't know. Is this better, Paul?

6 MEMBER ZIEMER: Anyway, I don't have
7 a question I just wanted to compliment John on
8 his presentation.

9 CHAIR MELIUS: So, any questions?
10 Okay. Now, I'll just comment.

11 We've been going back and forth with
12 NIOSH, at least I have with NIOSH, including
13 their attorney, trying to work out a good Class
14 Definition for what we're actually going to
15 approve of that.

16 And I think we have it worked out, and
17 we'll have that for presentation tomorrow to go
18 over.

19 But it doesn't differ from -- it
20 differs in some of the language and just moving
21 around some of the time periods to make it a
22 little bit more straightforward than what is on
23 this slide.

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1 But I don't see any reason we can't
2 have a vote, just until we approve this in
3 principle.

4 Now, if there's no objection?

5 MR. KATZ: Do we need to do a roll
6 call on this?

7 CHAIR MELIUS: Okay, that's fine. But
8 before I do that, if there's no comments, is the
9 petitioner for this on the line and wishing to
10 make comment?

11 I don't believe they were going to but
12 I just wanted to make sure. So, if not, I'll
13 turn this over to Ted.

14 MR. KATZ: Thanks, Jim. Okay, just
15 running down the line alphabetically. Dr.
16 Anderson?

17 MEMBER ANDERSON: Yes.

18 MR. KATZ: Ms. Beach?

19 MEMBER BEACH: No.

20 MR. KATZ: Mr. Clawson?

21 MEMBER CLAWSON: Yes.

22 MR. KATZ: Dr. Field?

23 MEMBER FIELD: Yes.

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1 MR. KATZ: Dr. Kotelchuck?

2 MEMBER KOTELCHUCK: Yes.

3 MR. KATZ: Dr. Lemen is absent. I'll
4 collect his vote after the fact, and the same
5 with -- Dr. Lockey is recused. Dr. Melius?

6 CHAIR MELIUS: Yes.

7 MR. KATZ: Ms. Munn?

8 MEMBER MUNN: Yes.

9 MR. KATZ: Dr. Poston's absent, I will
10 collect his vote after, and same with Dr.
11 Richardson. Dr. Roessler?

12 MEMBER ROESSLER: Yes.

13 MR. KATZ: Mr. Schofield?

14 MEMBER SCHOFIELD: Yes.

15 MR. KATZ: Ms. Valerio is recused.
16 Then I'll go on Dr. Ziemer?

17 MEMBER ZIEMER: Yes.

18 MR. KATZ: And that is the majority of
19 the Board, so the motion passes.

20 MR. STIVER: Okay, I'm going to go
21 ahead and move onto the Site Profile?

22 CHAIR MELIUS: Go ahead, but we're
23 going to break right at 10:45 a.m. So, I may --

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1 MR. STIVER: Okay, how much time have
2 we got now?

3 CHAIR MELIUS: We've got a half hour.

4 MR. STIVER: Okay, it shouldn't be
5 much more than that.

6 CHAIR MELIUS: We have a half hour,
7 not just you. I may cut you off at 20 minutes,
8 and whatever.

9 MR. STIVER: I should be able to get
10 through it in time.

11 CHAIR MELIUS: Okay.

12 MR. STIVER: Okay, the Site Profile
13 Status Update, as I said, the original review,
14 there were 33 findings.

15 We've closed out 27 of them, 4 are
16 currently in progress and 2 were transferred to
17 the Procedures Subcommittee.

18 Beyond that, we also looked at two
19 other documents in November of 2014.

20 We reviewed the NIOSH White Paper,
21 which was addressing Fernald dose reconstruction
22 methodology for the post-SEC period. Basically,
23 1979 to 2006.

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1 And that came out June, 2014. We had
2 seven findings and seven observations in our
3 review.

4 And then in May of last year, we
5 reviewed the latest iteration of OTIB-78, the
6 internal dosimetry coworker data, or FMPC
7 Revision Three. And we had two findings and six
8 observations out of that review.

9 So, what's in progress or transferred
10 at this point? Findings in 7 and 8 from the
11 raffinates, uranium and radium.

12 Once again, I think we already went
13 over this, so I went spend any more time on it.
14 But NIOSH is going to provide an official written
15 position on this issue.

16 Findings 9 and 11, again, related to
17 recycled uranium. The same thing, NIOSH is going
18 to provide their official written position on the
19 revised ratios.

20 And then 17 and 19, those two findings
21 relate to the Correction Factors for extremity
22 date exposures, as measured by film badges.

23 And the Work Group really determined

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1 that the treatment of extremity dose is a
2 program-wide issue under review by the
3 Subcommittee on Procedures Reviews, mostly in
4 relation to OTIB-13.

5 And so it was transferred to that
6 Subcommittee as part of that review.

7 Let's take a look now at post-SEC
8 thorium methodologies. There are three periods
9 involved here, with different methodologies
10 employed.

11 From '79 to '89, as we discussed
12 earlier, monitored workers are going to get the
13 results from the mobile in-vivo radiation
14 monitoring laboratory result.

15 Unmonitored workers are going to get
16 a coworker intake developed from those results.

17 From 1990 to 1994, Fernald had a fixed
18 in-vivo examination center, the IVEC, and
19 monitored workers are obviously going to get the
20 results from those scans.

21 And the unmonitored workers are going
22 to get 10 percent of the Derived Air
23 Concentration, which will be applied to all

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1 radiological workers who aren't monitored.

2 We had actually done a sub-study
3 related to that to look at whether 10 percent of
4 the DAC was indeed bounding and claimant-
5 favorable.

6 And we determined that, yes, indeed,
7 it was.

8 1995 to 2006, monitored workers,
9 again, get their individual IVEC results or
10 breathing-zone data as appropriate.

11 And unmonitored workers get no
12 coworker assignment, because at that time,
13 everybody involved in thorium work during this
14 repackaging and the shipping off site were either
15 monitored or had breathing-zone data.

16 So, anybody who wasn't monitored,
17 there was really no chance that they could have
18 been involved in thorium work.

19 As far as our review, Findings One,
20 Three, and Five all relate to who's going to get
21 the coworker model from 1979 to 1994.

22 And the Work Group agreed that it's
23 going to be all radiological workers. And so at

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1 the July Meeting, just last month, we recommended
2 closure.

3 Finding Two was intake assignment. We
4 felt that despite the fact that we're looking at
5 a period of stewardship, it's not production, but
6 just occasional repackaging and so forth.

7 We still fall into the 95th
8 percentile. Total radiological workers is
9 probably a claimant-favorable way to go because
10 you really don't know who's involved in this work
11 during that period of time.

12 However, the Work Group felt that for
13 the reasons stated, it's a period, and not a
14 productive period, but a period of stewardship.

15 And the 50th percentile with
16 associated GSD, which really gets you close to
17 the 84th percentile anyway, would be sufficient
18 for all, or for most, radiological workers, with
19 some 95th percentile exceptions, those who
20 submitted baseline fecal sampling, and those who
21 are employed by IT Corporation who actually
22 performed the repackaging activities.

23 Again, at last month's meeting, the

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1 Work Group recommended closure on that particular
2 finding.

3 Finding Four, we felt that NIOSH
4 would, or at least the TBD, would benefit from
5 investigations of using a higher Class Y DAC
6 value for 1990 to 1994, instead of the currently
7 proposed Class W DAC.

8 Our application's at 10 percent DAC
9 values, and NIOSH is going to look into that and
10 provide an official written position on that
11 issue. So, that one is in progress.

12 There's a bunch of observations here,
13 no action required on those. They're all
14 captured in the Issues Matrix Version Five, so I
15 won't go through these right now in the interest
16 of time.

17 As you can see, seven observations, no
18 action required on any one of them.

19 Now, looking at thoron and unsupported
20 radium. NIOSH investigated modeling of Building
21 65 for exposures in lieu of the current site-wide
22 model, the main reason being that was the thorium
23 storage facility.

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1 And provide an official position on
2 the assumed Occupancy Factors for thoron
3 exposures. This is was subject to our Finding
4 Number Nine. That one is in progress.

5 NIOSH also assigned intakes of
6 unsupported radium, only in the rare cases where
7 the in-vivo result for actinium-228 is a factor
8 of 1.5 or higher than the associated lead-212
9 result.

10 And that was the subject of SC&A
11 Finding Seven. Again, on that one, on Finding
12 Seven, the Work Group recommends closure.

13 And now, moving onto the uranium
14 coworker model, this is OTIB-78, the third
15 revision, which has since been incorporated into
16 the TBD-5 Revision Three as Attachment C.

17 These intakes are derived using over
18 400,000 bioassay results.

19 Unmonitored intake assignments is
20 going to apply to all prime contract workers from
21 1952 to 2006, and construction and trade
22 subcontract workers from 1984 to 2006. Because
23 the SEC established from 1951 to 1983 for that

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1 category of workers.

2 You see that little asterisk down
3 below, you can barely read it.

4 But we're really not clear, I guess
5 this would be a question for Stu, whether NIOSH
6 intends to develop a separate coworker model for
7 that transitional period from 1984 to 1985.

8 If you recall, the data started
9 picking up in 1983 and then by 1985, it kind of
10 stabilized at a constant level.

11 So, there's still a little bit of
12 question about, what about those years, 1984 and
13 1985?

14 MR. HINNEFELD: Are you talking about
15 for a different one from coworker models compared
16 to the --

17 MR. STIVER: Yes, just for the
18 subcontractor. There's a separate model for
19 those ones.

20 MR. HINNEFELD: We've actually looked
21 at that data and there's no numerical difference.

22 MR. STIVER: All right, that was just
23 a loose end that we wanted to tie up. Okay, we've

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1 got two findings.

2 Finding One was the treatment of
3 negative and zero bioassay results, which is not
4 consistent with the guidance in Report 53.

5 I believe the issue there was that
6 they were censoring the data at the highest
7 positive value instead of at zero.

8 The resolution of that was in the
9 future revisions of the coworker model. We used
10 the Report 53 methods.

11 Again, the effect is really more just
12 a matter of using the appropriate methodology but
13 the dosimetric significance is very minimal.

14 So, the Work Group recommended putting
15 that into abeyance until such time as the next
16 iteration the TBD comes out.

17 Finding Two was that we've discovered
18 in our review that paired bioassay measurements
19 for the same worker could be different by one to
20 three orders of magnitude for the same day.

21 And so we kind of had a problem with
22 that, and NIOSH looked into that and determined
23 that the higher result is actually the correct

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1 result, and therefore, you remove the lower
2 results from the analysis.

3 And the Work Group recommended closure
4 on that particular finding.

5 Again, observations, if we have enough
6 time I can go through some of these. First one
7 is we could not recreate NIOSH's calculation for
8 some years in the late '80s and early '90s.

9 And it turns out, the files we were
10 using were different than those that NIOSH used.
11 And NIOSH actually used the correct procedures,
12 so we withdrew that observation.

13 Observation Two, yes, as expected, the
14 time-weighted OPOS method reduced the
15 variability, but it did not really significantly
16 affect the geometric mean.

17 Closed that one out.

18 Observations Three to Six, additional
19 information bioassay database, comments not
20 utilized in the coworker calculations. NIOSH
21 acknowledges in the future revisions, those
22 comments will be considered.

23 So, the Work Group recommended putting

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1 those observations into abeyance until future TBD
2 Revisions are performed.

3 And finally, the other was the
4 accuracy of information designated solubility
5 type and intake amount couldn't be confirmed.

6 And so, that will not be used, and the
7 Work Group recommendation closure of Observation
8 Six.

9 So, where do we go from here? As
10 mentioned earlier, NIOSH is going to provide
11 their official written positions on Findings
12 Seven, Eight, Nine, and Ten. That should be 9
13 and 11. Ten is americium-241.

14 They're also going to provide an
15 official written position statement on the use of
16 Class Y DAC for 1990 to 1994, instead of Class W.

17 Also, they'll investigate modeling
18 Building 65 thoron exposure in lieu of the site-
19 wide model, and provide an official position on
20 Assumed Occupancy Factors for thoron exposure.
21 That would have been thoron Finding Six.

22 And so, what's some of those response
23 received? We can schedule a Work Group meeting

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1 to disposition the active findings, and then
2 await future TBD revisions to disposition the
3 issues in abeyance.

4 And that's all I have. I'll take any
5 questions?

6 CHAIR MELIUS: Questions for John? I
7 have one just to get on the record. The prepared
8 bioassay measurement, could someone give an
9 explanation for -- it sounds.

10 MR. HINNEFELD: Well, I can
11 conjecture, but I believe it was probably a unit
12 issue with, at times, there were multiple
13 locations where dosimetry data was written down.

14 And when the database was consolidated
15 in the HIS-20, in addition to capturing data that
16 had already been computerized in an earlier
17 database, that didn't encompass all of the
18 written records.

19 And so, an effort was made to look at
20 the written records. I believe they were written
21 in different locations, and I think it was a unit
22 issue. I think.

23 MR. STIVER: Yes, it comes back to

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1 mind. Bob Barton, if you're on the line, you're
2 really close to this?

3 Yes, that sounds about right to me.
4 If you'd like to weigh in on that?

5 MR. BARTON: Yes, John, can you hear
6 me?

7 MR. STIVER: Yes.

8 MR. BARTON: Yes, Stu pretty much had
9 it right. Basically, the different sources that
10 they were using to compile that HIS-20 database.

11 And as it turns out, when you add
12 those measurements, really the higher measurement
13 was correct. And so those higher measurements
14 were used, and the lower measurements were
15 removed.

16 And then furthermore, results that we
17 got in that investigation, any entries that had
18 decimal places, essentially indicating units that
19 were below a microgram per liter.

20 Will also see an error because the
21 sites just didn't have the capability to measure
22 that level of detail. So, you have to actually
23 multiply by 100, and correct the units for those

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1 as well.

2 So, the higher measurements came in
3 and also there were measurements made, to any
4 urinalysis result that showed a decimal place.

5 CHAIR MELIUS: Okay, thanks. Okay,
6 any Board Members on the phone with questions or
7 comments? If not, then I guess we can -- this is
8 still open.

9 There's a number of Site Profile
10 issues open. At the same time, I don't think we
11 necessarily want to go through all these again.

12 So, what we might consider is a motion
13 that would deal with those that are closed, that
14 have reached closure. And those are all
15 indicated in the slides.

16 And since I can't make motions.

17 MR. STIVER: I'll also mention that the BRS
18 has been updated for all issues except for the
19 thoron paper we just got into the BRS.

20 CHAIR MELIUS: Maybe our Work Group
21 Chair would like to make a motion?

22 MEMBER CLAWSON: Yes, I'd like to make
23 a motion that we accept those that are closed.

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1 MEMBER MUNN: Second.

2 CHAIR MELIUS: Second from Wanda. All
3 in favor say aye.

4 (Chorus of aye.)

5 Opposed? Okay. One opposition. Good.

6 MEMBER ANDERSON: Is there any
7 timeline for when this is going to come out?

8 MR. HINNEFELD: I don't have it with
9 me. We do have a project schedule that ORAU has
10 been working on.

11 And we have started to populate dates
12 on these projects but I don't have it with me and
13 I don't know that we've finalized it completely.

14 CHAIR MELIUS: Okay. We'll have a
15 longer break. Okay, so we're going to take our
16 break now.

17 We're going to have to ask everybody
18 to leave the room because we have to have a
19 private session from 11:00 a.m. to 12:00 p.m.

20 And we'll reconvene here at, what
21 time? At 1:30 p.m. we'll reconvene in this room.
22 But until then, I have to ask everybody who's not
23 on the Board or relevant to the next session.

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1 **Lunch**

2 (Whereupon, the above-entitled matter
3 went off the record at 10:32 a.m. and
4 resumed at 1:35 p.m.)

5 CHAIR MELIUS: If everyone would get
6 seated, please. And be quiet, we need to get
7 started.

8 MR. KATZ: Let me -- let me first check
9 on the line and see that we have our Board Members
10 who are participating by phone. Dr. Ziemer, are
11 you back on?

12 MEMBER ZIEMER: I'm back on the line.

13 MR. KATZ: Super. And welcome. And
14 Gen, Dr. Roessler?

15 MEMBER ROESSLER: I'm on.

16 MR. KATZ: Super. Thank you. You
17 guys are the only two. And there was one little
18 piece of business to just take care of before we
19 get started again.

20 And I'll make another notice about the
21 pub -- well, we don't have any additional people
22 here, so I won't do that yet.

23 But on the Fernald vote I mistakenly

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1 said that Loretta was recused from that vote.
2 She is not recused from that vote.

3 And so we'll capture her vote there
4 now instead of doing it as an absentee. And her
5 vote is yes for the record. Thank you.

6 And Loretta is and Brad are recused
7 from the INL session. Which is what we're doing
8 now.

9 MEMBER CLAWSON: Well, here I'll
10 leave.

11 MR. KATZ: To the back of the room is
12 fine.

13 MEMBER CLAWSON: No, that's far
14 enough.

15 MR. KATZ: You don't need to leave the
16 room. We want you to stay.

17 MEMBER CLAWSON: No. That's fine.

18 (Laughing)

19 MR. KATZ: Okay. And they just also
20 remind folks on the phone to mute your phones
21 while you're listening. If you don't have a mute
22 button to press * and then six to mute your phone.
23 Thanks.

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1 CHAIR MELIUS: Okay. We'll get
2 restarted. And Idaho National Laboratory, which
3 is an SEC petition and Dr. Tim Taulbee will be
4 presenting.

5 It's a succinct presentation. I've
6 looked at the slides, so.

7 **Idaho National Laboratory SEC Petition**
8 **(Petition #238, 1975-1980, Scoville, ID)**

9 DR. TAULBEE: Thank you Dr. Melius. I
10 tried to be succinct here. Before I get started,
11 I'd like to recognize -- well, the title of the
12 talk is Idaho National Laboratory SEC Evaluation
13 Report.

14 And this is for SEC 238. And before
15 I get started, let me recognize my ORAU
16 colleagues who did the lion's share of this.

17 Mitch Finley led the team and did the
18 bulk of this work. He was assisted by Brian
19 Gleckler. And Bill Kline did the technical
20 editing.

21 This particular report came through
22 very well. And with very few comments going back.
23 So, it was a very nice report from the start.

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1 To give a little background on this
2 particular petition, most of the petitions that
3 we receive are 83.13s. This one is an 83.14.

4 So at the conclusion of the SEC 219,
5 NIOSH cut off the evaluation period for CPP at
6 December 1974. And we did this as it was the
7 first indication of site awareness of the
8 contamination issues that were going on at CPP in
9 the laboratories and the cells, and the need for
10 bioassay monitoring for alpha contaminants.

11 So, if you recall, they issued a
12 report. And I've got it listed here at the
13 bottom, ACI 167. Which was a preliminary ICPP
14 health physics upgrade program report.

15 And so what we were looking at was
16 when were these recommendations implemented? You
17 know, was it January 1975? Was it six months
18 later? Was it later on in the following year?

19 We really didn't know at that time.
20 So we needed to do some follow up evaluation.
21 Which is why we proposed to look at this under an
22 83.14.

23 And what we found, in brief, is that

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1 the site did not implement those recommendations
2 for several years after. Which was quite a
3 surprise to us.

4 So as a result, we're recommending
5 extending the SEC Class for CPP workers through
6 December 31, 1980. And the rest of this
7 presentation will be giving our justification for
8 that and why we came to that conclusion.

9 So, to kind of start with the end
10 here, here's the proposed Class that we are
11 recommending. It is all employees of the
12 Department of Energy, its predecessor agencies
13 and their contractors and subcontractors who
14 worked at the Idaho National Laboratory ILN in
15 Scoville, Idaho and who were monitored for
16 external radiation at the Idaho Chemical
17 Processing Plant, CPP.

18 For example, at least one film badge
19 or TLD dosimeter from CPP between January 1, 1975
20 and December 31, 1980. For a number of work days
21 aggregating at least 251 work days, occurring
22 solely under this employment or in combination
23 with work days within the parameters established

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1 for one or more other Classes of employees in the
2 Special Exposure Cohort.

3 So, with the 83.14 process, where we
4 start is with an inability to reconstruct dose
5 letters. So, what we found was this
6 infeasibility.

7 And so we sent an inability to
8 reconstruct dose letter back on March 2 of this
9 year. Back in the spring. And the petitioner
10 responded with a Form A-83.14 Petition which we
11 received on March 16.

12 July 21 is when we approved the SEC
13 Petition Evaluation Report and sent it to the
14 Board -- the Work Group a couple of days later.
15 So about a month ago.

16 And what we're talking about here is
17 that back in October 1974, this was one of the
18 site's internal recommendations. That a routine
19 bioassay program is being developed. And a draft
20 Standard Operating Procedure 1.6.5.22, ICPP
21 bioassay program, has been prepared.

22 So in October '74 they knew they
23 needed bioassay. They had written the standard

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1 operating procedure. And so we are looking for,
2 when did they implement this?

3 And what we found in our research and
4 investigations at the site is that what this
5 instituted initially was negotiations between the
6 health and safety laboratory and the contractor
7 in 1976 and '77 to implement a routine plutonium
8 monitoring and fecal and urine samples.

9 With the routine monitoring program,
10 the first hints of it really begin in 1978. So
11 there's a couple of years here. We're already
12 now four years after before we start to see any
13 routine monitoring.

14 And when they did start the routine
15 monitoring, they limited it to chemists, to
16 analysts, to operations, D&D folks, and
17 instrumentation personnel. Folks that one would
18 assume would be the highest exposed workers is
19 who they started with.

20 And the analysis of these limited
21 samples indicated low-level plutonium exposures
22 were still occurring at CPP even after their
23 initial incident or discovery back in 1972.

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1 So if you look at the plutonium
2 bioassay monitoring at CPP, the current SEC runs
3 1970 through 1974. And that we've highlighted in
4 red here.

5 And you can see that in 1972 with that
6 Shift Lab incident, where they discovered that
7 they had an issue, there was quite a bit of urine
8 monitoring.

9 Hold on just a second, Stu? Okay.

10 CHAIR MELIUS: This is to give Stu
11 something to do during these presentations.

12 DR. TAULBEE: And so after that Shift
13 Lab incident and they made these recommendations
14 to institute a routine monitoring program, if you
15 look at 1975 through 1980, which is the time
16 period we're recommending, they actually
17 decreased in the number of urine samples that
18 they had during that time period. So, they
19 certainly weren't in any hurry to implement this
20 program.

21 Then in 1978 they began with very few.
22 But they do have eight fecal samples, and then 11
23 the following year. And so they did begin to

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1 implement this routine program.

2 And then you see in 1981 you've got an
3 order of magnitude jump in the number of samples
4 that were being instituted. You've got -- you
5 know, it jumps from 36 urine samples to 214 in a
6 year. And one fecal to 278 fecal samples.

7 So, at that point is where they really
8 began doing -- implementing those recommendations
9 from way back in October 1974.

10 Well, what causes that change in
11 bioassay monitoring? Well, as they began to do
12 this routine monitoring they say intakes.

13 And so they knew they had a problem
14 and they had to start doing something, more
15 monitoring. And that you see with the records.

16 So, at this point plutonium and
17 uranium bioassay samples were being fully
18 implemented.

19 So, what we've concluded from this
20 evaluation is that based on the assessment of the
21 available employee monitoring data that there are
22 insufficient internal dosimetry data or air
23 monitoring data available to bound the intakes of

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1 transuranic radionuclides for the period from
2 January 1, 1975, through December 31, 1980.

3 And again, that's pretty evident from
4 that chart that I just showed you. With only a
5 handful of bioassay, we really can't do a
6 coworker model on that time period.

7 They were still having intakes. So
8 the air monitoring really wasn't working to
9 identify that people were getting intakes.

10 And so we really have to rely on the
11 bioassay. So until that big shift in 1981, we're
12 left with this infeasibility.

13 From health endangerment, some
14 workers in the Class may have accumulated chronic
15 radiation exposure through intakes of
16 radionuclides at CPP.

17 NIOSH is therefore specifying that
18 health may have been endangered for those workers
19 monitored at CPP who were employed for a number
20 of work days aggregating at least 250 work days.

21 So what about the employees not
22 included in the SEC? We intend to use the
23 monitoring data that is available to conduct

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1 partial dose reconstructions for those
2 individuals who don't qualify for the SEC.

3 So, some of those workers that have
4 plutonium monitoring in that '78/'79/'80 time
5 period, but their cancer doesn't qualify them for
6 the SEC, we will use their bioassay to
7 reconstruct their dose.

8 So again, the proposed Class is listed
9 here. And I'll read it one more time. All
10 employees of the Department of Energy, its
11 predecessor agencies, their contractors and
12 subcontractors who worked at the Idaho National
13 Laboratory in Scoville, Idaho, and who were
14 monitored for external radiation at the Idaho
15 Chemical Processing Plant.

16 For example, at least one film badge
17 or TLD dosimeter from CPP between January 1,
18 1975, and December 31, 1980, for a number of work
19 days aggregating at least 250 work days occurring
20 solely under this employment, or in combination
21 with work days within the parameters established
22 for one or more other Classes of employees of the
23 Special Exposure Cohort.

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1 Now you notice this Class Definition
2 here reverts back to the initial one that we had
3 back in March 2015. Where we were saying,
4 monitored at CPP.

5 The Class that was approved by the
6 Board from March -- March 1970, I'm sorry,
7 through December 1974, is all monitored workers
8 onsite. And the reasoning for that was the
9 monitoring methodology.

10 And if you recall, the reason that we
11 had to make that change in the Definition, where
12 there is a Part A, 1963 through February 1970,
13 and then post our March 1970 through December
14 1974, was the site went from a one badge one area
15 policy to a one badge multi-area policy. And
16 that was under Idaho Nuclear Corporation.

17 Well, in January of 1975 the site
18 returned to the one badge one area policy for
19 external dosimetry and the main reason for that
20 is looking back as to why they switched in the
21 first place.

22 When Idaho Nuclear controlled all of
23 the major operating facilities, the Materials

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1 Test Reactor Area, the Chemical Processing Plant,
2 the Test Area North, the Central Facilities areas
3 as well as the exterior reactors, they didn't
4 really care where an individual got their
5 exposure or their dose.

6 Well, in January 1975 they contract
7 was split between Aerojet Nuclear Company and
8 Allied Chemical Corporation. At the same time
9 DOE was implementing ALARA principals, as low as
10 reasonably achievable.

11 And so one company didn't want to be
12 responsible for another company's dose. They
13 wanted to meet their own internal goals.

14 So, they switched back to one badge
15 one area methodology. And so this is why our
16 Definition has reverted back to the one -- or to
17 people monitored at CPP.

18 Because by company, these workers that
19 might have worked for the other company could
20 have come into CPP. But they were not routinely
21 working there. So all of their dose totals for
22 ALARA goals and so forth would be different.

23 So this is why we switched, or why the

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1 Definition has reverted back to that earlier one
2 that we are currently using from 1963 through
3 February 1970.

4 One of the Board questions that came
5 out during my presentation back in March 2015
6 with SEC 219 was how confident are we that the
7 dosimetry is complete?

8 So we went through the same exercise
9 that we did with that particular SEC in
10 subsequent presentations to the Board of
11 comparing the monthly reports as well as the
12 dosimeter printouts where we went through and
13 tallied up how many people were monitored.

14 To where if the monthly report says
15 there's 320 people being monitored and we count
16 up and we've got 320 workers, then we're fairly
17 confident that we have a complete set of records
18 from which the Class could be administered.

19 And this is a comparison. We do not
20 have all of the monthly reports. But those that
21 you see that we've got here do line up well and
22 compare well.

23 There's a couple of things there that

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1 I'll point out. There in the middle of 1975,
2 this is a six-month monitoring that they were
3 doing for what we call it CPP kind of area, or
4 location code 55.

5 And so you'll see the dosimetry ends
6 up matching the printouts and the monthly
7 reports. But these people, these workers were
8 actually on a six-month monitoring period.

9 So they're not going to show up in
10 that initial lower part there. So, it looks kind
11 of goofy with a step change, but it's really
12 people monitoring for an extended period of time,
13 is what's causing that.

14 We also looked at the construction
15 trades workers like we did before. And again,
16 for the months where we have the monthly reports
17 and the dosimetry printouts, we're seeing very
18 good agreement between this.

19 So that concludes my presentation with
20 the SEC Class Definition. And I'll be happy to
21 answer any questions before I move onto our
22 current INL activities.

23 So, are there any questions?

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1 CHAIR MELIUS: Yes. Go ahead, Jim.

2 MEMBER LOCKEY: So, I have one
3 question. Maybe, this is on -- what's that slide?

4 It's partial dose reconstructions in
5 regard to -- prior to 1981. You're going to use
6 monitoring data to conduct partial dose
7 reconstructions for individuals not part of the
8 SEC.

9 So, I was thinking, Jim, in relation
10 to your question on Pacific Proving Grounds,
11 isn't that the same -- is that the same type of
12 question here? Or how is it different?

13 That's what I need.

14 CHAIR MELIUS: No. I mean, it's the
15 -- I don't think it is. It's not been sort of
16 fleshed out yet.

17 But, it would be only for -- they
18 would still be using the other data that is not
19 considered to be part of the SEC.

20 The SEC is only based on certain
21 exposures, the internal exposures.

22 MEMBER LOCKEY: No. I meant for the
23 non-SEC dose reconstruction.

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1 CHAIR MELIUS: No. I'm saying, there
2 will still be other data they would be able to
3 use, to utilize.

4 How they would utilize that I don't
5 think has been clarified yet.

6 MEMBER LOCKEY: That's the question.

7 CHAIR MELIUS: Yes?

8 DR. NETON: Well, I think what we're
9 saying is, if say there's 350 people that have
10 bioassay or 35 people have bioassay and they're
11 non-SEC cancers, we will use their individual
12 bioassay to reconstruct their dose.

13 It just makes sense. And there's
14 nothing wrong with the bioassay data. We just
15 don't have it for like 90 percent of the people.

16 MEMBER LOCKEY: So how do you
17 reconstruct that other 90 percent? That's what
18 I was unclear on.

19 DR. NETON: We wouldn't.

20 MEMBER LOCKEY: So to the non-SEC
21 cancers that's --

22 DR. NETON: If you have a non-SEC
23 cancer and you have a valid bioassay sample, we

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1 will reconstruct your dose for pluton -- well,
2 for -- yeah, plutonium in this case.

3 MEMBER LOCKEY: And if you don't have
4 a bioassay?

5 DR. NETON: You don't do anything.

6 CHAIR MELIUS: Yes. That's correct.
7 For that particular exposure. Yes. Yes. So
8 it's not.

9 DR. TAULBEE: Yes. We would only be
10 using the INL, the bioassay --

11 CHAIR MELIUS: I understand.

12 DR. TAULBEE: --- listed up here.
13 There's like 36 in 1980. So if one of those
14 people --

15 CHAIR MELIUS: I had a question. What
16 accounts for the drop off from like, I don't know,
17 I guess it started in '73, in terms of like
18 plutonium bioassay. Why did they like start up
19 and then cut back?

20 And they -- it only coincides with the
21 six month dose batches. I mean, this seems odd.
22 That's all.

23 DR. TAULBEE: It's really not a drop

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1 off. What you're seeing is -- well, it is a drop
2 off.

3 CHAIR MELIUS: Yes.

4 DR. TAULBEE: What I'm saying is, it's
5 -- there wasn't -- there was not a routine
6 monitoring period. Okay?

7 These samples that you see in '72,
8 '73, '74, none of them were routine.

9 CHAIR MELIUS: Oh, okay.

10 DR. TAULBEE: This was due to an
11 exposure event. And they sampled a bunch of
12 people.

13 CHAIR MELIUS: Okay.

14 DR. TAULBEE: And so the drop off that
15 you see, there is a drop off.

16 CHAIR MELIUS: Yes.

17 DR. TAULBEE: But it is not a routine
18 monitoring. Because there was no routine
19 monitoring.

20 CHAIR MELIUS: Okay.

21 DR. TAULBEE: That's what you're
22 seeing.

23 CHAIR MELIUS: Okay. So then they

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1 just decided to start in essentially '80 to '81
2 is when they geared up and --

3 DR. TAULBEE: Exactly.

4 CHAIR MELIUS: And --

5 DR. TAULBEE: Exactly.

6 CHAIR MELIUS: Okay. Okay.

7 DR. TAULBEE: Remember in 1972 they
8 had that very large intake.

9 CHAIR MELIUS: Yes.

10 DR. TAULBEE: And they discovered
11 people didn't -- were exposed not during that
12 intake, but a previous one that went unaccounted
13 for.

14 CHAIR MELIUS: Yes. Okay. Yes, I'm
15 sorry. Go ahead Josie.

16 MEMBER BEACH: So I just want to be
17 clear. So we set aside the Work Group's -- or
18 the Board set aside the 1963 to 1970 based on
19 needing what? Was it one TLD or one film badge?

20 DR. TAULBEE: Film badge.

21 MEMBER BEACH: Okay. So that's set
22 aside, we're still working on that. And then
23 this, '75 to '80 is kind of the same parameter

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1 needing one film badge.

2 We're still grappling with that as a
3 Work Group, validating and making sure that we
4 can -- we can verify and validate that we won't
5 miss anybody.

6 How is this any different, I guess?
7 I'm asking that question. Throwing it out. This
8 time period?

9 I'm asking anybody in general that can
10 might answer that. Or just give you something to
11 think about before the vote.

12 CHAIR MELIUS: Maybe Tim can update us
13 on the progress --

14 DR. TAULBEE: Okay.

15 CHAIR MELIUS: -- on the verification
16 issue.

17 DR. TAULBEE: Last week we had a Work
18 Group meeting. And following that Work Group
19 meeting Bob Barton sent me the list of, I think,
20 31 people.

21 And I forwarded that onto our claims
22 folks. And they are making the request from the
23 site.

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1 And so once we get those response then
2 you will be able to do that validation that you
3 all were looking for.

4 CHAIR MELIUS: And I guess my
5 question, and I don't know if SC&A can answer it
6 here. But as I recall from the Work Group
7 meeting, there was some question as to what years
8 were covered among those.

9 And whether those would cover this
10 later time period. The ones they were choosing.

11 And because we were trying to figure
12 out which years were -- these people were
13 employed. And would we be looking at and to what
14 sort of level.

15 And I don't know if that ever got
16 answered or --

17 DR. TAULBEE: If Bob Barton is on the
18 phone. But I believe it's only prior to Feb --
19 or March 1970.

20 I don't believe that any of those
21 folks that he sent me were in this latter time
22 period.

23 CHAIR MELIUS: Yes.

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1 DR. TAULBEE: Again, this is an 83.14.
2 So, what we tend to do is, we identified an
3 infeasibility. And we've got claims that are
4 sitting, waiting to be processed here.

5 And so we did a limited review here is
6 what we did. And this is a Class that we defined.

7 CHAIR MELIUS: I'm not faulting you.
8 I think the issue is how to get to this Class
9 Definition issue, which I mean, is there any
10 reason to think that's different than the earlier
11 period?

12 MEMBER BEACH: That's my --

13 CHAIR MELIUS: Other than optimism or
14 whatever we want to call it.

15 DR. TAULBEE: No.

16 CHAIR MELIUS: Yes. And it maybe, I
17 mean, we don't know. We don't know the reason
18 what really went on in the earlier period.

19 MEMBER BEACH: Well, and it's not --
20 I'm not trying to hold it up. I just want to
21 make sure we're not missing anybody because of
22 that have to have one badge. So.

23 DR. MELIUS: Well, I think it's the -

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1 -

2 DR. TAULBEE: One of the things --

3 CHAIR MELIUS: Go ahead, Tim. I don't
4 want to --

5 DR. TAULBEE: One of the things the
6 83.14 allows us to do is that we can -- it states
7 there in the regulation that this is identifying
8 a claim that we cannot process.

9 And it allows us to amend the Class at
10 a later date. To expand it if necessary. So
11 that's one of the points with an 83.14 that's a
12 little different than the 83.13.

13 CHAIR MELIUS: Yes. But we can also
14 change the 83.13, given that -- the period that's
15 covered --

16 DR. TAULBEE: Absolutely.

17 CHAIR MELIUS: By the 83.13 petition.

18 DR. TAULBEE: You can.

19 CHAIR MELIUS: So I don't think it --
20 I'm not sure that's relevant.

21 DR. TAULBEE: It's just one of the
22 caveats under the 83.14 rule.

23 CHAIR MELIUS: Yes, yes. No, I --

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1 DR. TAULBEE: That says we can add
2 later.

3 CHAIR MELIUS: And it can be helpful.

4 DR. TAULBEE: Yes.

5 CHAIR MELIUS: Well, and you actually
6 have the same purview in some extent on the 83.13.
7 Yes.

8 Anybody else with questions? Or I
9 don't want to --

10 DR. TAULBEE: Is Bob Barton on the
11 phone?

12 (No response)

13 DR. TAULBEE: I guess not.

14 CHAIR MELIUS: Hey, I don't know if we
15 can get -- since we know it wasn't -- we don't
16 think it was covered -- excuse me, is that Bob?

17 MR. BARTON: Yes. I'm here. This is
18 Bob Barton.

19 CHAIR MELIUS: Okay.

20 DR. TAULBEE: The claims that you sent
21 to me, those were just evaluating the earlier
22 time period up through February 1970. Is that
23 correct?

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1 MR. BARTON: They are all employed in
2 that earlier period. I can't speak to whether
3 they had employment in the later period as well.

4 DR. TAULBEE: Okay. Thank you. In
5 other words, we targeted people in that early
6 time period. And if they continued on, then
7 they'll be there. And if they're not, then
8 they're not.

9 CHAIR MELIUS: But they may be.

10 DR. TAULBEE: That is correct.

11 CHAIR MELIUS: Yes. And I guess the
12 -- I think the question is, numerically what is
13 that, you know, if 20 of them are then that tells
14 us something.

15 If two of them -- only two are, then
16 that tells a lot less.

17 DR. TAULBEE: That is correct.

18 CHAIR MELIUS: Yes. And I think where
19 we left it in the Work Group, again, someone
20 remind me. Refresh me.

21 Is that we would, you know, sort of
22 try to keep this process going as quickly as
23 feasible in the terms of adding additional -- I

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1 mean, because there's additional people that
2 could be added.

3 We don't think they'll be as
4 informative, but they could be helpful. And now
5 that I've confused everybody that's not involved
6 in this.

7 MR. KATZ: Jim, do we want to go ahead
8 and give a thumbs up if Bob looks and sees that
9 there's not much coverage, do we want them to
10 supplement this with some more claims?

11 Because this would be a good time to
12 decide that. And then it wouldn't wait.

13 CHAIR MELIUS: Well, that would be my
14 suggestion.

15 MR. KATZ: Yes.

16 CHAIR MELIUS: I think the Board has
17 to decide how they want to handle this 83.14.
18 But, okay.

19 Any further -- Dr. Ziemer or Gen, do
20 you have any comments? Or questions?

21 MEMBER ROESSLER: Hi, this is Gen. I
22 could not hear what you were saying Jim. You
23 kept cutting out.

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1 MEMBER ZIEMER: No. I'm comfortable
2 with the information method. I think we need to
3 go ahead with it.

4 MR. KATZ: Paul said that he was
5 comfortable with the information. And that he
6 thought they needed to go ahead with it.

7 CHAIR MELIUS: Any other comments? I
8 don't know if the petitioners are on the line or
9 if they were going to be. Do they wish to make
10 comments?

11 I don't believe so, but.

12 (No response)

13 CHAIR MELIUS: So if not we can -- we
14 can continue discussion or get a motion or some
15 action. I think again, not to make a motion, but
16 the choices -- excuse me, let me get this switch
17 to work.

18 So the choices are either to move
19 ahead with -- accept this 83.14 petition with the
20 proviso that we don't know that it provides
21 complete coverage.

22 We don't know if the earlier one
23 provides complete -- for construction worker

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1 people or other people -- workers that might be
2 intermittently in the CPP area.

3 We have some indications there might
4 be problems earlier. But until DOE was done doing
5 all the data entry and getting a full database
6 together, we really couldn't evaluate that.

7 We're in the process of evaluating
8 that. We don't think it will take long. It
9 depends on some of the turnaround times from the
10 site and so forth.

11 And what was the estimate, Tim? Do
12 you remember from the meeting?

13 DR. TAULBEE: Well, we're submitting
14 them as if they were regular claims. So there's
15 typically a 60-day turnaround --

16 DR. MELIUS: That sounds right.

17 DR. TAULBEE: For each group. And so
18 the first group was, like I said, being submitted
19 now. And so about 60 days from now we should
20 have that.

21 And then once we get -- start getting
22 those, we're going to submit the next group that
23 Bob had indicated.

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1 DR. MELIUS: Yes.

2 DR. TAULBEE: So, I would think
3 somewhere, 120 days or so you might have the
4 answer.

5 DR. MELIUS: Mm-hmm.

6 MEMBER ROESSLER: Well, I think I
7 understand what's going on now. This is Gen.
8 I'd recommend we move ahead.

9 Am I off of mute?

10 CHAIR MELIUS: Well, if someone makes
11 a motion. I --

12 MEMBER SCHOFIELD: We're going to go
13 ahead and make a motion to go ahead and move
14 forward at this time with the caveat that we may
15 have to revisit this.

16 MEMBER KOTELCHUCK: Second.

17 CHAIR MELIUS: Any further discussion?

18 (No response)

19 CHAIR MELIUS: If not do we have to
20 do the roll call?

21 (Laughter)

22 CHAIR MELIUS: If you go to slide --
23 page 13, slide 13. We're not engendering a lot

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1 of confidence here. I know. I know. I'm sorry.

2 So slide 13 is the proposed SEC Class.

3 So the motion is to accept the Class as proposed
4 here.

5 We've not -- just again for context,
6 for the earlier time period, we have not accepted
7 a similar Class. That pending verification or
8 validation of whether everybody was actually
9 badged and covered and can be identified that
10 worked in the CPP area.

11 The issue is whether -- we know that
12 people came in from other areas of the plant to
13 work there. And that they were badged at those
14 areas.

15 But the question is whether they were
16 all identified and recorded. And there's some
17 record keeping issues.

18 In order to validate that and verify
19 what was going on, we've chosen some examples.
20 And we're seeing what happens with the -- the
21 data has now all been entered, so we have a, what
22 we believe to be a complete, you know, actually
23 for quite a lot of the site.

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1 Right? I'm not sure of what years are
2 entirely covered. But --

3 DR. TAULBEE: If I could clarify just
4 a little bit more.

5 CHAIR MELIUS: You're welcome to.

6 DR. TAULBEE: Okay. The issue
7 involved temporary badges. This would be people
8 who worked at Materials Test Reactor coming into
9 CPP, they would be issued a temporary badge.

10 At the time that we recommended that
11 Class, we knew of these temporary badges. What
12 we didn't realize is that if a person didn't have
13 a positive badge, that badge was not entered into
14 that person's dose of record.

15 So, the site for the past year has
16 been coding, going back to all of those temporary
17 badges. Not just at CPP but at MTR and Test Area
18 North, and entering them so that now we would get
19 a complete record and we'd be able to see it.
20 Okay.

21 MEMBER KOTELCHUCK: What -- Dave
22 Kotelchuck. Whatever we find in the research,
23 it's not going to change the proposed SEC Class.

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1 That proviso is something we may do in
2 the future based on future information. So I'm
3 perfectly comfortable approving the proposed SEC
4 Class. Because that's not going to change based
5 on that research.

6 So, I would just say, let's go ahead
7 and vote on it.

8 DR. TAULBEE: Well, the Class
9 Definition, if you approve it would not change.
10 But we could amend to add to it from that
11 standpoint.

12 And the rule -- the 83.14 rule allows
13 us that ability to kind of expand the Class if we
14 find that this -- the temporary badges didn't
15 make it into DOE's database.

16 But the claims that are currently
17 being held up for this Class Definition that we
18 have pending would be able to go forward.

19 CHAIR MELIUS: Do we know how many
20 there are?

21 DR. TAULBEE: Currently we have 15
22 claims that are pended due to this SEC.

23 CHAIR MELIUS: Okay.

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1 DR. TAULBEE: Or due to this 83.14.

2 CHAIR MELIUS: Do I hear 19?

3 (Laughter)

4 CHAIR MELIUS: Are you clear now? I'm
5 sorry.

6 MEMBER BEACH: Okay. I have one more
7 question.

8 CHAIR MELIUS: Okay.

9 MEMBER BEACH: So if you have -- and
10 I'm not opposed to this moving forward. I just
11 want that understood. I just don't want anybody
12 left out or left behind.

13 So if you have one indication or
14 somebody is not added to this Class because they
15 don't have a TLD or a film badge, how will you
16 know about that?

17 And how will that move this forward
18 for that particular individual?

19 DR. TAULBEE: My impression is that
20 based upon the evaluation that SC&A is doing on
21 the temporary badges that if we find that this,
22 you know, the Definition doesn't work and it
23 needs to be -- the initial one needs to be

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1 expanded, then we could do the same thing here
2 from this standpoint.

3 But while that determination is being
4 made, that evaluation is being made, these claims
5 could then go ahead and go forward. And we could
6 then amend this.

7 CHAIR MELIUS: And that will probably
8 be three or four months from now. Yes.

9 MEMBER BEACH: As long as it's going
10 to be taken up.

11 DR. TAULBEE: It is definitely being
12 taken up.

13 MR. KATZ: Any more questions? Are we
14 ready? Okay. Anderson?

15 MEMBER ANDERSON: Yes.

16 MR. KATZ: Beach?

17 MEMBER BEACH: Yes.

18 MR. KATZ: Clawson is recused. Field?

19 MEMBER FIELD: Yes.

20 MR. KATZ: Kotelchuck?

21 MEMBER KOTELCHUCK: Yes.

22 MR. KATZ: Lemen, we'll obtain his
23 vote afterwards. Lockey?

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1 MEMBER LOCKEY: Yes.

2 MR. KATZ: Melius?

3 CHAIR MELIUS: No.

4 MR. KATZ: Munn?

5 MEMBER MUNN: Yes.

6 MR. KATZ: Poston, we'll obtain his
7 vote afterwards and the same with Richardson.
8 Roessler? Gen?

9 MEMBER ROESSLER: Yes.

10 MR. KATZ: Yes. Schofield?

11 MEMBER SCHOFIELD: Yes.

12 MR. KATZ: Valerio is recused. And
13 Ziemer? Paul? You may be on mute.

14 MEMBER ROESSLER: Or maybe he can't
15 hear. Sometimes it's difficult.

16 MR. KATZ: Paul?

17 MEMBER ZIEMER: Okay. Now I'm off
18 mute.

19 MR. KATZ: There you are.

20 MEMBER ZIEMER: Yeah. I have now.
21 Yes.

22 MR. KATZ: Yes. Okay. And the motion
23 passes. Thank you.

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1 CHAIR MELIUS: So, Tim move on.

2 DR. TAULBEE: Okay. Thank you. And
3 just to give you a little updated, a one slide
4 update of our current activities.

5 As I indicated in our March -- during
6 the March meeting when we presented the addendum
7 to SEC 2019 for Idaho, which involved the burial
8 grounds and a couple of other areas, we pointed
9 out that in the 1970s there were large retrieval
10 operations of waste. Which we felt were much
11 different than when the waste was being buried.

12 And so we decided we'd look at this
13 under the 83.14 process as well. So to give a
14 brief update, Mitch and his team went out to the
15 site in late-June of this past year and did a
16 data collection and capture out there for the
17 burial grounds.

18 And so we are waiting receipt of that
19 information. So that is moving forward for us to
20 look at that and determine whether or not we need
21 to recommend another 83.14 for those burial
22 grounds.

23 The other major activities that we

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1 have going on that we indicated we would report
2 back to the Work Group on where the response to
3 the Advisory Board, SC&A observations and
4 findings with regards to SEC 219 and SEC 224.

5 And so I've listed here in four
6 bullets kind of the main topical items. The first
7 one is an SC&A review of the early years at CPP
8 for alpha exposures.

9 And this covers the time period from
10 start up in the 19 -- I believe 1953 up through
11 1960 -- up through '62.

12 1963 is the current period where we're
13 recommending a Class. And so we need to develop
14 responses to that SC&A review.

15 The next item is the ANL-West air
16 monitoring evaluation. This was regarding our
17 dose reconstruction methods for estimating people
18 who are working with the cold fuel, not
19 irradiated fuel at the Fuel Cycle Facility.

20 And SC&A raised some issues with
21 regards to the air monitoring at that time.

22 The next one appears to be like a
23 duplicate of the evaluation of the burial

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1 grounds. But it's actually not.

2 This would be an evaluation of the
3 burial grounds up through 1970. And our current
4 83.14 that we are working on is post-1970, during
5 those large retrieval operations.

6 And SC&A raised a number of issues and
7 observations and findings that we will be
8 developing responses to.

9 The last issue that we'll be working
10 on is the mixed fission product evaluation. And
11 this is kind of two-fold.

12 There's one area where Ron Buchanan
13 had raised some issues with regards to the cesium
14 and strontium variability. And the other issue
15 is using OTIB-54 to estimate the mixed fission
16 product inventory for the various research
17 reactors.

18 So these are the four items that we
19 talked about with the Work Group. And the Work
20 Group wanted to kind of see them listed in order
21 to give us some priorities of which order they
22 want us to work on from this standpoint.

23 And I know I had intended to get this

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1 out to the Work Group last Friday. And failed to
2 do so. But here you have it.

3 So, these are the items. And
4 hopefully in future discussions then with the
5 Work Group, we'll get a little more priorities.

6 Right now we're moving forward on the
7 burial grounds and the CPP evaluation until we
8 hear back from the Work Group. Because those
9 seem to be the two most critical at least -- from
10 at least my standpoint.

11 But the Work Group might reprioritize.
12 And that's fine too.

13 CHAIR MELIUS: Speaking as a Member of
14 the Work Group, as I recall, those -- I think
15 that fits the priorities. Am I missing
16 something? Phil or --

17 MEMBER SCHOFIELD: No.

18 DR. TAULBEE: No. I said I did not
19 send them.

20 CHAIR MELIUS: I know. I know. But,
21 I just -- okay.

22 MR. STIVER: And then there's just one
23 other thing was Steve Ostrow's reactor

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1 prioritization.

2 DR. TAULBEE: It's listed on that last
3 bullet.

4 MR. STIVER: Okay. You kind of
5 combined them together because --

6 DR. TAULBEE: I did in one.

7 MR. STIVER: Oh, okay. I wasn't quite
8 sure of that.

9 DR. TAULBEE: Just in one bullet. But
10 there are two separate issues there going on.

11 MR. STIVER: Oh, great.

12 DR. TAULBEE: The reactors have
13 actually already been prioritized. And it's when
14 we start working on them.

15 CHAIR MELIUS: And I think the Work
16 Group felt that those were a lot lower priority
17 than some of these others. Which means that
18 they're going to be a while before we get to them.

19 I mean, this is not a short list of
20 quick assignments, so.

21 DR. TAULBEE: No. It's not.

22 CHAIR MELIUS: Yes.

23 MR. KATZ: Just to clarify though, are

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1 we okay with SC&A supplementing the sample that
2 they're looking at to cover the later period?

3 This 83.14 period, in terms of
4 verifying that that Class Definition can be -- is
5 complete enough? That it covers everybody?

6 Is that okay with the Work Group?

7 CHAIR MELIUS: Yes.

8 MR. KATZ: Okay.

9 CHAIR MELIUS: I think we should.

10 MR. KATZ: You got that John? Okay.

11 Thanks.

12 CHAIR MELIUS: Any other questions for
13 Tim? While we've got him up there.

14 (No response)

15 CHAIR MELIUS: Okay. Thank you very
16 much Tim.

17 DR. TAULBEE: Thank you.

18 CHAIR MELIUS: And I would join you in
19 thanking your ORAU colleagues also. For their
20 hard work.

21 Now the usual high point of our
22 meetings.

23 MR. KATZ: Short and sweet.

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1 CHAIR MELIUS: That's next. I'm
2 sorry. Someone want to retrieve our missing --
3 oh there he is. Okay. Come back to work now.

4 **SEC Petitions Status Update**

5 MR. RUTHERFORD: Okay. Are we ready?
6 Alright. I'm LaVon Rutherford. I'm the Special
7 Exposure Cohort Health Physics Team Leader for
8 NIOSH. And I'm going to give the SEC update.

9 I provide this update to the Advisory
10 Board in preparation for future Board meetings,
11 Work Group meetings. We're going to identify
12 petitions and qualifications under evaluation,
13 currently under Board review and SEC petition,
14 potentially 83.14s.

15 To date we have 243 petitions. The
16 petitions -- we have five petitions in
17 qualification. We have one evaluation in
18 progress. And we have 12 petitions with the
19 Advisory Board.

20 The five petitions in qualification
21 are Wah Chang, Mound Plant, Y-12 Plant, Pinellas
22 Plant, and Argonne National Lab-West. I forgot
23 -- omitted that slide somehow, so.

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1 Tim just -- Dr. Taulbee just presented
2 the INL CPP 83.14. And the Board took action on
3 that.

4 Tomorrow we will be presenting an
5 Evaluation Report for Santa Susana Field Lab from
6 1991 to 1993. It's all employees. Again, that
7 will be presented tomorrow.

8 We also have a Metals and Controls
9 petition evaluation. This is for the residual
10 period, January 1, 1968, through 1997. That
11 will be presented tomorrow as well.

12 Los Alamos National Lab addendum.
13 This is a continuation of an existing petition,
14 SEC 109. This will address the years 1996 through
15 2005. And I will be presenting that one shortly
16 this afternoon.

17 Sandia National Lab, again, this is
18 another continuation of SEC 188. This is the
19 1995-2005. And it is covering the -- virtually
20 this -- one of the main issues -- this is the 10
21 CFR 835 era. And it is following Los Alamos
22 National Lab. Currently our expected completion
23 date is November of this year.

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1 Lawrence Livermore National Lab.
2 Again, this is a continuation of an existing
3 petition. It addresses the remaining years.

4 It also largely encompasses the 10 CFR
5 835 era. And expected completion is February of
6 next year.

7 The last few, Sandia, Lawrence
8 Livermore, have slipped a little bit as Los
9 Alamos has slipped. Some of the same resources
10 are involved.

11 Currently petitions under Board
12 review, I don't know why this says continuation.
13 But, Feed Materials Production Center, that was
14 addressed earlier. And I believe that petition
15 was closed out with some Site Profile issues to
16 resolve.

17 Hanford, this petition, current
18 period ends in 1990. We have taken action to add
19 a Class up through 1990. However, that was a
20 limited Class.

21 And we are still evaluating the prime
22 contractors during that period. So there is
23 still some activities going on there.

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1 Savannah River Site, I believe we have
2 an update schedule for tomorrow. And so you'll
3 get -- the Advisory Board will get that update
4 then.

5 Grand Junction facilities, I believe
6 the Work Group is going to report out on that
7 tomorrow as well.

8 Idaho National Lab, I don't think I
9 need to say much here. I think Tim covered
10 everything. Including the 83.14 and the current
11 activities. As well as Argonne-West.

12 So again, these are the petitions that
13 were with the Board for review. A number of
14 these, Fernald, from an SEC perspective will come
15 off.

16 There's still a few activities. And
17 then there's some other Work Group updates
18 scheduled for a few of these other ones later on
19 during the Board meeting.

20 Again, the petitions in
21 qualification, Wah Chang, this is actually a site
22 that we'd actually taken action on. And this
23 actually is a petition for a couple of years that

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1 were added to the residual contamination.

2 Based on the Residual Contamination
3 Report is put out with a set date. And then when
4 that report is updated that date shifts in time.
5 And so ultimately residual contamination years
6 can be added.

7 The Mound plan is for a 1959 through
8 1969. Y-12, 1981 through present. Pinellas
9 Plant is 1956 through 1997. And Argonne National
10 Lab-West is 1969 through 1982.

11 These five petitions are in
12 qualification. I missed -- I don't know where I
13 missed that slide. But somehow I did, so.

14 And that's all I got. Questions --
15 on, wait a minute. 83.14s. I thought I was done.

16 The INL, Tim just presented. That
17 one's done. Ames Laboratory, this is one that
18 we've had on our plate.

19 We have identified an infeasibility
20 that -- well, their challenge is, is putting our
21 arms around what the end dates are for this
22 infeasibility.

23 And we did receive some additional

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1 documentation. And we're working that issue.

2 Sandia National Lab Albuquerque, 1945
3 through '48. That's the Z Division from LANL.
4 Again, if we ever receive a petition that -- or
5 a claim, we'll move forward with that.

6 Now the Dayton project, now actually
7 this one should be updated. The Mound and the
8 Dayton project itself now overlap from a facility
9 designation standpoint.

10 So we won't be getting a litmus claim
11 for that one. We won't be moving forward. There
12 is a potential for another area with that one on
13 Monsanto, but not at this time.

14 And that's it. Questions?

15 CHAIR MELIUS: Questions for LaVon?
16 John and Joe.

17 MR. RUTHERFORD: Wow. I'm used to
18 getting questions from the Advisory Board. But
19 not from SC&A.

20 CHAIR MELIUS: It looks like we've
21 planted some from SC&A. They're getting back at
22 you.

23 MR. STIVER: I was just noticing that

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1 Oak Ridge wasn't on the list. Isn't there a
2 petition that's been qualified for Oak Ridge?

3 MR. RUTHERFORD: For Oak Ridge
4 National Lab?

5 MR. STIVER: Yes.

6 MR. RUTHERFORD: There is a potential
7 83.14 that we -- and it's not on here right now
8 for -- but that actual activity was conducted at
9 Y-12.

10 And so that there is the -- a lot of
11 people may remember back in the early years at Y-
12 12 with the calutrons and the cyclotrons, the
13 work was conducted by -- or in support of Oak
14 Ridge National Lab.

15 However, it was conducted at Y-12.
16 So, we're putting our arms around that one right
17 now.

18 MR. FITZGERALD: Okay. I was going to
19 say, I think this was a broader petition -- oh,
20 this was a broader petition for Oak Ridge
21 National Lab as a whole. And it was being held
22 up -- the ER was being held up because there was
23 a lot of work being done on the internal

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1 radionuclides.

2 MR. RUTHERFORD: Oh, that's -- I
3 mean, that is a petition. Yeah, that petition -
4 - the petition itself was closed.

5 We continued on with a number of
6 activities on that one. And we are continuing
7 activities on that.

8 And actually where the infeasibility
9 I just talked about came out of that additional
10 work that was going on there with Oak Ridge
11 National Lab.

12 CHAIR MELIUS: Yeah. I think we have
13 a Work Group that's monitoring it. I think they
14 have been waiting for a period of time.

15 MR. RUTHERFORD: Yeah. And I believe
16 Dr. Hughes provided an update to the Work Group
17 Chair as well.

18 CHAIR MELIUS: Yes. No, I -- Ted
19 want -- I'm asking for Ted now. I don't know
20 what to --

21 (Laughter)

22 CHAIR MELIUS: So is Ames going to be
23 ready for the next Board meeting?

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1 MR. RUTHERFORD: You know, I believe
2 it may. Actually Stu had just asked me of any.
3 And I think Ames will probably be ready for the
4 next Board meeting. I had forgotten about that
5 one.

6 CHAIR MELIUS: Okay. Any Board
7 Members now like to --

8 (No response)

9 CHAIR MELIUS: SC&A, you're done also?

10 (No response)

11 CHAIR MELIUS: Okay. LaVon, thank you
12 for confusing us. As always. Okay.

13 **Board Work Session**

14 So, anyway, we're at a point where
15 we'll take a break and reconvene at 3:00 p.m. for
16 the Board work session.

17 At 4:00 will be the Los Alamos
18 Laboratory petition presentation. And that's
19 scheduled from 4:00 to 5:30.

20 However if we do finish the discussion
21 of that earlier than 5:30, we will start the
22 public comment period for people here that, you
23 know. So we can move that along.

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1 So, but we'll continue it past 5:30
2 obviously. So, also. So reconvene at 3:00 p.m.
3 (Whereupon, the above-entitled matter
4 went off the record at 2:25 p.m. and
5 resumed at 3:02 p.m.)

6 CHAIR MELIUS: So let's first start
7 with some of the scheduling issues. So we have
8 a meeting scheduled for December 13th and 14th
9 without a location?

10 MR. KATZ: Correct. So in terms of
11 what little talking around I have done so far --
12 in terms of what possibly -- depending on other
13 matters -- what possibly could be ready -- the
14 only site where something might be ready is if -
15 - and it's very conditional at this point, would
16 be possibly a Sandia presentation for the latter
17 period of Sandia. So that would mean, perhaps,
18 for example an Albuquerque location. We have --
19 I mean, Savannah River Site is a busy business
20 for the Work Group right now and the Board. So
21 Augusta is another location -- we don't have to
22 worry about the weather.

23 CHAIR MELIUS: Famous last words.

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1 MR. KATS: Less worry about the
2 weather.

3 CHAIR MELIUS: Hurricane -- you know
4 --

5 MR. KATZ: And other than those two -
6 -

7 CHAIR MELIUS: It would be the drive
8 from Atlanta, you have to worry.

9 MR. KATZ: And other than those two
10 locations, I think we are just thinking about a
11 fair weather port for the next meeting. Sort of
12 irrespective of -- unless other Board Members
13 have recognized something that I do not in terms
14 of what might be ready or ripe for public
15 participation or what have you.

16 CHAIR MELIUS: Anybody?

17 MEMBER BEACH: I was just asking Brad
18 about Argonne-East. I know we have an SC&A report
19 and we haven't had a Work Group yet. And we
20 haven't met in that area.

21 CHAIR MELIUS: Yes, we have. Last
22 year.

23 MEMBER BEACH: Did we?

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1 CHAIR MELIUS: We had our first
2 meeting.

3 MEMBER BEACH: Oh, that's right. It
4 was.

5 MR. KATZ: And that -

6 CHAIR MELIUS: Chicago. Do you
7 remember?

8 MEMBER BEACH: It was so last year,
9 sorry.

10 MR. KATZ: And Chicago, although it
11 has had -- it had a mild winter this past winter,
12 I am not sure how many winters we can promise for
13 that.

14 MEMBER BEACH: I am concerned that we
15 won't be ready for Santa Susana. I know we have
16 two ER reports, the Work Group hasn't met. And
17 between now and December, the time is short. I
18 am going to be gone most of it. I just -- anyway,
19 that might be problematic.

20 MR. KATZ: Right, that is what I am
21 saying. If there isn't work to do at a location
22 with a public interaction, then we are just --
23 really just talking about a fair weather port

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1 irrespective of the rest.

2 MEMBER BEACH: Right.

3 MEMBER CLAWSON: Idaho.

4 MEMBER BEACH: No, that's not fair
5 weather.

6 MR. KATZ: Nice try, Bread.

7 CHAIR MELIUS: When was it snowing?
8 When I called you in what, the end of May?

9 MEMBER BEACH: Yes.

10 CHAIR MELIUS: Of last year.

11 MEMBER CLAWSON: Yes.

12 CHAIR MELIUS: Telling me all the snow
13 that was on the ground.

14 (Laughter.)

15 CHAIR MELIUS: Okay, so we are getting
16 silly here, right? So we will -- anyway, think
17 it over. Some of this depends on those --
18 Savannah River presentation as well as the LANL
19 presentation and discussion. And so we will come
20 back to it. But I just want you to think -- and
21 if you have good ideas, let us know.

22 So scheduling?

23 MR. KATZ: So, beyond that, then -- we

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1 have a -- the next meeting that's scheduled is
2 for the June time frame of 2018. And I have --
3 the week of June 25th is right in the ballpark.
4 But it doesn't have to be that week. So why don't
5 you check your calendars and see how that week
6 looks. The 25th should be a Monday. So then we
7 would be talking about --

8 Does anybody -- and Paul and Gen? Are
9 you back on the line?

10 MEMBER ROESSLER: Can you hear me?

11 MR. KATZ: Yes.

12 MEMBER ROESSLER: Yes, I am on.

13 MR. KATZ: How does -- so does that -
14 - and that week? How does that look for you?
15 That's just a teleconference. So that's just a
16 midday.

17 MEMBER ROESSLER: Looks clear to me.

18 MR. KATZ: Everybody's good here?

19 (No audible response.)

20 MR. KATZ: Okay.

21 (Pause.)

22 MR. KATZ: Okay, so do you want to do
23 it the midweek? June 27th?

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1 (No audible response.)

2 MR. KATZ: Okay, June 27th, 2018.

3 (Pause.)

4 MR. KATZ: Yes. So how about let's
5 make it the 26th, then. That's a Tuesday.
6 Thanks, Wanda. And then for a full meeting the
7 ballpark is about August -- the week of August
8 13th. But -- anywhere around there.

9 MEMBER KOTELCHUCK: That's kind of not
10 great, August 13th, in terms of vacation season.

11 MR. KATZ: That week in particular,
12 you are saying? Because --

13 MEMBER KOTELCHUCK: Yes, family -- I
14 mean, family vacations. That's the week before
15 school starts for many kids. So, family at least.
16 And then that week is probably not good -- for us
17 -- for me. Earlier?

18 MR. KATZ: So how about the previous
19 week? That would be the week of the 6th? How is
20 the week of the 6th? Oh, that's better. Well,
21 what about the week that the kids start school?
22 The following week? The week of the 20th? How's
23 that? Similar to this week.

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1 MEMBER KOTELCHUCK: That's better.

2 (Pause.)

3 MR. KATZ: Any problems with the week
4 of the 20th? For Paul and Gen?

5 MEMBER ROESSLER: None here.

6 MR. KATZ: Okay, so the 20th is
7 Monday. The 22nd and 23rd?

8 CHAIR MELIUS: August 22rd and 23rd.
9 Yes.

10 MR. KATZ: Okay. Okay, very good.
11 That was quick.

12 MEMBER BEACH: Just to recap, in April
13 I have down the 11th and 12th and 18th and 19th.
14 Did you settle on a week that week in April?

15 MR. KATZ: I'm sure -- yes, I am sure
16 I settled. I have the April 11th.

17 (Pause.)

18 MR. KATZ: We are talking about
19 already scheduled meetings.

20 CHAIR MELIUS: So, April 11th I have
21 down.

22 (Pause.)

23 MR. KATZ: So, it's April 11th and

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1 12th, right? That's face-to-face, yes. Any --
2 any other questions?

3 (No audible response.)

4 MR. KATZ: Okay. No other questions,
5 then? I just -- let me just note, someone on the
6 line has their line open. Can you mute your line,
7 please? Thanks.

8 (Pause.)

9 MR. KATZ: There's still someone with
10 a -- there is still someone else with the line
11 open and conversation going on. Press *6 to mute
12 your line if you don't have a mute button, please?
13 Thanks.

14 CHAIR MELIUS: Okay. I will remind
15 you, if you could look -- take a chance to look
16 over your -- the public comments from the last
17 meeting. We will go over those in the work
18 session tomorrow. Do that for us. Usually is
19 fairly quick. Okay, and we will do Work Group
20 and Subcommittee reports. And I will proceed
21 alphabetically by Ted's list. Dave, you are up
22 first for Ames Laboratory.

23 MEMBER KOTELCHUCK: Well, we were just

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1 hearing about Ames. That they're working on
2 trying to find out whether their
3 incompatibilities -- or, inability to assess
4 exposure and working on dates on that.

5 So the group hasn't met. And they're
6 also -- they're also looking up data for some
7 exposures that they can assess. And as soon as
8 we get word we will meet. But the group has not
9 met. And the folks will remember who they are,
10 or I will remind them when we are ready to have
11 a meeting. And we should, I hope, have something
12 fairly soon. Maybe before the next Board
13 meeting.

14 CHAIR MELIUS: Who is responsible for
15 the report that you are waiting on?

16 MEMBER KOTELCHUCK: Oh, Tom Tomes.

17 CHAIR MELIUS: Okay. And do we have
18 a date on Tom?

19 MEMBER KOTELCHUCK: No, but LaVon said
20 that -- earlier this afternoon that he hopes and
21 they hope that they will have some report before
22 the next Board meeting. So we will arrange a
23 meeting -- we will arrange a Working Group

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1 meeting soon after.

2 MR. RUTHERFORD: We will keep the Work
3 Group Chair and the rest of the Work Group updated
4 over the next few weeks as we define -- get that
5 schedule finalized. So -

6 CHAIR MELIUS: Thank you. So,
7 Argonne-East, Brad.

8 MEMBER CLAWSON: Well, that's where we
9 were at the last Board meeting. I believe what
10 -

11 CHAIR MELIUS: Do you have your mic
12 on?

13 MEMBER CLAWSON: I don't have too much
14 to report right now. I believe that it is in
15 SC&A's hands at this time, isn't it?

16 MR. STIVER: We already submitted our
17 review and test findings.

18 MEMBER CLAWSON: Okay. And so it's -
19 - it's to NIOSH, then?

20 MEMBER MELIUS: And I think we have
21 some help coming to the mic, before you dig too
22 deep a hole here.

23 MEMBER CLAWSON: Okay.

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1 DR. HUGHES: Yes, it's progressing.
2 But it's relatively slowly based on work
3 priorities. Currently we completed the interview
4 stage. We were able to interview four
5 individuals. Unfortunately it is very hard to
6 find four more workers from the very early
7 period.

8 We are also working on ongoing
9 evaluation of the documents in the database and
10 addressing the remaining issues -- or, really all
11 the issues that are there. The timeline is, I
12 want to say in the order of months. It's still
13 some time away before we will issue a report.

14 CHAIR MELIUS: Thank you, Lara. And
15 I think I owe you a older worker -- I was going
16 to refer you some -- I will follow up on that.
17 Blockson Chemical?

18 MEMBER MUNN: Nothing happened.

19 CHAIR MELIUS: Nothing expected, I
20 believe, right? I should know him I am the --
21 (laughter.)

22 Brookhaven?

23 MEMBER BEACH: Brookhaven, we are

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1 waiting for TBD revisions and they are expected
2 out early next year, according to the DCAS work
3 schedule that was just posted.

4 CHAIR MELIUS: Gen, if -- excuse me --
5 - Gen, if you're on the line. Carborundum?

6 MEMBER ROESSLER: I just un-muted.
7 What did you just say?

8 CHAIR MELIUS: It's Carborundum
9 update.

10 MEMBER ROESSLER: I think we finished
11 that.

12 CHAIR MELIUS: And is there any other
13 activity?

14 MEMBER ROESSLER: No, I don't think we
15 have anything else scheduled right now.

16 CHAIR MELIUS: Okay. Jim Neton?

17 DR. NETON: I think there is a couple
18 -- NIOSH showed some responses, I think, on some
19 Site Profile-type issues on the example dose
20 reconstructions. So that's in our court. It
21 should be soon. It's a fairly limited number of
22 issues.

23 CHAIR MELIUS: Okay. So, stay tuned,

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1 Gen.

2 MEMBER ROESSLER: Okay. And I would
3 like to recommend everybody use the mic like
4 Josie does. I could hear Josie really well, but
5 most of the rest of you I cannot.

6 MEMBER ZIEMER: I second that, too.

7 CHAIR MELIUS: Well, we can't all sit
8 with Josie is the problem.

9 This is mine. Dose Reconstruction
10 Review Methods, we are waiting from a report from
11 NIOSH. I think it's fairly far along. Like, in
12 second draft. And so we should be scheduling a
13 meeting for that between now and the -- before
14 the next Board meeting. So probably either
15 September or October time period.

16 Fernald we have heard about Grand
17 Junction. We will be hearing about Hanford. We
18 have -- I don't know if Joe, you were on that
19 call that I didn't hear about until today. So -
20 -

21 (Laughter.)

22 CHAIR MELIUS: So, we are moving
23 along. I don't know if you want to just update

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1 on the technical call where we have -- didn't you
2 -- yes, okay.

3 MR. FITZGERALD: Working? Yes.

4 CHAIR MELIUS: Yes, fantastic.

5 MR. FITZGERALD: Yes, we had a --
6 essentially a coordination call, it wasn't a
7 technical call, on Thursday last week. No, I'm
8 sorry, Friday last week, on Hanford. And the
9 notion was to take the issue's matrix that has
10 lied fallow for quite a while and to get the
11 principles together -- had Arjun on that call and
12 Chuck and, I think, LaVon, I think you were on
13 that call.

14 So really, to compare notes -- make
15 sure that the status was up-to-date and that we
16 coordinated. And I think it worked pretty well.
17 There was a couple actions on the part of NIOSH
18 to go back and run to ground. You know, some of
19 this is going back to transcripts of a few years
20 ago to make sure we get this pinned down properly.

21 And same thing for us. There was a
22 couple of issues that we had to clarify. But
23 what is happening at this point is Chuck is

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1 basically crafting a first cut at a updated
2 matrix for the Work Group which he will then
3 deliver to us for comment and for any potential
4 changes, edits, whatever. So we will get to the
5 point where everybody is on the same page. And
6 that will be forwarded to the Work Group for
7 review and go from there.

8 I think at that point, really, the
9 issue is going to be what would the -- you know,
10 in terms of the status being what it is, is there
11 any sense of priorities, any issues that the Work
12 Group would like particular focus given? And we
13 should have all that ready, I would suspect, some
14 time in September.

15 CHAIR MELIUS: So for fellow Members
16 of the Work Group, plan for a Work Group call
17 sometime September, October time period. Again,
18 reminder to the -- since Sam Glover left, there's
19 a little time sort of getting caught up. There's
20 been interviews. There's been activity.

21 But we now just need to get it
22 coordinated. And I think we -- the main priority
23 was, I think, what LaVon presented earlier -- was

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1 getting the issue with whether the SEC, latest
2 SEC applied to workers other than subcontractors
3 and so forth. To that. Idaho we have heard
4 about. Dr. Ziemer, Lawrence Berkeley?

5 DR. ZIEMER: Yes, nothing to report on
6 Lawrence Berkeley. Same as last time.

7 CHAIR MELIUS: Thank you, Paul.
8 Josie, Kansas City?

9 MEMBER BEACH: Kansas City's work is
10 complete. We completed all the TBD issues, SEC
11 issues. So unless something new comes up, that
12 Work Group is done.

13 CHAIR MELIUS: So, why don't we put it
14 to bed and just retire it? Yes. But we can
15 always call you back from retirement. Los Alamos
16 we will hear about. Mound? Anything to be --

17 MEMBER BEACH: So Mound -- the
18 internal TBDs, we took care of those. We are
19 waiting for the external TBD. And I understand
20 that should be out in late 2017, unless there is
21 an update on that which I did not see.

22 CHAIR MELIUS: Yes. Nevada Test Site,
23 Brad?

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1 MEMBER CLAWSON: I believe that that
2 one -- I just got a letter from John Stiver. SC&A
3 has got that one. NIOSH had a White Paper that
4 they sent out and that should be bringing it
5 pretty close to an end. Do you have anything to
6 add to that, John? Or ---

7 MR. STIVER: Yes, we actually
8 delivered everything that we were tasked to do at
9 the January meeting. We are waiting for
10 responses on those -- the items. That was issue
11 11 about the beta-gamma ratios in the comment 26.
12 Then I think in June we have the call with Lynn
13 Anspaugh and the NIOSH people. And we kind of
14 resolved some of the issues that he had. So we
15 are kind of waiting on responses from NIOSH at
16 this point.

17 MEMBER CLAWSON: Okay. NIOSH had some
18 responses to that Work Group meeting that we are
19 still waiting for.

20 CHAIR MELIUS: So, NIOSH, an update?
21 We are playing ping pong here, so I am trying to
22 --

23 DR. NETON: John Stiver is right, we

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1 do owe a response to their review. And it is --
2 I think we are down to like one issue. Maybe one
3 and a -- two issues. And it is a beta-gamma ratio
4 that we are applying. And we are working on it,
5 ORAU is preparing our response. It should be
6 done soon.

7 CHAIR MELIUS: Okay.

8 DR. NETON: It is almost done.

9 CHAIR MELIUS: I don't think it is a
10 high priority issue, but keep track of it. Oak
11 Ridge National Laboratory, Gen?

12 MEMBER ROESSLER: Yes, the Work Group
13 has been waiting to hear from NIOSH. And we got
14 a little hint from LaVon's report today that
15 there may be some information coming up. I called
16 Lara Hughes, who is the lead health physicist for
17 that work. I think I heard Lara on the phone
18 before. Lara, if you are on, maybe you want to
19 update us?

20 DR. HUGHES: Yes. With ORNL, we are
21 working on remaining issues that were left over
22 after the Evaluation Report was completed. I
23 think that went up to 1956. The issues mainly

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1 concerning the internal monitoring. So we have
2 identified an issue that is internal monitoring
3 for plutonium 241 that was produced at the Y-12
4 site. So we will most likely move forward on that
5 at some point. But we have some additional issues
6 that we are evaluating first to make sure we have
7 -- if we identify an infeasibility that we can do
8 an all in one go, we have prepared a draft report
9 that deals with the monitoring gap for iodine.

10 And we are -- have a rather lengthy
11 draft report to assess all exotic nuclides and
12 monitoring methods for those. We are currently
13 at about 110 pages and counting. This is a draft.
14 And it will be issued soon, but it has to go
15 through all the formal review process within
16 DCAS, so I want to say we are still looking at a
17 month or two before that is out. And I am not
18 making any promises at this point because Dr.
19 Neton hasn't read it -- or, he has read a draft
20 maybe, but we are hoping to have something
21 relatively soon.

22 CHAIR MELIUS: Okay.

23 MEMBER ROESSLER: Thank you, Lara.

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1 And I think -- so the Work Group may hear
2 something soon. I want to remind Field, Lemen,
3 and Valerio are on the Work Group. So we will
4 keep our ears open.

5 CHAIR MELIUS: Okay.

6 MEMBER ROESSLER: That's it, Jim.

7 CHAIR MELIUS: Okay, thank you. I
8 like the way the hint got fleshed out there. The
9 110 pages.

10 (Laughter.)

11 CHAIR MELIUS: Next, I think, we
12 haven't covered Pinellas.

13 MEMBER SCHOFIELD: We closed that out
14 last meeting.

15 CHAIR MELIUS: So is there anything
16 left over? Can we retire that Work Group for
17 now?

18 MEMBER SCHOFIELD: I think we can
19 retire that Work Group.

20 CHAIR MELIUS: Okay. Nothing
21 personal. Okay. And while you've got your mic
22 there, Portsmouth/Paducah, K-25.

23 MEMBER SCHOFIELD: We are just waiting

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1 on a couple other factors and then we will have
2 that one retired out, too.

3 CHAIR MELIUS: Who is responsible for
4 the factors? NIOSH, I know.

5 MEMBER BEACH: That will be after our
6 Work Group call, though, right?

7 CHAIR MELIUS: Okay. Rocky Flats,
8 Dave?

9 MEMBER KOTELCHUCK: Yes. Well, we
10 made a decision earlier -- the Board -- that
11 individual dose reconstruction could be made at
12 Rocky Flats. But since then there was real
13 concern on the Board, by a number of people, about
14 the magnesium thorium at LANL.

15 So the folks at NIOSH -- and LaVon
16 told us about this -- the folks at NIOSH will
17 continue to be taking a look and perhaps sampling
18 some of the boxes. And if there is any new --
19 people from the Subcommittee know about this, but
20 it's worth mentioning to the rest of the Board.

21 So we should say that the Work Group
22 will continue to exist as long as they're taking
23 a look at that. And if there is anything that

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1 comes up that would make us reconsider our
2 earlier decision, then obviously we will meet and
3 talk about that.

4 **Los Alamos National Laboratory SEC Petition**
5 **(1996-2005; Los Alamos, NM)**

6 MR. RUTHERFORD: Yeah, that's correct.
7 We've -- actually, the site, Los Alamos National
8 Lab, put together indices for us. We reviewed
9 the indices of the -- basically a description of
10 the documents that they had. It was general at
11 first. They actually came back with a better,
12 more detailed. We provided that to the Work
13 Group. We provided it at SC&A.

14 We all reviewed those, both secure
15 indices and non-classified indices. And we've
16 identified roughly about 40 boxes of documents at
17 Los Alamos National Lab we want to look at. We
18 had hoped to be able to look at those in the first
19 -- or, actually around September 11th. However,
20 DOE funding is limited right now. It's probably
21 going to be pushed out until the October -- to
22 the start of the next fiscal year.

23 But we have identified them. We are

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1 going to review them. SC&A is on board. They
2 are going to be present when we review them, as
3 well. So, there you go.

4 CHAIR MELIUS: Thank you. Good.
5 Thank you, Greg, for keeping this moving, I hope.
6 Can't change the fiscal year issue, right? No.

7 Sandia. Dr. Lemen isn't here. I
8 think LaVon sort of brought us up to date earlier.

9 Santa Susana we'll hear about.
10 Savannah River we will hear about.

11 Science Issues, David Richardson is
12 not on the phone. And they did not gather --
13 okay. We did distribute the one report. So we'll
14 follow up with David on that.

15 SEC Issues, the only activity has been
16 in conjunction with the Savannah River coworker
17 models for now. So we will have some -- we're
18 planning a joint meeting of the SRS and the
19 Special Exposure Cohort Issues Work Groups
20 probably coming up hopefully in September or
21 October. Try to work the calendar and so forth
22 to make that work, to go over some of the coworker
23 issues regarding Savannah River. And there are

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1 several coworker and big reports and lots to do
2 there, so we will do that.

3 Subcommittee on Dose Reconstruction?

4 MEMBER KOTELCHUCK: Yes. The
5 Committee last met on the June 27th. We basically
6 closed out Sets 14 through 18, with the exception
7 of three or four cases that are in progress. So
8 we're waiting for reports from others on that.
9 And we started full bore with Sets 19 through 21.

10 We continued to find that the
11 categorization of cases where SC&A and I and DCAS
12 agree into Category 1 and Category 2, that this
13 really helps speed up our reviews. So we're
14 moving ahead on sets 19 through 21. We are
15 getting ready soon -- and perhaps at the next
16 meeting, at our next meeting -- to start looking
17 at the blinds in Set 23, which the groups are
18 working on. And we will meet on September 28th
19 for our next meeting.

20 CHAIR MELIUS: Okay, thank you, Dave.
21 Questions? Comments?

22 (No response.)

23 CHAIR MELIUS: Okay. So how many sets

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1 to go? Dave? I forget with this numbering
2 scheme.

3 MR. KATZ: Well, there are a total of
4 24 sets. It's a mixture of blinds and ordinary
5 DR reviews.

6 CHAIR MELIUS: So we are close to
7 being caught up? Or what's the ---

8 MR. KATZ: Well, we are getting there.
9 I think early next year we will be about caught
10 up.

11 CHAIR MELIUS: Okay.

12 MR. KATZ: The first DR meeting next
13 year should probably bring us pretty close to
14 wrapping it up. I mean, there may be some odds
15 and ends.

16 CHAIR MELIUS: So at what point do we
17 need to start the --

18 MR. KATZ: I think later this fall we
19 need to start turning the crank and have a -- so,
20 I think it would be helpful to wait for your DR
21 Methods Work Group meeting.

22 CHAIR MELIUS: Yes.

23 MR. KATZ: And then develop a sample

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1 based on what you guys decide to do.

2 CHAIR MELIUS: I guess my question. is
3 December meeting too late? Is December Board
4 meeting too late? Or we could do it on a call,
5 I suppose, but -- tricky.

6 MR. KATZ: We could do it with a --
7 yes, we could do it at the December Board meeting,
8 or we could do it -- yeah.

9 CHAIR MELIUS: Yes, that works.

10 MR. KATZ: That would work.

11 CHAIR MELIUS: Okay. We just like to
12 keep your Subcommittee busy, Dave. That's what
13 the plan is.

14 MEMBER KOTELCHUCK: You are doing a
15 fine job.

16 (Laughter.)

17 CHAIR MELIUS: Okay.

18 MEMBER KOTELCHUCK: Or we are doing a
19 fine job.

20 CHAIR MELIUS: Yeah, we. Subcommittee
21 on Procedure Review? Wanda?

22 (Pause.)

23 MEMBER MUNN: Okay, I'm close. We

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1 continue to focus pretty much on the work that we
2 are doing with the PERs. We have several that
3 are ready for us to take a look at now that have
4 been -- that is, we have reports back ready to do
5 our final evaluations, I think, on three from the
6 Y-12 badge issues that we had. That was a
7 different -- there was a different PER for three
8 different types of badging issues.

9 And have waiting to go Alcoa, Norton,
10 we have a finance report from SC&A on Grand
11 Junction. We have insoluble plutonium. And I
12 believe that we have just been gifted two
13 findings from Fernald that we have not yet
14 addressed.

15 So, at the current moment we are
16 looking at potential dates. Our kind DFO has
17 suggested toward the end of November, the early
18 part of December. I anticipate we will have a
19 date firm in the next week or so.

20 CHAIR MELIUS: Questions? Comments?
21 Ted, do you?

22 MR. KATZ: I was just going to say,
23 Paul, if you are on the line, I just -- I need

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1 good dates for you to wrap that up and schedule
2 that.

3 CHAIR MELIUS: And speaking of Paul,
4 TBD-6000?

5 MEMBER ZIEMER: Yes, we have two PERS
6 that are ripe are are ready for the Subcommittees
7 to review. Don't actually remember which ones
8 they are off the top of my head, but we have
9 already scheduled the meeting in September, late
10 September, to do those two. So that is the status
11 of what we are doing right now.

12 CHAIR MELIUS: Okay, thank you.
13 Questions for Paul? If not, Henry, 6001, which
14 has been renamed, but -

15 MEMBER ANDERSON: We have a couple of
16 sites that we are waiting for reports and some
17 updated things. But we have not met.

18 COURT REPORTER: Can you speak into
19 the mic? MEMBER ANDERSON: I'm sorry.

20 We are waiting -- there are several sites that we
21 are waiting to look at. I think NIOSH is working
22 on those. Is that correct? I don't think that
23 has changed from the last time. No one? Then we

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1 just have -- we have a few issues that advance on
2 sites that -- we are waiting for updates and
3 that's it.

4 MR. RUTHERFORD: I know General
5 Atomics, one is a coworker model that has been
6 pushed off based on the coworker implementation.
7 And the fact that the site is in SEC for the
8 entire operational period. Other than that, I
9 know we're working -- I think we completed our
10 issues with NUMEC. Am I correct, Lori? Yes. So
11 I think that is the main one. Well, actually,
12 W.R. Grace. There is a -- yeah, and we expect to
13 have that completed by late this year.

14 CHAIR MELIUS: I knew if we kept
15 pressing we would get more from you.

16 (Laughter.)

17 MR. STIVER: I just wanted to say that
18 we still have 20 outstanding findings from our
19 review of the General Atomics Site Profile that
20 had been on the docket for several years now. So
21 it might be good to, at some point, maybe when
22 W.R. Grace is done, then we could kind of knock
23 all that stuff down.

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1 CHAIR MELIUS: Do we have any activity
2 at Weldon Springs? No. I think that pretty much
3 finishes us up for that report.

4 MEMBER BEACH: Work Groups done?

5 CHAIR MELIUS: Yeah.

6 MEMBER BEACH: Worker Outreach, can we
7 agree to put that one --

8 CHAIR MELIUS: We will retire it.

9 MEMBER BEACH: Retire it? Yes.

10 CHAIR MELIUS: Yeah. Okay.

11 MEMBER BEACH: Okay. Because it is
12 still being reported out. Thanks.

13 CHAIR MELIUS: That's why I skipped
14 it. It was on the list. I was unilaterally
15 retiring you.

16 CHAIR MELIUS: Yes. Okay, so, we have
17 15 minutes. I don't think I've got any other
18 Board business that can't wait for tomorrow.

19 Okay, so we will take another 15-
20 minute break. I don't want to go into LANL until
21 the timing. So we will start again -- start
22 directly at 4:00, we'll start up with the LANL
23 presentation.

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1 MR. KATZ: Yeah, and for folks that
2 are here from LANL, if you want to make public
3 comments would you please sign up in the --
4 there's a book outside on the desk. Please sign
5 your name there. That will be helpful, thanks.

6 (Whereupon, the above-entitled matter
7 went off the record at 3:41 p.m. and resumed at
8 4:02 p.m.)

9 CHAIR MELIUS: We'll first start with
10 a presentation, an update on the SEC petition for
11 LANL. Then that will be LaVon Rutherford from
12 NIOSH will present. There'll be some discussion
13 of that among the Board Members and questions
14 about that. Then we'll also have time for the
15 petitioner, if he wishes to make comments, to
16 make comments at that time, further deliberation
17 on what to do.

18 When we're done with that session,
19 which may last until 5:30, may finish before
20 then, we will open it up for public comment. We
21 have some rules on how that takes about, so we'll
22 explain those, but we'll start that as soon as
23 that -- as soon as we're ready, so we may start

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1 it a little bit early.

2 We always start the public comment
3 period with people commenting relative to this
4 site, so it'll be to the LANL people, and then
5 we'll do other people that might wish to comment
6 about other sites will have to follow them and so
7 forth. We'll explain the public comment period
8 just before we start. There are some rules about
9 that. Ted, anything else?

10 MR. KATZ: Yes, just a note, for the
11 record. There are four Board Members who are
12 recusing from this session. That includes Phil
13 Schofield and Loretta Valerio and Paul Ziemer and
14 John Poston, who's absent today anyway, but just
15 for the record, thanks.

16 CHAIR MELIUS: Joe, too? Okay.
17 LaVon, go ahead.

18 MR. RUTHERFORD: Thank you, Dr.
19 Ziemer -- boy, I keep reverting back to Dr.
20 Ziemer. Dr. Melius. I think I've done that three
21 or four times now. I was so practiced before at
22 Dr. Ziemer.

23 CHAIR MELIUS: (Simultaneous

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1 speaking) three or four times (Simultaneous
2 speaking). Dr. Ziemer, by the way, for you
3 (Simultaneous speaking).

4 MR. RUTHERFORD: Was the former chair.

5 CHAIR MELIUS: He's still on the
6 Board. He's not here today. He will be on the
7 phone. I'm not insulted by (Simultaneous
8 speaking).

9 MR. RUTHERFORD: I had a flashback
10 there. I had a minor flashback. I'm LaVon
11 Rutherford. I'm a Special Exposure Cohort health
12 physics team leader for NIOSH, and I will present
13 the Los Alamos National Lab Addendum. A little
14 background. The petition was received in April
15 of 2008. It was qualified in May of 2008. The
16 Class evaluated was all service support workers
17 from January 1, 1976 through December 31, 2005.
18 The Evaluation Report was approved initially in
19 January of 2009.

20 It was revised in August of 2012,
21 recommending addition of a Class. This addendum,
22 which addresses the remaining years, was issued
23 in April of this year. The Class recommendation

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1 on Rev 1 was for all employees, from January 1,
2 1976 through December 31, 1995. The Board took
3 action on that and agreed with NIOSH, and the
4 recommendation moved forward to the secretary,
5 and a Class was added.

6 Additional background. The
7 identified infeasibility included the inability
8 to bound unmonitored intakes of exotic alpha
9 emitters, fission products, activation products,
10 special tritium compounds, strontium-90 and
11 thorium-230 and thorium-232. As part of the
12 revision, we committed to continue to evaluate
13 these issues for the post-1995 period. The end
14 date of December 31, 1995 of the Class is based
15 on the presumption that LANL would be in full
16 compliance with 10 CFR 835 by then. 10 CFR 835
17 requires internal dosimetry programs, including
18 routine bioassay programs, for radiological
19 workers who, under typical conditions, are likely
20 to receive a committed effective dose equivalent
21 of .1 rem or 100 millirem or more from all
22 occupational radionuclide intakes in a year.

23 Given this requirement, in the absence

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1 of individual internal dosimetry data, intakes
2 would be unlikely to have resulted in greater
3 than .1 rem CEDE, and the infeasibility to
4 reconstruct dose would not exist. Basically,
5 what we're saying is if the site's in full
6 compliance, then individuals that were not
7 monitored would not exceed 100 millirems CEDE.

8 Since the issuance of Rev. 1 of
9 SEC-109, NIOSH has sought and received additional
10 information, documents, and procedures relating
11 to the post-1995 use of exotic radionuclides.
12 Work with these radionuclides, especially after
13 1995, has been sporadic, and there are
14 corresponding few bioassay data. In November
15 2015, we took a trip to LANL. That trip included
16 SC&A, the ORAU Team, and myself. Meetings were
17 held with the LANL health physics staff,
18 including managers, dosimetrists, and field
19 personnel, to better understand how compliance
20 with 10 CFR 835 was achieved.

21 During this data capture, as well as
22 interviews, we looked at new documents that were
23 captured, including RWPs, respirator use, air

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1 sampling, radiation surveys, HP checklists,
2 routine monitoring instructions, and external
3 exposure data.

4 LANL also provided us radiological
5 policy and procedure documents, background
6 information on 835 implementation,
7 organizational charts, non-routine radionuclides
8 handled by waste management, and a summary of
9 their dosimetry monitoring program. LANL also
10 provided us information documents specific to
11 special tritium compounds.

12 So if a site assesses an operation and
13 determines that workers are unlikely to receive
14 100 millirem per year CEDE, dosimetry would not
15 be required. If you take that into
16 consideration, each job activity and different
17 things, if the dosimetry department, the
18 radiological department does their job and
19 assesses it appropriately, then personal
20 monitoring and bioassay would not be required.
21 Our position is during the 835 era, if a site has
22 a radiation protection program approved by DOE,
23 NIOSH will assume compliance, unless

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1 documentation supports otherwise.

2 NIOSH will focus their evaluations
3 during this period on internal and external
4 assessments and incidence reports associated with
5 10 CFR 835. How do we do that? We look at this
6 in two perspectives. An SEC perspective is do
7 the findings identify unmonitored exposures that
8 may prevent reconstructing exposures to a defined
9 Class of workers.

10 From a DR perspective, do the findings
11 identify a programmatic flaw that would suggest
12 the unmonitored workers could have received
13 exposures in excess of 100 millirem CEDE.
14 Therefore, our evaluation in this addendum, we
15 looked at assessments. We focused on findings,
16 responses, and corrective actions. We looked at
17 the non-conformance tracking system for 10 CFR
18 835 violations. We looked at the site response
19 and corrective actions. We did the same for the
20 occurrence reporting system. Did I jump a slide,
21 or is that correct? I don't know if I did or
22 not. I don't believe I did. Assessments. In
23 May 1995, LANL internal assessment of the

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1 Radiation Protection Program was conducted. They
2 had one finding associated with administrative
3 controls for sealed sources and five
4 observations.

5 Of those, one was relevant to internal
6 dosimetry, and that was in Observation 4. It
7 stated that the Radiation Protection Program
8 Office has not coordinated with support
9 organizations to implement site-specific
10 document control and records management programs.
11 Problems were identified with document control
12 and distribution of updated procedures.

13 The one finding in the five
14 observations do not prevent us from doing dose
15 reconstruction, nor do we consider them as likely
16 to raise the issue of unmonitored individuals
17 exceeding 100 millirems per year CEDE. DOE and
18 NSA conducted an independent review of the
19 internal dosimetry program at LANL in July of
20 2004. The stated performance requirements for
21 the assessment included evaluation of compliance
22 with 835.702(a), which is actually records
23 management of personnel monitoring. No findings

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1 or observations associated with 835.702(a), but
2 there were three non-compliances noted in the
3 assessment. However, none of these
4 non-compliances would like affect our ability to
5 perform individual dose reconstructions, nor
6 would they have likelihood of individuals
7 exceeding the 100 millirem and not being
8 monitored.

9 We looked at the non-conformance
10 tracking system. We reviewed the NTS system for
11 LANL 835 violations, site response, and
12 corrective actions. Three hundred and
13 eighty-four reports were captured; ninety-one
14 were considered potentially relevant. Of those
15 91, two were considered pertinent to compliance
16 with 10 CFR 835.702(a). Again, that is records
17 management of personnel monitoring.

18 NC ID: 652, records non-laboratory
19 exposure data, was not included in all employee
20 records for current year lifetime dose. In some
21 cases, when an employee's previous employer
22 provided dose information, it was not included in
23 the employee's current year or lifetime dose. NC

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1 ID: 1377, the cumulative total effective dose
2 equivalent received by each individual, as
3 recorded and reported by LANL, does not include
4 doses at other locations, as required by 10 CFR
5 835. Basically, if you have an individual that
6 worked at another DOE site or another location,
7 they weren't including it at that time. The
8 findings for the two NTS reports will not likely
9 affect NIOSH's ability to perform individual dose
10 reconstructions.

11 NIOSH considers all relevant data from
12 all sites for a claimant when performing dose
13 reconstruction. If a person has covered
14 employment at two separate sites, we request the
15 data from both sites. SC&A identified an NTS
16 report that NIOSH overlooked in reviewing the
17 reports.

18 I have no idea why we missed this one.
19 We actually had retrieved it, and it was in there,
20 but we overlooked it. The report was NC ID: 484.
21 After we got SC&A's review and we looked at that,
22 we went back again and we actually identified an
23 additional one that we wanted to look at, which

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1 was NC ID: 1219. We looked at both 484 and 1219
2 under the criteria I previously mentioned. NC
3 ID: 484 identified a number of deficiencies which
4 would affect LANL's ability to ensure personnel
5 with the potential of receiving doses greater
6 than 100 millirem per year CEDE were monitored
7 appropriately. The site implemented a number of
8 programs to ensure this would not happen in the
9 future.

10 Their corrective actions were
11 complete in October of 2000, and the PAAA
12 coordinator for DOE signed off in January of
13 2001. However, the question came up what about
14 the individuals during the time period
15 before -- while the issue was identified, prior
16 to and up to the point of the corrective actions,
17 how did LANL address those individuals? We've
18 requested additional information from LANL as to
19 what the site concluded concerning the potential
20 exposures to personnel who were not monitored.

21 We have actually identified -- LANL
22 has come back and identified they do have that
23 data. Actually, they know where that data is.

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1 It's at the Denver Federal Records Center, and
2 we're working to retrieve that information. That
3 is one of our commitments to the Work Group, to
4 provide that update. NC ID: 1219 identified a
5 deficiency where some workers at TA-55 were not
6 on the appropriate bioassay program. Some
7 personnel were on less conservative bioassay
8 program than required. You can see 23 of the 93.
9 Believe it or not, this was caused by a computer
10 software glitch. The corrective actions for NC
11 ID: 1219 included computer problems were
12 corrected and tested.

13 Workers were placed on the appropriate
14 bioassay program, and line managers were reminded
15 of the requirements to review dosimetry
16 requirements for their employees. NIOSH
17 concludes that although the non-compliance
18 occurred, corrective actions ensuring personnel
19 were on the appropriate bioassay and bioassay
20 occurring, no personnel with the potential to
21 receive -- no unmonitored personnel with the
22 potential to receive 100 millirem CEDE.

23 We looked at the Occurrence Reporting

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1 System. We reviewed DOE ORPS or LANL 835
2 violations. We identified a total of 159 reports
3 in our initial search. Of the 159 reports, 64
4 were deemed potentially relevant. NIOSH reviewed
5 the 64 in detail and found no findings pertinent
6 to 10 CFR 835. After we did that initial
7 search -- you would think when you're
8 looking -- doing a search, if you do the search
9 by site, you would get all the reports. However,
10 that's not true for the current reporting system.
11 We actually -- if you search by area, such as
12 TA-55, or by contractor name, you can get
13 additional reports, or the number of reports can
14 be greater. After issuing the addendum, we
15 continued to search ORPS for more occurrence
16 reports.

17 However, after further investigation,
18 we concluded that if there is an 835 violation,
19 there would be an NTS report. Based on NIOSH's
20 review for dose reconstruction of unmonitored
21 workers, based on NIOSH's review of the LANL
22 approved Radiation Protection Program, internal
23 and external assessments, the NTS reporting

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1 findings and occurrence reporting, NIOSH
2 concludes that intakes for unmonitored workers
3 with access to controlled areas were unlikely to
4 have resulted in a CEDE of 100 millirem per year.

5 Bounding intakes -- our dose
6 reconstruction methodology. Bounding intake
7 quantities corresponding to 100 millirems CEDE
8 may define as 2 percent of Stochastic ALI or
9 annual limit on intake. An unmonitored worker
10 can be assumed exposed to 2 percent of the
11 Stochastic ALI per year, with potential -- year
12 from potential radionuclides. For the purpose of
13 dose reconstruction, the radionuclide and lung
14 clearance Class selected for each year's intake
15 would be the one resulting in the highest dose to
16 the organ of interest.

17 Again, the specific 2 percent SALI
18 nuclide mixture resulting in the highest dose to
19 the organ of interest at the time of cancer
20 diagnosis would be the selected intake. So we
21 take the 100 millirem CEDE; we figure out the
22 intake that would give that CEDE; we use that to
23 define, to determine what the dose to the organ

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1 of concern would be.

2 Our example DR, White, non-Hispanic
3 male, born in 1965, starts employment at LANL in
4 January 1, '96, ends in 12/31 of 2016, and he's
5 diagnosed with cancer on 12/31, his final day of
6 employment. We must have adjusted the
7 sensitivity on that.

8 You can look at this table. It's
9 really hard to read. I put this together, and I
10 showed it to the Work Group, as well. Everybody
11 looks at 100 millirems CEDE and they think wow,
12 that's not much dose, but again, that's a
13 distribution -- whole body. We're looking at a
14 specific organ of concern. If you look at using
15 that 100 millirems CEDE and take the bone
16 surface -- you'll also notice that the year is
17 1996 to 2009. 2010, we have a separation. That's
18 because the DACs changed for 10 CFR 835, which
19 changed some of the results that we had.

20 But again, bone surface, you can see
21 20.012 rem, with a 22 percent PoC. Lung, as well,
22 you can get as high as 31 percent PoC for an
23 individual that never smoked. We also looked at

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1 special tritium compounds. This was another area
2 of concern. Potential dosimetric issues
3 associated with STCs, including stable metal
4 tritides and organically bound tritium, were not
5 formally recognized or addressed by LANL or DOE
6 until the late 1990s.

7 In 1998, LANL issued a dose assessment
8 for tritium internal dosimetry and bioassay
9 programs, which specifically addressed bioassay
10 for special tritium compounds. The potential for
11 significant exposures to special tritium
12 compounds were small, and dose assessments were
13 rarely deemed necessary. Bioassay data specific
14 to special tritium compounds are rare for the
15 entire period of the evaluation. NIOSH can bound
16 unmonitored intakes of STCs in the same manner as
17 the intakes of other rare nuclides for which
18 internal dosimetry data is lacking. By assuming
19 intakes to unmonitored workers do not exceed 2
20 percent of the Stochastic ALI, which is
21 equivalent to 2 percent of the Stochastic ALI for
22 tritiated water vapor, then when you use the
23 methods outlined in OTIB-66.

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1 We also looked at petitioner concerns,
2 one of those associated with 10 CFR 835. A
3 preliminary notice of violation was issued on
4 February 16, 2007, by DOE. The PNOV included
5 radiological protection violations for
6 monitoring. The PNOV noted that the Office of
7 Independent Oversight, in 2005 inspection, found
8 that LANL failed to adequately establish
9 personnel and area monitoring for TA-55 for
10 hazards of neptunium and radium nuclides, other
11 than uranium, plutonium, americium and tritium.

12 NIOSH reviewed LANL's response and
13 corrective actions. We also looked at the NTS
14 reports related to this. NIOSH also asked LANL
15 for information on potential neptunium
16 exposure -- on this potential neptunium exposure.
17 LANL indicated the 100 gram quantities fell below
18 their monitoring threshold, as documented in
19 their internal dosimetry Technical Basis
20 Document. Therefore, they have come up with a
21 specific quantity where they deem it necessary
22 that individuals could exceed the 100 millirem
23 CEDE, so activities above that specific quantity,

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1 individuals would be put on the bioassay program,
2 below that specific quantity, they would not.

3 After reviewing all available
4 information, NIOSH finds that unmonitored workers
5 involved in these operations were unlikely to
6 have received intakes that would have resulted in
7 100 millirem CEDE. Therefore, our methodology
8 described earlier would bound intakes for
9 unmonitored workers associated with this
10 activity.

11 For the period of January 1, 1996
12 through December 31, 2005, NIOSH finds that it
13 has access to sufficient information to estimate
14 the maximum radiation dose for every type of
15 cancer for which radiation doses are
16 reconstructed and could have been incurred in
17 plausible circumstances by any member of the
18 Class, or we can estimate radiation doses for
19 members of the Class more precisely than an
20 estimate of maximum dose. Oops. Sorry. Summary
21 slide. Again, what I just stated, dose
22 reconstruction is feasible for the entire period
23 of January 1, 1996 through December 31, 2005.

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1 Questions?

2 CHAIR MELIUS: Board Members with
3 questions for LaVon? Brad.

4 MEMBER CLAWSON: Yes, LaVon, you were
5 saying that it's feasible for you to be able to
6 do this. This is using --

7 CHAIR MELIUS: Brad, can you talk
8 directly into the mic? I know that's awkward,
9 but -- face us. Face me.

10 MEMBER CLAWSON: Okay. Here's the
11 thing. You're saying that you guys can do that
12 because the implementation of 835, and you're
13 taking for it that nobody went over that 100
14 millirem, that you -- that has been put out there.
15 Even if they don't, you're saying that if there's
16 no data for them, they couldn't have gone over
17 the 100 millirem, is that correct?

18 MR. RUTHERFORD: What we're saying is
19 if the site was in compliance with 10 CFR 835,
20 not counting NC ID: 484, which we have not
21 reviewed yet, that we've already mentioned needs
22 further review, but if the site's in compliance,
23 which we've seen so far, then individuals that

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1 were not monitored would not exceed the 100
2 millirem per year CEDE.

3 MEMBER CLAWSON: Okay, and along with
4 that --

5 MR. RUTHERFORD: I want to point out,
6 though -- because I know where you're going with
7 that, but I want to point out if information is
8 presented to us, we will look at that information
9 to see if that did not occur, or if that occurred.

10 MEMBER CLAWSON: Granted, but you're
11 also looking at internal audits from the people
12 that are monitoring that, that is saying yes,
13 we're all good. The only way that you're going
14 to find this out is an external comes in and
15 audits them, as we have seen at LANL, Mound, and
16 Savannah River. I don't see how you can use this.
17 I really don't. Because there's no way for us to
18 be able to take and positively verify that they
19 were in compliance. You can't do it.

20 MR. RUTHERFORD: Okay, one of those
21 was an external assessment by DOE and NNSA that
22 we've identified. The other one, which SC&A
23 identified, was an internal assessment, but it

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1 was done by external individuals. That's the one
2 we have to review, as I had mentioned.

3 CHAIR MELIUS: Other Board Member
4 questions? I have one question. Is this the
5 first time this issue has come before the Board?

6 MR. RUTHERFORD: Yes, it is.

7 CHAIR MELIUS: You believe it has.

8 MR. RUTHERFORD: I want to point out
9 this is not only the -- Sandia National Lab, as
10 I mentioned earlier in my presentation, Lawrence
11 Livermore National Lab -- there are a number of
12 sites coming down the road that the 10 CFR 835
13 period is under evaluation. The fact of the
14 matter is that in a lot of circumstances, you are
15 not going to have the personal monitoring data if
16 the site determined that they would not exceed
17 the 100 millirem CEDE. You have to take that
18 into consideration.

19 CHAIR MELIUS: But it's a site by site
20 evaluation?

21 MR. RUTHERFORD: Exactly.

22 CHAIR MELIUS: Any other Board Member
23 questions at this point? We'll open it up again.

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1 We have the Work Group and the SC&A presentations
2 to hear first, so don't go too far away, LaVon.

3 MEMBER BEACH: Actually, can Joe go
4 ahead and go, and then I'll go after Joe? I think
5 that's -- does that work?

6 MR. FITZGERALD: That's fine.

7 CHAIR MELIUS: So just for the record,
8 Josie Beach is the head of the Work Group that's
9 been reviewing this. Joe is from the Board's
10 external technical contractor.

11 MR. FITZGERALD: Good afternoon, Joe
12 Fitzgerald. As Dr. Melius indicated, I am with
13 SC&A. I support the Work Group on Los Alamos.
14 We reviewed the ER addendum, provided a
15 memorandum that the full Board has a copy of,
16 which I believe is also available on the back
17 tables for anyone that wants to review that.

18 I'm not going to go through -- there's
19 some preliminaries about the addendum, which
20 LaVon has already covered, so I'm not going to go
21 through that, really, and just get to what we
22 did. This is certainly a different review. This
23 is not so much of a technical review or technical

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1 issues, per se. It's really looking at sort of
2 the adoption of a fundamental policy. So to some
3 extent, we were wary about getting into what
4 would be a Board deliberation on the merits of
5 the policy, but wanted to provide -- and did so
6 in the memorandum -- some considerations that go
7 into, maybe, the background and the history of
8 how these policies were developed and some of the
9 implementation questions that arose.

10 I don't think we have a real problem
11 with the concept of using full compliance with
12 835 and all the elements of that as being a basis
13 for applying the 100 millirem as, I think, NIOSH
14 has proposed. But the issue that we come into is
15 this question of the site certifying, essentially
16 certifying full compliance, as of January 1,
17 1986.

18 They had some QA provided by the field
19 office and some program office representatives,
20 but essentially, it was the site certifying
21 against the elements of 835 that they met those
22 elements and were in full compliance as of that
23 date. The issue I think we raised in our memo to

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1 the Board is that it's clear from that
2 history -- and we can look back at it. Actually,
3 I kind of lived it. I had a firsthand, front-row
4 seat. The implementation against these policies,
5 whether it was 548011, 1989, RadCon manual later,
6 or 835, when it was promulgated, I think the
7 history is that the implementation, the actual
8 putting these actual requirements into place, not
9 simply a paper certification, but actually
10 changing the way you do business at some of the
11 sites took time.

12 These practices were embedded deeply
13 into how, in this case, Rad Programs were
14 implemented. They didn't change on a dime, even
15 with the onus of Price-Anderson enforcement. It
16 took time. Not all sites, but some sites, the
17 implementation did take some years, several years
18 to actually put in place.

19 Certainly, the enforcement actions,
20 the compliance self-assessments, the field
21 representatives of the Defense Board, there was
22 a lot of leverage being applied for the sites to
23 actually change practices to meet expectations,

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1 not simply the interpretation of a site of what
2 those expectations are, but actually what the
3 Department, as a whole, felt 835 needed to be
4 implemented. The reason I raise this is because
5 there was a number of milestones in DOE's history
6 where it wasn't the standards, it wasn't the
7 policies. Heck, DOE had some very good policies
8 early on. It was the actual execution against
9 those policies and the accountability of the
10 managers and the workers to implementing the
11 expectations fully that turned out to be the
12 issue.

13 I know Paul Ziemer's on the phone. We
14 both went through the Tiger Team era. I led two
15 Tiger Teams. The Tiger Teams were -- this is
16 1989 and '90, so it actually does fall in that
17 time frame. They were designed as a bit of a
18 shock treatment throughout the complex to look at
19 the accountability of sites to meeting the
20 compliance requirements across the board,
21 environment safety and health.

22 The concern was -- and this was born
23 out of the Rocky Flats raids and the West Valley

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1 raids -- was that we had the requirements, but
2 the sites were not implementing them fully. They
3 weren't actually carrying them out, and there
4 were gaps in performance. There was gaps in
5 compliance. These weren't being recognized and
6 acted upon. Our concern relative to this issue
7 is yes, there was a certification of full
8 compliance as of that date, but foregoing an
9 active review of whether or not, in this case,
10 dosimetry programs important for dose
11 reconstruction were being fully implemented, or
12 implemented effectively, that one could base dose
13 reconstruction on them, and presuming that this
14 is all resolved by that compliance certification
15 on January 1, 1996 is one that we think is quite
16 a leap.

17 Actually, looking at the -- we only
18 have several data points. We didn't look further
19 than the Savannah River and Los Alamos, but we're
20 finding instances of fairly significant
21 gaps -- what appear to be gaps in how bioassay
22 participation was being run, how enrollments were
23 being done, how RWPs were being satisfied.

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1 There certainly appears to be missing
2 bioassays in those instances. The question to
3 ask is if implementation against 835 is falling
4 short significantly in those cases, then how does
5 one have confidence that implementation against
6 the other tenets of 835, including the 100
7 millirem, were also being satisfied, as well? I
8 think the question of is there enough confidence
9 in that milestone that you have, in fact, full
10 compliance and implementation on that date, or
11 did that happen further down the pike, as
12 experience was gained with 835, and as actions to
13 hold sites accountable, which happened,
14 certainly, throughout the '90s, is that milestone
15 of confidence of full compliance, did that come
16 later, actually, than the very first date, which
17 is that -- when they put the paper out, when the
18 835 Rule became effective.

19 It was that context we actually went
20 through and provided some of the considerations.
21 Reviewing the oversight findings, I think we had
22 discussion of looking at non-compliances. I
23 think that turns out to be a fairly blunt

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1 instrument, particularly when you're talking
2 about bringing outsiders in to look at your
3 bioassay program.

4 A lot of what you're doing in those
5 dosimetry programs may not be something that
6 could be -- where you have non-conformances
7 identified within a couple, two, three days of an
8 on-site review. I think a lot of cases, when
9 you're talking about oversight reviews, even
10 Price-Anderson reviews, relying on the site
11 self-assessments to frankly divulge where they
12 have issues and to bring those issues to DOE's
13 attention, that's not necessarily going to be
14 even. You're not going to have all the sites
15 responding uniformly. I think you had some very
16 good examples in Savannah River, based on their
17 concerns on their internal dose assessment
18 program.

19 That was basically borrowed from the
20 Mound experience. They did, in fact, identify
21 issues and brought that to DOE's attention, but
22 you're not going to necessarily have that across
23 all the DOE sites, where you're going to have a

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1 self-awareness of what's wrong with your program
2 and the ability to actually identify those
3 issues.

4 Using non-compliance reviews, using
5 non-compliance findings as the instrument to know
6 whether or not there's issues at sites after
7 1995, I think, is an issue that needs to be
8 discussed by the Board. I think that's a pretty
9 significant move. What we did, basically, is we
10 did a review of the certification process. I
11 think the process was pretty thorough. I think,
12 as NIOSH pointed out, they did bring a team in.
13 They did look at the site, in terms of where
14 things stood, and they did make some findings
15 that were corrected before that date. On the
16 various and sundry tracking systems, we pretty
17 much followed the same scope as NIOSH did and
18 looked at -- we looked at the NTS. We looked at
19 ORPS. We looked at the Defense Board reviews.

20 There's an extensive scope of Defense
21 Board reviews of Los Alamos. They have a site
22 representative at Los Alamos. Generally, we
23 didn't find anything other than this one NC ID:

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1 484, which really focused on a non-conformist
2 that had implications that were substantive
3 to -- that would be substantive to dose
4 reconstruction. It's unclear, and I think it's
5 really good that NIOSH is looking at that -- it's
6 unclear what the full significance of that is.

7 But the one thing I would point out to
8 the Board, and I think LaVon was mentioning that
9 they're looking for whatever sampling results
10 that Los Alamos might have that would shed some
11 light on whether these people were resampled, or
12 whether there's any additional information. I
13 think the implications are much broader than
14 that. I think this was a snapshot of a
15 non-compliance that took place at this particular
16 point in time. They looked at one RWP, for
17 example, and found a number of these support
18 workers did not need bioassays. But the real
19 question is how long did that persist? To what
20 extent do you have a history of incomplete
21 bioassays that date going back in time before
22 that point? This was 1999.

23 The broader question is if the program

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1 was dysfunctional, as identified in 1999, on this
2 non-compliance, the fact that there might be some
3 sampling data that they did for that particular
4 RWP that was identified in the non-compliance, to
5 me, is just the tip of the iceberg.

6 The real question is going back in
7 time, what does that say about the completeness
8 of that bioassay program, and can you rely on
9 that bioassay program if you had to, in terms of
10 dose reconstruction, or not, and does that
11 undercut the premise of assuming that you had
12 full compliance and you wouldn't have to look at
13 any particular issues of completeness beyond the
14 fact that they should have monitored at 100
15 millirem? I think it's a broader question than
16 just whether or not there's samples for that
17 particular time period. I think LaVon went
18 through the scope of that review. It's a pretty
19 extensive scope. They made ten findings,
20 covering everything from improper enrollment of
21 the key subcontractor site, the non-adherence to
22 participation in job-specific bioassays, and the
23 improper filling out the checklist.

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1 This was a three-day review, as I
2 recall, so this was a very specific, not too
3 extensive sampling, but the sampling found these
4 issues during that one-week review. The other
5 thing we looked at were -- I think Josie can get
6 into this to some extent. The Work Group and the
7 series -- this is several years' review of
8 various issues that were pertinent to the
9 preceding SEC period.

10 This is the one from 1970 -- is it
11 '75? I think it's '75 to '95 or '72 to '95, there
12 was a number of issues revolving around mixed
13 activation products, mixed fission products,
14 exotics, and certainly a number of questions
15 about whether there was sufficient monitoring
16 data, sufficient record keeping to support dose
17 reconstruction. The conclusion was no, there was
18 not. The issue that I think the Work Group
19 certainly has, at this point, is this presumption
20 basically preempts any further review of those
21 issues into -- except the Site Profile issues,
22 perhaps -- into the post-'95 period, even though
23 they certainly were significant before '96. I

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1 highlight one set of issues involving MAPs, mixed
2 activation products.

3 These were ones that certainly were of
4 significance for the previous SEC discussion. So
5 what do we do with those issues? How are they
6 addressed, and are they still pertinent? They
7 were sort of hanging there since 2013-14. For
8 continuity's sake, I think that's another
9 implication that the Board needs to look at, as
10 well. Finally, on neptunium, there, I think, is
11 a question of clarification, in terms of the
12 operation that involved neptunium.

13 It's not clear that the operations
14 that figured in the conclusion that NIOSH had
15 were all the operations. I think it would be
16 useful for the secure inventory that DOE
17 maintains to be consulted just to provide that
18 assurance that you have all the operations that
19 were important for neptunium covered, and that
20 the conclusion reached about the less than 100
21 millirem and whatnot are all applicable there. I
22 think that's pretty much it. In terms of
23 considerations and conclusions, again, I think we

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1 point out, and I think NIOSH fully agrees, it's
2 an important precedent for all of these sites
3 that are reviewed under EEOICPA. I think, again,
4 the considerations that we discussed in the
5 review are ones that this Board will have to
6 address.

7 I think the significance
8 non-compliances -- and these are only for ones
9 that we're familiar with on LANL, Mound, and
10 Savannah River in the late '90s -- illustrate
11 that implementation took time. This did
12 not -- this wasn't full compliance from Day 1.
13 There are issues. I know NIOSH has pointed out
14 that these are considerations that they're going
15 to tackle, in terms of determining whether 1996
16 applies or not.

17 By the same token, if you have enough
18 of those exceptions, doesn't that argue that
19 maybe 1996 is not the milestone that it is
20 purported to be? Maybe that milestone's further
21 up in time. I'm just saying that if there's
22 enough exceptions, a presumption, by itself,
23 doesn't carry a whole lot of weight anymore. The

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1 whole concept of a presumption is that there's
2 confidence that you have full compliance, and
3 that's supported. But if there's enough
4 exceptions, one would argue maybe it's not a
5 valid presumption to make at that particular
6 time.

7 I think that's something that, on
8 balance, needs to be reviewed. We didn't look
9 across DOE, but just the three examples we looked
10 at, I think, were pretty bracing, in terms of
11 those considerations. That's pretty much it. I
12 think this last one I already talked about. Any
13 questions on that before I leave?

14 CHAIR MELIUS: Board Members,
15 questions? Wanda.

16 MEMBER MUNN: Joe, you've implied that
17 there's no evidence of implementation when we
18 talk about compliance, or at least you've
19 inferred -- at least, I have inferred, from what
20 you've said, that you have no knowledge, and
21 there is no indication of when full
22 implementation was achieved here. You've talked
23 about the DOE program, as a whole, and I can

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1 understand that there are variations in site
2 accomplishment of implementation. But what I
3 hear is you cannot provide any evidence that
4 there was not implementation in a timely manner.
5 You can point to one or two issues which have
6 been raised by the agency, but I also hear the
7 implication that you can't rely on internal
8 audits for anything, and you can't rely on
9 external audits for anything because they're not
10 here long enough to know what they're doing, and
11 they're outside and don't know.

12 That leaves me with a question that is
13 the converse of those, which is what would a
14 reasonable person assume to be a valid audit?
15 When did such a thing occur? How does one
16 identify when an implementation that was adequate
17 for our purposes here took place?

18 MR. FITZGERALD: I think I would
19 answer that to say that the site rad program
20 is -- that's where the knowledge resides, as far
21 as how business is being done. When you bring
22 outside experts in, I think that provides an
23 outside perspective to balance against what may

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1 be some inbred or safety culture issues that you
2 think you're doing everything right, but you need
3 an outside perspective to help you understand. I
4 think that's what Los Alamos did when they
5 brought in Savannah River and MJW from Mound,
6 because those two sites had gone through a
7 Price-Anderson review just previously, '98 and
8 '97, where gaps were found in their job-specific
9 bioassay program. I think LANL did the right
10 thing bringing that outside perspective in.

11 My only point was writ large, across
12 all the DOE sites, to expect that there would be
13 a self-awareness that each site would be tracking
14 the experience at other sites and to be
15 self-aware enough to know if their program may
16 actually -- even though they believe in their
17 program as being, in their own view, implemented
18 effectively and in compliance with 835, to invite
19 in an outside perspective, that might actually
20 show otherwise.

21 I think the concern there would be
22 perhaps at Los Alamos, and maybe another site,
23 would have that self-awareness and that

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1 motivation to do so. Some of this motivation is
2 you don't want to be in the shoes of a site that
3 just got a Level 1 violation for bioassay
4 deficiency. You certainly want to get ahead of
5 that curve and bring in that perspective and
6 self-report as soon as possible. But
7 nonetheless, looking across all the DOE sites
8 that we're looking at under this program, I don't
9 know if that expectation that all the sites would
10 do that, and by adopting a presumption, you may
11 be missing instances or programs where the gaps
12 were perhaps very similar, but weren't picked up
13 because the programs involved would not have done
14 that kind of review.

15 The issue I'm getting to is that
16 relying on strictly non-compliances,
17 Price-Anderson or that kind over oversight
18 scheme, to identify gaps that might be pertinent
19 to dose reconstruction, under this program, I
20 think you may fall short. You may not, in fact,
21 catch the kind of issues that would be important
22 to catch.

23 Los Alamos, if it did not invite in

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1 Savannah River and MJW, may not have understood
2 the scope of the gaps that they had in their
3 job-specific bioassay program. I don't want to
4 get ahead of this. All I have seen is the NTS
5 summary. What I think LaVon is doing,
6 appropriately, is getting all the details from
7 the lab that would fill in a lot of the history
8 on this thing. That's one element. My other
9 concern is if you get into a regulatory context,
10 you're going to say if I can find -- if I find
11 out that the lab did some sampling right after
12 this NOV and was able to establish that these
13 CTWs, construction trade workers, who did not
14 leave a bioassay, but they are, in fact,
15 resampled and found to have no intakes -- my
16 concern is that success could be declared not
17 just by Los Alamos, in that instance, but by this
18 program.

19 When, in fact, the implication is that
20 program wasn't working. Even if that one RWP was
21 resolved by resampling of those workers, it
22 doesn't answer the question about all the workers
23 and the RWPs that preceded it, from 19 whatever

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1 up to 1999. What about all those bioassays? How
2 would one establish the completeness of those?

3 Those are the kinds of things that
4 would concern me. If you think about it, you're
5 relying on an NOV that was based on Los Alamos
6 taking the initiative, in order to establish
7 whether or not full compliance was in place at
8 Los Alamos. If that one initiative wasn't taken,
9 the presumption would have pretty much been there
10 everything was fine. That's kind of where I'm
11 coming from on the regulatory front. If you go
12 that way, you're making a lot of assumptions
13 about how things work. I think in reality, a lot
14 of this is driven by the sites, and not all the
15 sites would do it the same way. That was my only
16 perspective. This hard question is what you all
17 have to wrestle with.

18 I want to point out again, this is
19 kind of a policy call. I think what we're all
20 trying to provide is grist for the mill. These
21 are considerations. Firstly, if it's full
22 compliance, and the site, in fact, is adhering to
23 requirements of 835 in totality, I don't have any

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1 problem with that particular premise. I don't
2 have a particular problem with that particular
3 premise, that you can rely on the 100 millirem.

4 But I think the experience at the
5 sites, particularly in the '90s and '80s, is that
6 just isn't the way things went in a very practical
7 way. This is sort of looking at the concept
8 versus the empirical. Is there a way to look at
9 the actual reality of performance and what
10 happened versus the concept of applying this
11 process? Again, I think there's some disparity
12 there. That's all I would point out.

13 MEMBER MUNN: Joe, you're well spoken,
14 and you make your points well, but I did not hear
15 any more facts in that than I heard beforehand.
16 What I heard were more if, might have, may have.

17 MR. FITZGERALD: Let me point out,
18 too, that we're a creature of the Board. Quite
19 frankly, we weren't tasked to do a DOE-wide
20 canvassing of implementation against 835 and
21 whether there's a history of non-compliances or
22 self-assessment findings across the sites.

23 MEMBER MUNN: Exactly my point.

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1 There's no --

2 MR. FITZGERALD: We were asked to
3 review what NIOSH had proposed. Based on what we
4 could look at -- again, we had Savannah River.
5 By way of Savannah River, we had Mound. We
6 certainly had the Los Alamos, in terms of the
7 ORPS and everything else.

8 In all the cases that we've looked
9 at -- and I agree; it's a sample size of three,
10 at this point, but in those three cases we found
11 instances of what I would consider pretty
12 prominent non-conformances against 835, or in the
13 case of Savannah River, 820, but again, 835 was
14 deferred on that one, that involved the bioassay
15 program. I think that's pretty relevant. Even
16 though the sample size is three, that's pretty
17 much three out of three. I think that raises
18 some concerns. You could broaden that scope, but
19 that's up to the Board. I think the real question
20 you're raising is the concept of doing this
21 versus the empirical evidence.

22 Am I right? The empirical
23 evidence -- I'm just saying the empirical

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1 evidence is, frankly, what we could look at in
2 these particular sites, where you have experience
3 past 1995. The other sites that we've done under
4 the program, we have not really gone that far in
5 time, as it turns out.

6 MEMBER MUNN: What I'm saying -- and
7 this is the last time I'll probe you on this. As
8 a matter of fact, I don't expect any further
9 answer. The point that I'm trying to make is the
10 information that we've seen from the presentation
11 here was based on the facts of the information
12 that we have, and we have considerable
13 information. What I am hearing is many questions
14 about what ifs and, as I said before, might have,
15 may have, but I have not heard any empirical
16 evidence -- your words -- to tell me when this
17 implementation could have been assumed. Because
18 we don't assume here unless we absolutely have
19 no --

20 MR. FITZGERALD: We're talking about
21 a --

22 MEMBER MUNN: -- empirical evidence.

23 MR. FITZGERALD: We're talking about

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1 a presumption of compliance. That is an
2 assumption, by itself.

3 MEMBER MUNN: Based on the evidence at
4 hand. I don't see -- we're going around in
5 circles here.

6 CHAIR MELIUS: Wanda, you've made your
7 point.

8 MEMBER MUNN: That's enough. I've
9 made my point. Thank you, Joe.

10 CHAIR MELIUS: You both have made your
11 points. I think we all understand them on that.
12 Anybody else have questions from the Board?

13 MEMBER BEACH: No, I didn't put
14 together a slide presentation because I knew we
15 had two. This will just stand as my Work Group
16 report. If you recall -- first, I'll point out
17 the Work Group Members are myself, Brad Clawson,
18 Dr. Lockey, and Wanda Munn. Our last Work Group
19 meeting was in 2012. We met on August 15th to
20 review the Evaluation Report. It is SEC-00109,
21 that was issued on April 24, 2017. The Work
22 Group's discussion centered around the Evaluation
23 Report and the SEC cutoff date of December 31,

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1 1995.

2 I'm not going to give you any new
3 information that you didn't hear from Joe and
4 from LaVon. I'm just going to key on some points
5 that the Work Group keyed in on. First of all,
6 we questioned bioassay data and the data gaps.
7 The Non-Compliance Report 484, based on the LANL
8 internal dose assessment that was conducted by
9 representatives from Savannah River, MJW
10 Corporation, LANL Rad Protection Service Group,
11 and the Quality Assurance Group, that report
12 was -- it was a three-day look, on March 22nd
13 through the 25th.

14 That was in 1999. I will go back to
15 this evaluation is from '96 to 2005, with that
16 cutoff date of 1995. I just want that in your
17 mind. This report was done in 1999. It was a
18 very small scale survey conducted over those
19 three days. They found serious issues, ten
20 non-compliance issues, three of which -- and I
21 know you heard this earlier -- three impaired
22 LANL's ability to monitor individuals. We've
23 been told that in '95, the cutoff date, or

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1 starting in '96, that monitoring for those
2 individuals could be done. So in '99, we had
3 serious issues.

4 Corrective actions for those issues
5 were closed in 2000. Some of the examples
6 included issuing new or revising eight of the rad
7 practice procedures. Those are the procedures
8 that, it was quoted earlier, is what, in 1996,
9 were up to snuff, so that everybody was covered.
10 They re-issued those and rewrote them.

11 Some of those included development of
12 LANL-wide dosimetry enrollment criteria,
13 web-based dosimetry participation notification
14 program to ensure better management of worker
15 bioassay participation, facility-specific
16 dosimetry matrices. This brings into question
17 the compliance and implementation of 835 in 1995
18 and LANL's ability to ensure personnel were
19 monitored appropriately. It's unlikely, and
20 can't be verified, the 100 millirem criterion
21 under 835 for individual monitoring. I realize
22 NIOSH is going to do some more work. They're
23 going to come back to the Work Group. We're not

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1 finished with that. Those are the issues that
2 need to be addressed. Neptunium is also a
3 monitoring question that remains unanswered. Of
4 course, we had a Site Profile White Paper that
5 came out prior to our Work Group meeting.

6 That is on hold until after the SEC
7 completion. Then Joe brought up the mixed
8 fission, which was the last SEC that ended in
9 '95. There are some questions remaining. I know
10 we do have some petitioner concerns that we're
11 going to look at and address. That's my report.
12 Thank you.

13 CHAIR MELIUS: Thank you, Josie. I'd
14 like to now hear from the petitioner, if they
15 wish to speak.

16 MR. EVASKOVICH: Good afternoon. My
17 name is Andrew Evaskovich. I'm the petitioner
18 for SEC-00109. I just want to hit on some issues
19 that came up during the Work Group meeting and
20 some other issues to argue against the
21 presumption. One of the issues was phoswich
22 detectors and germanium detectors. The Tiger
23 Team reports indicate that there were two

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1 phoswich detectors for measuring plutonium and
2 americium in the lungs. They weren't state of
3 the art. This is on Page 4-785. Further, the
4 Division is hindered in conducting its programs
5 and supplying technical support as a result of
6 lack of facilities and equipment and other
7 resources.

8 An example of the difficulty
9 experienced by the Health Physics Measurement
10 Group is obtaining a germanium detector array for
11 lung measurement on personnel working with
12 plutonium. That was on 4-773. The key concern
13 that I have is the symptoms here. Given the
14 presumption of compliance, the absence of
15 internal dosimetry records indicates that
16 unmonitored workers were deemed unlikely to have
17 received intakes resulting in CEDE 0.1 rem or
18 more from occupational radionuclide intakes in a
19 year.

20 Standing by itself, it sounds like
21 that's begging the question, that statement, but
22 prior to that, there is an indication of why
23 they're just going with the unmonitored personnel

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1 and how they're going to do the dose
2 reconstruction for other personnel. I talked to
3 LaVon about that earlier, so that issue is, I
4 think, taken care of. NIOSH has not located
5 specifics regarding quantities of neptunium used,
6 only that use was rare. The controls employed
7 appear to be those in place for plutonium-related
8 work. In a 2005 DOE inspection report, 11 workers
9 are discussed using 100 gram quantities.

10 That's one of the issues that NIOSH is
11 using as far as determining how much neptunium is
12 used, but the inspection team in that report said
13 that 10 to 20 gram quantities will require
14 bioassay, and I don't believe that issue was
15 resolved.

16 Additionally, there was a project that
17 worked with neptunium -- it lasted a number of
18 years -- in which a neptunium sphere was made,
19 and the sphere weighed six kilograms, which
20 exceeds the 1700 gram amount that LANL believed
21 would be the precursor or what would start
22 bioassay. In the case of neptunium, the need for
23 monitoring was formally evaluated in 2006, which

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1 is outside the petition years. Further, NIOSH
2 refers to the robust field monitoring program
3 described in a section in the report that it's
4 highly unlikely that such released material could
5 have occurred without eventual detection. But in
6 the report, it says in addition to bioassay
7 concerns, there are potential inadequacies in the
8 assessment of neptunium airborne contamination
9 from instruments designed and calibrated for
10 plutonium.

11 Another finding, at the institutional
12 level, methods used to enroll workers in the
13 bioassay program have not been adequate to ensure
14 that workers are monitored for the correct
15 isotopes and the required frequencies. I believe
16 that argues against presumption.

17 Further, NIOSH refers to a manual,
18 ESH-1 TA-55 Radiation Monitoring Instructions, as
19 an example that field monitoring and
20 contamination control programs were well
21 established and formalized by January 1, 1996,
22 but the document is dated January 4, 2000.

23 How can that be an example that these

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1 requirements are in place? LANL has a history of
2 being not in compliance. They had a number of
3 Clean Air Act violations prior to this. In 1989,
4 LANL had to start complying with the Clean Air
5 Act. In the years 1991 to '93, the EPA found
6 that LANL was in violation. Further, LANL lost
7 a lawsuit concerning Clean Air Act violations in
8 1994. The court ordered that LANL had to submit
9 to three audits, in order to get into compliance.
10 The last audit was completed in 1999, and it still
11 had findings that LANL needed to address.

12 Given the record of other programs,
13 which are similar, because this dealt with the
14 release of radioactive materials into the air,
15 and given the fact that they were in violation
16 post-1995, I think it's indicative that they
17 didn't follow the rules. I think there's another
18 presumption to be made that they did not comply
19 with 10 CFR 835. Thank you.

20 CHAIR MELIUS: Thank you. If I
21 understand this correctly, NIOSH is still
22 evaluating this. Is that --

23 MR. RUTHERFORD: Yes, NIOSH is

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1 reviewing the NC ID: 484, which we're pulling
2 that specific information. We're also in the
3 process of drafting a White Paper in response to
4 SC&A's review. This was one of the actions as
5 part of the Work Group meeting. In addition, we
6 are also -- the Work Group has asked us to pull
7 together a specific list of all the petitioner
8 concerns and the responses to those concerns, so
9 we are working on all of those. As soon as we
10 get the information from NC ID 484 from the site
11 and we've had a chance, we will make that
12 available to the Work Group and SC&A.

13 CHAIR MELIUS: So the plan would then
14 be to --

15 MR. RUTHERFORD: I would suspect that
16 depending on the outcome of that review, we would
17 either provide an update to the Work Group -- to
18 our position, based on that review, and then we
19 will -- with our response to SC&A's review -- both
20 of those items will support another Work Group
21 meeting, I'm sure.

22 CHAIR MELIUS: Assume it's okay with
23 the Board that we take no action. There's

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1 continued follow up going on of this SEC
2 recommendation from NIOSH, so we'll be coming
3 back to it. That concludes our -- you don't have
4 to listen to us too much anymore. It's our turn
5 to listen to you. Ted, do you want to go through
6 the instructions?

7 **Public Comments**

8 MR. KATZ: Hi, everybody. This is
9 pretty simple. As Jim said earlier in the day,
10 public comments will start with folks in the room
11 and with folks who are addressing LANL. Anyone
12 else in the room who signed up, but doesn't intend
13 to address LANL, should wait until we're done
14 with the LANL folks. Also, if there are folks on
15 the line that want to address LANL -- so LANL
16 comes first. Just for you to know, with your
17 public comments, a lot of people comment about
18 personal stories, family member stories, and so
19 on.

20 Everything the Board does is
21 transcribed and published on the NIOSH website
22 for all the public to read. You're welcome to be
23 as open as you want about yourself or other

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1 parties, but just understand that when you're
2 discussing other parties than yourself, that
3 information, we will redact it, meaning we will
4 cut out parts of it to protect the privacy of
5 those individuals because they're not here
6 speaking for themselves.

7 Hence, we have to protect their
8 privacy. That's something we have to do under
9 law. That's the only point. I just want you to
10 understand that context for giving your comments.

11 CHAIR MELIUS: I would just add to
12 that if there's something private, that you don't
13 want to say in the public comment period, sort of
14 let us know at the end or text one of the NIOSH
15 people or so forth to talk to them directly.
16 We're not trying to force people to tell all their
17 medical information or anything like that if they
18 don't wish to be identified as making public
19 comments.

20 PARTICIPANT: If we haven't signed up
21 already, can we still --

22 CHAIR MELIUS: Yes, I will --- no, I
23 will go through -- I'm assuming you're here to

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1 comment on LANL. What I'll do is we go through
2 who I believe to be the LANL people that have
3 signed up. Then I will open it up to -- I'll ask
4 whether there are other people from LANL here
5 that wish to make comments today. The list is
6 not controlling. I will try to sort of go through
7 and identify those, and then we'll do the best we
8 can. I'll tell you now, I'll probably
9 mispronounce people's names and the usual stuff.
10 Mispronounce mine, also, probably. First, we
11 have a representative from Senator Udall's office
12 here. We usually look to congressional people.
13 Michele. Yes, I think that's the one working.
14 You'll be the test on the new microphone. I will
15 just add that --

16 MS. JACQUEZ-ORTIZ: Thank you, Dr.
17 Melius. Good afternoon, Chairman Melius and
18 Members of the Advisory Board. On behalf of
19 Senator Udall, thank you for allowing me to speak
20 today, and also for coming to Santa Fe to hear
21 directly from New Mexico claimants.

22 Much, much appreciated that you all
23 came out here for this. As you know, Senator

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1 Udall has closely followed LANL's SEC petitions,
2 and the senator commends LANL petitioners
3 [identifying information redacted] and
4 [identifying information redacted] for their
5 tireless efforts in support of the two major LANL
6 petitions that have been approved.

7 The senator is especially grateful to
8 the Advisory Boards, its SEC Work Groups, its
9 Chair, Josie Beach, and the Board's contractor,
10 SC&A. You all have been thoughtful and
11 conscientious in your review of these petitions
12 and have navigated through the complicated issues
13 unique to LANL with just the right mix of
14 scientific scrutiny and adherence to the law,
15 while also exercising fairness and good common
16 sense. The senator is grateful to the Advisory
17 Board for its approval of these previous
18 petitions and understands the challenges involved
19 in the continued evaluation of the years 1996
20 through 2005.

21 It appears that there remains
22 important questions that deserve further
23 investigation. The senator hopes for approval of

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1 additional years to bring closure for many of his
2 constituents who are sick and dying while
3 awaiting the determination on their claim. He
4 urges the Board to recognize the need to
5 compensate these Cold War heroes for their
6 efforts on behalf of our nation.

7 Thank you for allowing me to speak on
8 Senator Udall's behalf and for your work to
9 ensure fairness and compassion in your decisions
10 that affect so many of these courageous Cold War
11 veterans. Thank you.

12 CHAIR MELIUS: Thank you. Thank you
13 for coming down. As Michele said, we've heard
14 many times from the senator and other
15 representatives about these issues. The next
16 person I have identified as related to LANL is
17 Danny [identifying information redacted]
18 Salazar. Are you still here? Okay. I don't
19 know if you're both commenting or just you.

20 MR. SALAZAR: Just me.

21 CHAIR MELIUS: Okay, fine.

22 MR. SALAZAR: My name is Danny
23 Salazar.

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1 CHAIR MELIUS: Get real close to the
2 mic.

3 MR. SALAZAR: Danny Salazar. I'm a
4 former worker at LANL. I don't think they were
5 compliant when I was there, between 1999 and
6 2010. I don't believe they were compliant
7 between 1999 and 2010 because I got sick up there
8 from working with this business. I have stuff
9 going on with my lungs and everything. I have a
10 claim open. They keep on denying my claim, and
11 I don't know why because I was doing all the PPE.
12 Whatever they told me to do, I was doing right.
13 I had trainings and all that stuff. We weren't
14 monitored at all times.

15 CHAIR MELIUS: Is your claim with
16 NIOSH or with the Department of Labor?

17 MR. SALAZAR: Department of Labor.

18 CHAIR MELIUS: You might want to talk
19 to somebody from NIOSH to see if they're covering
20 it or not. I'm not sure if they would be, but if
21 not, they can refer you to where -- Department of
22 Labor to check with on that. Go over there right
23 now. Stu's in the front row, standing up, so

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1 he'll be able to help you.

2 MR. SALAZAR: Thank you.

3 CHAIR MELIUS: Thank you. Tony
4 Sandoval. You look familiar.

5 MR. SANDOVAL: I hope so. Maybe the
6 name.

7 CHAIR MELIUS: No, I don't remember
8 names; I remember faces.

9 MR. SANDOVAL: Good afternoon, Dr.
10 Melius and Board Members. Thank you for coming
11 to New Mexico and listening to our concerns. I
12 am a former Los Alamos National Laboratory
13 employee, and I have been denied, based on dose
14 reconstruction. My main concern is that I worked
15 from 1973 to 1997 for the County of Los Alamos.
16 I was employed with the county as a pipefitter,
17 and eventually became a supervisor. During my
18 employment with the county, I was issued a Z
19 number. That's an ID number specific to Los
20 Alamos National Laboratory. This is the first
21 indication that I was actually on site more than
22 as a visitor. During my career at the county, I
23 was involved in the repair, maintenance, and

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1 installation of overall operations with the
2 water, gas, and wastewater systems.

3 It is important to know that even
4 today, the water distribution lines cross
5 boundaries between the County of Los Alamos and
6 LANL property. I was constantly on lab property,
7 working with LANL contractors and subcontractors
8 or water line issues. I was even issued a LANL
9 badge, uncleared, but nonetheless, I had a badge.
10 I know at least two other county workers, one who
11 provided electrical, and the other pipefitting
12 services.

13 The pipefitter was directly under my
14 supervision. Both filed under the program, and
15 both were awarded benefits. I supervised and was
16 denied. In addition, I obtained some affidavits
17 from LANL employees and county co-workers
18 attesting to the fact that I was on site
19 continuously while employed in the county. Their
20 affidavits were dismissed by DOL. After retiring
21 from Los Alamos County, I went to work for the
22 maintenance contractor to LANL, which was KSL.
23 However, this was after the 1995 cutoff date to

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1 the current cohort. While employed with the
2 county, myself and the employees at numerous
3 other county utility employees worked on site and
4 were exposed to the same radiation hazards as
5 LANL employees.

6 We were not monitored the same as LANL
7 workers, and we are now suffering from the same
8 cancers as LANL workers. There is substantial
9 information to verify that the county employees,
10 specifically water and electrical utility
11 workers, were under contract or under an
12 agreement to provide support and service to LANL.
13 This, too, was dismissed.

14 In addition, I have an Evaluation
15 Report from the county that states that I worked
16 closely with the fire department to maintain fire
17 hydrants, testing and repairing of the hydrants.
18 Fire fighters are covered, but utility workers
19 are not. I respectfully ask the Board seriously
20 to consider adding additional years to the cohort
21 to cover those workers who started after the 1995
22 cutoff date. Secondly, I respectfully request
23 that the DOE and DOL include county utility

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1 workers, in addition to the firefighters covered
2 for this department. Thank you so much.

3 CHAIR MELIUS: Thank you. Jim or
4 LaVon, do you know anything about the county
5 coverage? I don't think we encountered that
6 before and what the different arrangement was
7 with the fire department. Follow up. Mike Brown.
8 Mr. Brown.

9 MR. BROWN: Good evening. My name is
10 Curtis Michael Brown, but I'm known as Mike
11 Brown. Medically, I've been diagnosed or have
12 experienced squamous cell carcinoma. I've also
13 experienced a pleomorphic adenoma of the parotid
14 gland. Those are my two medical conditions. I've
15 been a rad worker, qualified rad worker, for over
16 25 years. I have a real brief point to make to
17 the Board, by the way.

18 CHAIR MELIUS: That's fine.

19 MR. BROWN: About ten of those at Los
20 Alamos National Laboratory. I'm primarily
21 addressing the principle behind dose
22 reconstruction. My primary comment is that dose
23 reconstruction for a cohort, something a larger

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1 population is a cohort, as LANL is a large cohort,
2 which is performed using complex algorithms, is
3 not time sensitive, cannot be time sensitive to
4 the mission at hand for those particular people
5 within the cohort, for those individual
6 populations within the cohort. For example, high
7 intensity periods, such as Cold War production
8 and that, represent periods of high exposure,
9 obviously.

10 Those can't be compensated for
11 adequately with the current algorithms that we
12 use. I would suggest to the Board that even the
13 most conservative algorithms cannot reasonable
14 reconstruct our doses. I would also suggest that
15 prior to DOELAP certification and the
16 implementation of thermoluminescent dosimeters,
17 our dosimetry was fundamentally an action of
18 dosimetry and, by its very nature, grossly
19 inaccurate as the kind of exposures that we're
20 talking about within regulations today. That's
21 my comment. Thank you for your time.

22 CHAIR MELIUS: Thank you. I have a
23 name that I cannot read the last name, so Lana

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1 Carver. Okay, I'll come back to you. We'll have
2 time. We're going to be here until we're done.
3 Miguel Virgil.

4 MR. VIRGIL: Miguel Virgil.

5 CHAIR MELIUS: Yes, Virgil, okay.

6 MR. VIRGIL: Good afternoon. I,
7 myself, as well, worked for Los Alamos County
8 from 1978 until my retirement in 2003, and then
9 after that, I also worked for Camp Dresser & McKee
10 on the burnt area reconstruction. I was involved
11 with utilities, electric distribution systems
12 throughout the county.

13 We did a lot of what they called
14 conversion from overhead to underground. We dug
15 in a lot of areas where we came across different
16 materials and stuff like that. Then after the
17 digging, also, we noticed that LANL went back in
18 there with their equipment and removed a lot of
19 the materials and stuff, and they were putting
20 them in tarped trucks and stuff and covering them
21 up, basically, to try and keep contamination from
22 spreading.

23 I also, when I worked as a utility

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1 worker with electric distribution, was sent out
2 on back charges to do work within S site. We
3 would take equipment out in there and do as we
4 were told, and the job got done. As my co-worker,
5 Tony Sandoval, says, a lot of us aren't like the
6 firefighters that are being covered under these
7 situations, but we ask that the Board does
8 consider because during the Cerro Grande fire, we
9 spent 11 days straight out there trying to keep
10 the power lines operable and fired up, so that we
11 could run the wells to protect property, home,
12 and lives.

13 We were exposed to all that smoke and
14 everything else. We didn't have SCBAs on or
15 anything like that. We just went out and did our
16 jobs. As a result of that, one of my co-workers
17 has already suffered from cancers and stuff like
18 that and has to put a claim in. Thank God he was
19 accepted into the Patriot Program, but maybe a
20 lot of us will be passed up just for that reason.

21 I don't think it's fair because, like
22 I say, a lot of the areas that we dug within, I
23 noticed after the fact, while I was still

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1 employed by other companies up there, that LANL
2 went in and removed more material. So the
3 material was being removed for a reason, which we
4 had already been in that area digging around.
5 The contamination is there. Thank you so much.

6 CHAIR MELIUS: Okay, thank you.
7 Still, you can correct me if I'm wrong, but the
8 Department of Labor and the Department of Energy
9 decide which groups are covered, in terms of
10 employers, but we can follow up and find -- which
11 we do on -- all comments here we do follow up on
12 and so forth. I actually have -- Tony, I have
13 your email address, so we'll have somebody get
14 back to you and find out why there's this
15 discrepancy on coverage, and then follow up.
16 Meanwhile, we're going to be working on the
17 post-'95 period. Okay, thank you.

18 MEMBER BEACH: You mentioned that you
19 were badged. Can you tell me who badged you?
20 Was it LANL, or was that through the county?

21 MR. SANDOVAL: I was a county
22 employee, employed by the County of Los Alamos.
23 They issued an uncleared LANL badge, which I

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1 still have. It has been sent with the records
2 and files that you have all the paperwork in
3 there, and I was still denied, for whatever
4 reason, but I do have a Z number and a badge that
5 was issued to me back then.

6 CHAIR MELIUS: It is a -- you had to
7 have some connection there, obviously to --

8 MR. SANDOVAL: But I was still denied,
9 for whatever reason. It's been denied a couple
10 of times already. I have several witnesses and
11 paperwork showing and stating that I was there
12 and indicating that I was in the LANL property
13 several times.

14 CHAIR MELIUS: Let us find out and get
15 back to you on that. Jerry Fuentes.

16 MR. FUENTES: Yes, my name is Jerry
17 Fuentes. I worked at Los Alamos National
18 Laboratories from '74 to 1985. While I worked
19 there, I was contaminated with 197,000 picocuries
20 of plutonium-239, weapons grade. As we all know,
21 special nuclear materials can migrate. They can
22 travel.

23 While I was working in a non-plutonium

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1 analysis section, analyzing uranium fuel rods, I
2 somehow ingested 197,000 picocuries of weapons
3 grade plutonium-239. Again, six months before
4 that, while working on fuel rods, the person that
5 was next to me was working on some impact spheres
6 for the plutonium batteries that work in outer
7 spaces. These impact spheres had been
8 contaminated. The supervisor brought them in.
9 He didn't test them for contamination. I was 50
10 feet away. I got 50,000 counts alpha particles,
11 millirems, on my face. I took that to the bar
12 and the health physics professionals had to go
13 and find me up there. They had to test the bar
14 to see if the bar didn't have any contamination.

15 It was all in my face. Then the person
16 who was in charge, who was the supervisor, who
17 gave us the sample to analyze, took it home,
18 contaminated his wife, his girlfriend, the dog,
19 the cat, the refrigerator and everything else.
20 Plutonium and uranium can travel. It can travel
21 humanly. In fact, just the other day, I was on
22 airline.

23 The safety director was on an airline,

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1 on a commercial airline. He had weapons grade
2 239 on an airline. The other thing about Los
3 Alamos is there's a lot of chemicals there. You
4 have PCBs, and you have TCBs that I worked on, in
5 the laboratory, on analyzing it. Those things
6 can get out just as easily as the ionizing
7 radiation and everything else. I've had three
8 cancers. I'm glad I'm one of the lucky ones. I
9 was accepted. But I had two primaries and a
10 secondary cancer. You need to cover all the
11 cancers. You need to cover the chemically
12 induced cancers, and you need to cover all the
13 people here who are hurting for this stuff that
14 you've been giving us. You released into the
15 air. I saw you. I've been working there for a
16 long time. Thank you.

17 CHAIR MELIUS: Thank you. Just to
18 clarify, this program does not cover the chemical
19 exposures, but the Department of Labor program
20 does, in parallel to this program. Felicia
21 Crull.

22 MS. CRULL: My voice should carry
23 anyways, right?

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1 CHAIR MELIUS: Well, speak in the mic,
2 please.

3 MS. CRULL: Is that good?

4 CHAIR MELIUS: That's good.

5 MS. CRULL: Dr. Melius and Board, my
6 name is Felicia, and I'm accompanied by my
7 brother, [identifying information redacted], and
8 my sister, [identifying information redacted].
9 Our father's name was [identifying information
10 redacted], and he passed away January 30th this
11 year from mantle cell lymphoma. We have filed a
12 claim that is proving difficult to satisfy the
13 criteria of hours. He worked as a phone installer
14 for Mountain Bell, and then AT&T. In this
15 capacity, he was contracted to work at LANL. DOE
16 records show that he was working as a
17 subcontractor in June 1993. Also, those records
18 indicate that he was only issued dosimetry badges
19 on four occasions.

20 Those badges shouldn't be used to
21 establish on-site presence, as they're only
22 issued when the person would be in areas
23 identified at that time as potentially exposing

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1 people to external radiation. There are records
2 documenting that our father submitted a technical
3 area badge request through LANL in May 1993. This
4 would allow him access to perform work on site in
5 the video teleconferencing center.

6 But there's also documentation that
7 our father worked in many technical areas that
8 were exposed to radiation. In addition to all of
9 those records, most compelling is that our dad
10 was granted a Q clearance as early as 1987. Then
11 there were subsequent re-investigations in
12 February '91 and May '96 to update and maintain
13 his clearance status. Should our dad have
14 separated as a person no longer requiring access
15 to the labs, the clearance badge would have been
16 surrendered, and his Q clearance would have been
17 inactivated, but the clearance was active for
18 nine years. In all that time, he was issued
19 dosimetry badges only on four occasions.

20 This tells us that perhaps the labs
21 and the DOE were not fully aware of the concerns
22 in all of the areas where people did actually
23 experience impactful exposure to radiation. This

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1 lack of awareness on them resulted in not
2 monitoring exposure in areas that may have
3 ultimately exposed people to radiation, which may
4 have contributed to impacting their health.

5 Because the dosimetry badges may not
6 have been used in all of these areas that may
7 have ultimately resulted in impacting their
8 health, we respectfully request that you review
9 the criteria considered for establishing the
10 causative nature of impacts to the health of
11 people who work at the labs, who may not have
12 been appropriately monitored. Thank you for your
13 time.

14 CHAIR MELIUS: Thank you. You might
15 want to talk to the people from NIOSH, Stu
16 Hinnefeld, in the first row, just to get some
17 follow up on the individual application. There
18 may be some other information that isn't clear or
19 something that might help in terms of that claim.
20 Stu or somebody from the program would be able to
21 help you get in contact and get more. It's not
22 just us changing things or criteria changing.
23 There might be other things that could be done,

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1 also. I have a Carl Lea. Okay. Pat Valerio,
2 J.F. Pat Valerio.

3 MR. VALERIO: My hearing is really
4 bad.

5 CHAIR MELIUS: Okay. Go ahead and
6 speak.

7 MR. VALERIO: I was refused because I
8 only had 50 percent of my prostate cancer. Johns
9 Hopkins recommended that I put in for workmen's
10 compensation because of my hearing loss because
11 of my exposure to chemicals. So what can I hear
12 from you?

13 CHAIR MELIUS: If it's an individual
14 claim, I would go over and talk to somebody from
15 NIOSH over here. It helps to turn the microphone
16 on. Okay. William Hardesty. You've been on the
17 edge of your seat there. I'm glad we got to you
18 here.

19 MR. HARDESTY: Thank you.

20 CHAIR MELIUS: Yes.

21 MR. HARDESTY: I'm a retired chemist
22 from Los Alamos. I have experience in the
23 environmental restoration program, and also on

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1 TA-54, Area G, and the domes. I was a little
2 surprised to hear that the domes were not
3 mentioned very much tonight. TA-55 was mentioned
4 as a possible exception to violations or
5 misconduct after 1995, but I think I have some
6 firsthand anecdotal evidence that things were not
7 great after 1995.

8 In the interest of full disclosure, I
9 do have lymphoma and leukemia. I've been
10 accepted into the Part E section for my solvent
11 exposures, but I missed the special exemption by
12 two months in 1995. The poured gas at Area G,
13 there's a free chemical waste dump. I know that
14 this is a rad discussion, so I'm only bringing up
15 the chemicals as it relates to tritium. But the
16 free liquid waste dump at Area G, where they
17 poured hundreds of thousands of gallons of liquid
18 into the volcanic tuff, is loaded with tritium.
19 I sampled that poured gas plume for many years,
20 between '95 and into the 2000s. The Area G is
21 loaded with tritium.

22 I never had a respirator, and they're
23 still doing the work out there without a

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1 respirator, so that's one thing I want to
2 mention. The other things I want to mention is
3 the drums at Area G were -- they started to put
4 the septum drums in, in the early 2000s, but when
5 I was running the headspace gas
6 laboratory -- here, I think I need to digress a
7 little bit because with the drum that exploded at
8 WIPP, to say that LANL is compliant with health
9 and safety issues after 1995 is bordering
10 ridiculous.

11 I have firsthand experience with
12 procedures where the chemists and the physicists,
13 their names are reviewed from the signature page
14 on procedures because they wouldn't agree to the
15 procedures. I have firsthand knowledge of this.
16 When I started the headspace gas laboratory
17 because they couldn't ship any drums in the early
18 2000s, we were using an instrument where we
19 brought the drums to the instrument. The
20 personnel had to sit with the drums for 12- and
21 13-hour shifts. I came up with a method, using
22 off-the-shelf technology, so that we could use
23 small glass-lined containers, mini summa

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1 canisters, if you will, and these canisters would
2 allow us to go in and sample the drums very
3 quickly, and then take our samples back to the
4 mass spectrometer.

5 When I brought up the ALARA concerns
6 in my quest to purchase the new equipment, so
7 that my personnel didn't have to sit with the
8 drums for 12-and 13-hour shifts, I was told by
9 the DOE -- and I have witnesses to this because
10 there were many people at this meeting -- F ALARA.
11 I just think it is ridiculous for anyone to say
12 that LANL was compliant from a radiological
13 safety point of view, starting in 1996. I just
14 have a few other points.

15 CHAIR MELIUS: Go ahead.

16 MR. HARDESTY: Wicker (phonetic), Vant
17 (phonetic), the headspace gas lab in the middle
18 of the domes, Dome 33, these all had tritium,
19 strontium, cesium, europium, and many calibrated
20 sources. The dosimeter is not going to pick up
21 the alpha emitters. Also, there were areas that
22 I worked in, the passive activation neutron
23 counter, which was near Wicker, no one ever wore

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1 PPE or rad protection in the general vicinity of
2 that machine. That was a neutron emitter.

3 The CTN counter in Area TA-54, where
4 my headspace gas summa canister gauges were
5 calibrated, also had sources that were emitting
6 alpha waves. I want to stress again that the
7 transuranic waste drums in the domes were -- up
8 until the early 2000s used metal clips to prevent
9 the hermetic closure of the drums and allow
10 radiological generated hydrogen to escape, and
11 also to allow plutonium oxide to escape.

12 It wasn't until well into the 2000s
13 when this was remedied. I probably have some
14 other points, but I'm nervous. I'm a little
15 bitter, and I think I've made some of my
16 most -- most of my concerns made clear.

17 CHAIR MELIUS: Thank you very much.
18 If you're willing, you might want to talk
19 to -- either from NIOSH or Joe Fitzgerald, who's
20 sitting next to you -- give your contact
21 information, and they can interview you and get
22 more information, again, if you're willing.
23 Okay. Joe's right there, with the blue tie on.

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1 Got to put him to work, also. Thank you very
2 much. Anybody in the audience who wishes to
3 comment on LANL that we haven't already talked
4 to? Then you, in the back, too, go ahead, come
5 on up.

6 MS. ULIBARRI: Hi.

7 CHAIR MELIUS: Just identify
8 yourselves.

9 MS. ULIBARRI: Yes, I will. Thank you
10 for the opportunity. I'm not going to pretend to
11 tell you that I understand everything you're
12 talking about because it is not of the world in
13 which I live. But this man standing next to me
14 has been my husband for 21 years.

15 The reason we walked into the meeting
16 late is because we've been at UNM Cancer. He's
17 got pancreatic cancer. He worked at Los Alamos
18 as a plumber, pipefitter. He wrote pages of
19 things that he saw and violations he was aware
20 of, doing terrible radiological rad drains and
21 that sort of thing, cleaning things out. This is
22 a man who is 110 pounds lighter than he was. He's
23 a rancher. He's from New Mexico born and raised,

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1 virile and strong. He's standing before you now.
2 He's a sick man. All I ask is possibly that all
3 of you will please consider expanding the date
4 range that you have put in place before.

5 He falls short by a year. We've been
6 denied. I have bigger battles to deal with than
7 this, and I was asked to come. Because I'm proud
8 to stand next to this man, I ask you please for
9 your consideration.

10 CHAIR MELIUS: Thank you, and we
11 appreciate you coming. You have every reason to
12 be proud.

13 MS. ULIBARRI: Say that again.

14 CHAIR MELIUS: I said you have every
15 reason to be proud.

16 MS. ULIBARRI: Thank you.

17 MR. ULIBARRI: My name is Gilbert
18 Ulibarri, and I worked in Los Alamos for a number
19 of years. Lo and behold, I am a
20 plumber/pipefitter. I don't know if I stepped on
21 anybody's toes up there or what. I did stop a
22 couple of jobs because they were pretty
23 dangerous. I was brought into some conferences

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1 as to why I'd done that. I have lost a lot of
2 weight. I do recommend that people out there
3 take care, and they turned me out -- and I worked
4 on a drain line for eight months that had any and
5 every chemical you can think of up in Los Alamos.
6 Until I seen the vapors coming out of there like
7 mad one day did I ask a person what was that. He
8 said don't worry about that.

9 That's just mercury vapors coming out
10 of there, when I'm cleaning the drain for eight
11 months right there -- unbelievable. Then I said
12 I'll just go to the right people. Lo and behold,
13 it took a long time, and they're still not
14 accepting my case, although I'm having to pay for
15 all my doctor visits and treatment and
16 everything.

17 I just thought I'd mention it to you,
18 that people on all those jobs that are going to
19 be done pertaining, especially, to those drain
20 lines, that they have them checked out before
21 they send the people in there to clean them out
22 because that is dangerous. That's all I've got
23 to say. Thank you.

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1 CHAIR MELIUS: Thank you very much for
2 coming. You'll be next.

3 MR. MEDINA: My name is Ignacio
4 Medina. I worked at Los Alamos for 38 years as
5 a machinist. I worked on the Mesa, basically,
6 when I got out of the machinist program. I worked
7 on the beam line, making plugs. I would go into
8 the beam line constantly. They used to make big
9 steel plugs to put in there.

10 From there, I worked in different
11 areas of the lab. I worked at SM-40, where one
12 time, they asked me if I can make some calibration
13 instruments for their radiation instruments,
14 dosimeter badges, wherever they went and dealt
15 with radiation. In doing so, I had to lean over
16 the radiation storage to calibrate the distance.

17 I worked on this for about three to
18 four months. This is probably in 1999 or around
19 that 1998 to 1999 time period. In 2000, I came
20 up with testicular cancer on my left side, and I
21 had to have it removed. Now I have a cyst in my
22 left kidney. But they say testicular cancer
23 isn't covered in your brochure, but ovarian

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1 cancer is. Ovarian cancer is within a woman.
2 Testicular cancer is external. How do you
3 explain that to me? I've had both my knees
4 replaced standing on concrete for 38 years
5 working in the machine shop. If you ever seen or
6 anybody working in a machine shop, especially in
7 the early years, since 1974, when I started
8 working, their pads were very thin. Now, when I
9 was ready to retire, they started getting thicker
10 pads to help protect your legs and your knees.

11 I would work from eight to ten hours
12 a day, sometimes six days a week, on concrete.
13 Recently, I had to go through double knee
14 replacement. Of course, the lab's not going to
15 cover that. Thank God Medicare did. I've had to
16 go through -- and I lost my hearing. Sure, I'll
17 get free hearing aids for the rest of my life,
18 but I get no compensation for it.

19 I've lost a lot of my hearing, my
20 knees, a testicle, and I still have a cyst in my
21 left kidney. I can't get anywhere. The lab
22 doesn't want to cover anything. I was a loyal
23 employee for 38 years.

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1 CHAIR MELIUS: Thank you. This
2 program only deals with the cancer.

3 MR. MEDINA: Well, I had cancer.

4 CHAIR MELIUS: I know, and I would
5 suggest you go over to talk to the people from
6 NIOSH and they can explain the process and so
7 forth for applying for that --

8 MR. MEDINA: Thank you.

9 CHAIR MELIUS: -- in terms of coverage
10 and so forth.

11 MS. MARTINEZ: Good evening. My name
12 is Gina Martinez. I'd like to thank you all for
13 being here. I'm a local advocate for EEOICPA.
14 I've been doing it now for about eight years.
15 I'm also a medical radiology professional. I
16 worked at Los Alamos from 1990, as an
17 undergraduate student, and '94 to '99 at TA-55
18 and in various areas. I worked for the rad worker
19 ESH-1 program.

20 I'd like to start my comment today
21 about most recent news, going back to
22 assumptions. This came out CBS news on Friday.
23 U.S. regulators to investigate after Los Alamos

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1 lab improperly shipped nuclear material.
2 Albuquerque, New Mexico, U.S. regulators said
3 Friday they are launching an investigation into
4 the improper shipment of nuclear material from
5 the laboratory that created the atomic bomb to
6 other federal facilities this week, marking the
7 latest safety lapse for Los Alamos National
8 Laboratory, as it faces growing criticism over
9 its track record. The National Nuclear Security
10 Administration said it was informed by the lab in
11 New Mexico that procedures were not followed.
12 This is 2017. These were shipping small amounts
13 of special nuclear material to the facilities in
14 California and South Carolina.

15 The material had been packaged for
16 ground transport, but instead, it was shipped via
17 commercial air cargo service, which isn't allowed
18 under U.S. regulations. Los Alamos -- this is
19 written in red, CBS news -- Los Alamos ignores
20 warning signs again. Tests done on the shipments
21 once they arrived at their destinations confirmed
22 no contamination or loss of radioactive material,
23 officials said, thank goodness.

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1 But it comes as criticism has been
2 intensifying over the history of safety lapses at
3 Los Alamos, as work ramps up to produce key
4 components for the nation's nuclear weapons
5 cache. This failure to follow established
6 procedures is absolutely unacceptable,
7 [identifying information redacted], head of the
8 National Nuclear Security Administration said in
9 the statement. The agency oversees the lab and
10 other facilities that make up the U.S. nuclear
11 complex. Contractors who manage the labs,
12 production plants, and waste repositories are
13 required to rigorously adhere to what
14 [identifying information redacted] called the
15 highest safety and security standards as part of
16 their national security work.

17 As a local advocate, I thank you all
18 because I have a lot of clients who have been
19 through the program. They've been accepted. I
20 thank you, and they thank you. However, there is
21 the people after '95-'96 that come to me, and I
22 try. I ask for the Department of Labor to
23 reconsider, and they get the 46.7 points from

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1 NIOSH, and they don't meet the criteria. I need
2 to know how to help these people because I worked
3 in '96.

4 I worked at TA-2, the Omega site
5 reactor, when they were decommissioning the
6 reactor. I was sent from TA-55, where that was
7 the most compliant place, while I was there, in
8 my six years. I went to TA-2. There were no
9 monitors. CAM alarms weren't even on most of the
10 time. They weren't even working. So the
11 continuous air monitors, right where the fuel
12 rods were kept, weren't working. Step off pads,
13 when we'd leave TA-2, hadn't been changed in
14 months. So my supervisor -- I was, at the time,
15 one of the lead techs at 55. I got detailed to
16 several areas. These are the areas I can recall
17 because it's been several years.

18 TA-50 was one, TA-54, Area G -- I was
19 at Area G, too. In fact, I remember you
20 there -- TA-18, in the kivas, TA-48, where a lot
21 of exotic radionuclides were being used in the
22 hot cells in the areas, TA-48, again, they were
23 not compliant.

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1 I was sent out there to help establish
2 the program, and it was in 1997 to '99 because I
3 left LANL in 1999. I remember working at TA-21
4 when they were tearing down the buildings, and
5 these were subcontractors. I don't remember,
6 ever, as an RCT, checking them, making sure they
7 were okay.

8 I don't remember going to Area G and
9 getting, again, subcontractors and making sure
10 the people that were working there were all being
11 monitored. I specifically remember going to
12 those areas and the laboratory not being in
13 compliance. Going back to this assumption, we
14 cannot -- not that we cannot assume, it was not
15 being done in 1996, up until the latter part of
16 '99, when I was there. Because I was detailed to
17 these several areas as a radiation control
18 technician, working with ESH-1, the rad program.
19 I'd like for you all to reconsider -- I'm not
20 sure what years you want to increase, but it was
21 not done in '96. I thank you again for your hard
22 work and for being in New Mexico. Appreciate
23 you.

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1 CHAIR MELIUS: Okay, thank you.
2 Anybody else that wishes to comment on Los
3 Alamos? Yes.

4 PARTICIPANT: I definitely did not
5 intend to come up here because I tend to be a
6 little shy, but after listening to the other
7 people, I've got to tell you, I was a property
8 auditor, which means I went everywhere. When I
9 first started my claim, before Johns Hopkins
10 checked me, I had a brain tumor, but foolish me,
11 I always thought they're watching after me.

12 But who's going to watch after an
13 auditor? I'm going to write them up. That's
14 just -- I have to be funny about it because it's
15 very depressing. One of the questions that they
16 kept asking me, did you ever have ear plugs? Did
17 they ever give you a gown? Did they ever give
18 you booties? Did they ever put a mask on you? I
19 went into some attics that were so full of dirt
20 and crap, and heaven knows what was in there.
21 Anyway, I did get sick. Eventually, the tumor
22 left, but I was told by the neurologist it could
23 come back. Again, I'm having trouble, so I filed

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1 again.

2 I've just put the claim in with the
3 Department of Labor. My concern is just because
4 I look fine doesn't mean I'm okay. Doctors have
5 said that tumor could just bust, and that's it,
6 and then I'm gone. I had the choice of removing
7 it and given a 50/50 chance of being blind or
8 totally disabled. I know this is not what you
9 want to hear, here, but I have to say it.

10 In 1996, they had a big layoff. One
11 of the criterias, you were not supposed to be
12 considered if you had ever filed a grievance or
13 was sick. The thing that was told to me, that I
14 didn't have the number of days that most people
15 with my years -- I worked from '76 to 1996, and
16 I had all that. I had filed a grievance, and I
17 was ill. I just want to -- I didn't even think
18 of what I wanted to say, but the more I hear the
19 other people speak, I realize I'm not alone. I'm
20 not positive what they're doing, but all
21 these -- I was foolish to work there without all
22 that coverage and thought they were taking care
23 of me. LANL does not take care of their

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1 employees, never has and never will.

2 CHAIR MELIUS: Thank you. Thank you
3 for your comments. Go ahead.

4 MR. SANCHEZ: My name is Ivan Sanchez.
5 I was employed for Los Alamos County from 1986 to
6 2006. I work in the utility department. I was
7 a lineman. Thank God, I was accepted to the
8 program, and I was awarded, but I had
9 non-Hodgkin's lymphoma cancer. I had Stage 3.
10 The thing about it is I'm able to speak for the
11 other people because they need that help. I went
12 through a living hell.

13 My family -- my girlfriend quit her
14 job to take care of me. I was weighing 105
15 pounds. I was doing five chemo treatments every
16 two weeks. I'd go in at 8:00, come out at 5:00.
17 I would sleep sitting down, throwing up for a
18 full year. It just --- don't ask what it does to
19 your family, what they have to endure when you're
20 sick like this. Like I say, I'm very grateful to
21 my Lord that I'm in -- I can't even speak because
22 I get tied up. Thank God that I had a good
23 family, supporting friends. My boss prayed for

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1 me. My advocate, Loretta Valerio, [identifying
2 information redacted]. I am so grateful to them.
3 They have done a wonderful job for me. But like
4 I said, I'm here to speak for Los Alamos County
5 workers because we were part of that.

6 I fought in the Cerro Grande fire, me
7 and my boss, side by side, up in the buckets, up
8 on hooks, rerouting lines to keep the wells going
9 to fight the fires. We didn't have the protection
10 like the LANL workers did, the linemen. We were
11 working side by side in all that. We weren't
12 properly trained. We didn't have the monitors to
13 monitor us.

14 But, like I say, I -- and the
15 long-lasting effects that it has on you, I'm
16 still very sick. Now I have neuropathy. It
17 affected my senses, my eyesight. It took a lot
18 of my eyesight, my taste, everything, the chemo
19 part of it. What people don't understand, the
20 chemo keeps you alive, but it kills everything
21 good in you. It's a long lasting thing. It just
22 doesn't go away. This is something that you live
23 for. I'm only 51. I'm not half the man I used

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1 to be. I was very active. I was very strong,
2 athletic. I can't do all that anymore. Thank
3 you for your time. Thank you so much.

4 CHAIR MELIUS: Thank you very much.
5 Yes, sir, come on.

6 MR. WALSH: My name's Elton Walsh. I
7 worked up at Los Alamos from about 1973 until
8 2003. I got sick. I am in the program with lung
9 disease, but recently, I wanted to apply for
10 hearing aids because my hearing's getting real
11 bad. My craft is not listed on your list of
12 crafts that are covered for hearing loss. I
13 wanted to know why our craft is not listed.

14 CHAIR MELIUS: That's not our list.

15 MR. WALSH: It's not your list?

16 CHAIR MELIUS: That's not our list.
17 We just deal with cancer.

18 MR. WALSH: Oh, okay.

19 CHAIR MELIUS: I don't know if this is
20 a workers' compensation that you've applied to or
21 Department of Labor.

22 MR. WALSH: Department of Labor, but
23 our craft is not listed, and it should be listed

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1 because we worked up there since the '40s.

2 CHAIR MELIUS: I think you need to
3 follow up with them.

4 MR. HINNEFELD: Yes, there are some
5 chemically caused hearing loss problems, and
6 Labor makes some determination like that. I
7 don't know what they are, exactly, but that is a
8 Department of Labor issue.

9 MR. WALSH: They talk about the
10 pipefitters, painters, and a lot of the crafts,
11 but ours wasn't listed. I don't know if we had
12 any representation when all this came down or
13 what happened there. I would like, at least,
14 them to look at our craft.

15 CHAIR MELIUS: I know they're
16 re-looking at those lists. There's another
17 separate advisory for that.

18 MR. WALSH: Who is that?

19 CHAIR MELIUS: For the Department of
20 Labor's program in that.

21 MEMBER BEACH: Jim, this gentleman is
22 here to help him.

23 MR. WALSH: Thank you.

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1 CHAIR MELIUS: There's a Member of the
2 Advisory Board in the back there.

3 MR. BUSTOS: Hello. My name is Eric
4 Bustos. I just lost my father to cancer. We're
5 having a hard time with getting compensated for
6 it. He also was a plumber through the lab at Los
7 Alamos. Also, I work with these gentlemen as a
8 county employee. While we were working there, I
9 did snow removal.

10 We were on top of Omega Canyon.
11 Throughout this whole time that we'd get called
12 out, we'd see the vapors coming out through the
13 ground. Nothing was ever told to us not to be in
14 those areas because it was fine. We were called
15 out at 2:00-3:00 in the morning, and we'd work
16 12-hour shifts, 14-hour shifts, sometimes 20-hour
17 shifts.

18 These guys would sleep on the job,
19 right there at the place. They were on call 24/7.
20 They'd spend the night there for a week at a time
21 or whatever. They were there, so they were
22 getting all those fumes into the areas where
23 their sleeping quarters were, so I know where

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1 they're at. We're having a hard time getting
2 compensated for my father because he got
3 beryllium in his system, and he had -- he's been
4 dead almost a year now.

5 CHAIR MELIUS: Did he work for the
6 county or for the --

7 MR. BUSTOS: For the lab.

8 CHAIR MELIUS: -- for the lab? Why
9 don't you talk to Stu or one of the people -- Stu
10 Hinnefeld, one of the people from NIOSH, just can
11 follow up on the claim. I think that would be -
12 - yes, sure, come on.

13 MR. GARCIA: I'm Robert Garcia. I
14 work security for Los Alamos from 1980 to '86. I
15 have skin cancer. Why is skin cancer not in the
16 list for the --

17 CHAIR MELIUS: That was what was in
18 the original legislation. So when Congress
19 passed that list, the SEC cancers, skin cancer
20 was not included. We can't change that.

21 MR. GARCIA: I also had a liver
22 transplant. Does that have to do anything with
23 the chemicals (Simultaneous speaking).

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1 CHAIR MELIUS: Not unless it was
2 related to -- it could be related to chemicals,
3 and that would be -- the Department of Labor's
4 program covers the chemical ones. Skin cancer's
5 covered under other parts of the NIOSH program.
6 Again, if you want to talk to Stu or Jim Neton or
7 one of the people from NIOSH, they can probably
8 explain to you. It would depend on your amount
9 of exposure.

10 MR. GARCIA: I figure cancer is
11 cancer. There's no good cancer.

12 CHAIR MELIUS: We're not saying there
13 is, but again, when they passed the law, they
14 limited it to only what they thought were the
15 most likely types of cancer from radiation.

16 MR. GARCIA: Right, thank you.

17 CHAIR MELIUS: Thank you.

18 MR. GARCIA: Who do I talk to?

19 CHAIR MELIUS: Stu's right there.
20 Anybody else wishing to comment relative to LANL?
21 If not, I'll go back to the other list. People
22 from LANL are welcome to still stay around, but
23 don't have to. We're not insulted if you have

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1 other things to do. Albert Frowiss, Sr. I knew
2 he was senior.

3 MR. FROWISS: That's junior there.

4 CHAIR MELIUS: Yes, I know.

5 MR. FROWISS: I'll just make a very
6 brief set of comments. First part, my name is
7 Albert Frowiss, Senior, in Rancho Santa Fe,
8 California. I've done 3,000 Department of Labor
9 EEOICPA cases, 800 of them in New Mexico, so it's
10 mostly LANL and Sandia workers, mostly cancer
11 claims, but other claims, as well, asthma,
12 respiratory issues, kidney, etc.

13 The real reason I wanted to ask you
14 some questions, or at least provide some input,
15 I got started in this program ten years ago. My
16 dad had been at Enewetak when I was in high
17 school. He was in Operation Redwing, which was
18 in 1955-56.

19 He got sent back with open cancer
20 lesions all over his face and head and died 40
21 years later of lung cancer. I discovered this
22 law about ten years ago and did a claim for my
23 mother, and then decided to help other people, so

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1 I've done 3,000 cases since then. You
2 mentioned -- the gentleman mentioned, on the
3 Pacific Proving Grounds presentation, the four
4 major PPG sites, but he also said other Pacific
5 sites. I'm not aware that any other Pacific site
6 is included in the Pacific Proving Ground SEC, so
7 I'm baffled about that comment about other
8 Pacific sites.

9 I know there were tests in other parts
10 of the Pacific Ocean, but they were not part of
11 Pacific Proving Grounds. That's one of the
12 issues I wanted to question. I've done 450
13 Pacific Proving Ground cases, most of them, in
14 fact. It covers Johnson Island, Christmas Island
15 Enewetak Atoll, and Bikini Atoll.

16 One of the things that I wanted to
17 point out is because I've done 450 cases for
18 Pacific Proving Grounds, I've talked to 450
19 people that worked there, and probably more than
20 you've talked to that worked at Pacific Proving
21 Grounds.

22 I know that from conversations with
23 scores and scores and scores of these people,

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1 they hid their dosimetry badges. They put them
2 between lead bricks because they didn't want to
3 go home. Because if they got too much radiation,
4 they'd be sent home. That was a common practice.
5 Everybody went along with it. Those were the key
6 things I wanted to talk about. I do want to add
7 some comment after another person speaks, but
8 that'll be later in the day.

9 CHAIR MELIUS: Why don't you finish
10 your comments? It's easier for us.

11 MR. FROWISS: All right. Well, I
12 wanted to -- one of the other advocates is going
13 to speak about another issue, and I just want to
14 be able to add a comment to that later. If not,
15 it's no problem.

16 CHAIR MELIUS: Okay. Next is John
17 Sadler. Is John still here? I can't --

18 MR. SADLER: Yes.

19 CHAIR MELIUS: Yes, there you are.

20 MR. SADLER: My name's John Sadler. I
21 worked at Fernald. There's a chemical engineer
22 that was there. His name is [identifying
23 information redacted]. Stu knows him very well.

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1 He's a subject matter expert of everything that
2 went on and came in those doors and went out those
3 doors. He wanted me to pass this out to the Board
4 because he's going to call in on a phone comment
5 later, so you know what he's talking about. Is
6 it okay to give you this? This is a study of
7 former Fernald workers. This is a study that was
8 done by NIOSH in 2013 about Fernald workers. I
9 know when they do dose reconstruction, they don't
10 use the cancer rate in the general population to
11 do that. In this study, they did, and there was
12 some astounding figures in that.

13 Is it okay to pass that out? I don't
14 really know how to start this because I was
15 planning on whatever was voted on this morning
16 didn't happen, but it did. Am I correct on that,
17 that you all voted down the SEC petition to go to
18 '89? Is that correct? Okay. That's correct,
19 right? There's things in here where I would ask
20 the Board to consider that petition, so I'll
21 leave that out. I want to thank you for the
22 opportunity to come here today. [identifying
23 information redacted] will be calling you later

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1 and talking about the handout you received. He
2 was a chemical engineer at Fernald. My name is
3 Jack Sadler, and I worked at Fernald from 1982 to
4 2003. Half of that time was a millwright, the
5 other half as a maintenance supervisor. My being
6 here is to be a voice for the many Fernald
7 workers, both past and present. There are many
8 workers and their families that have experienced
9 devastating illnesses that have taken a toll both
10 emotionally and financially. Then, I've got
11 another section about SEC years for contractors
12 at Fernald.

13 I'll leave that out, since you voted
14 that down this morning. Anyway, this is a
15 comparison of the SEC years to non-SEC years. A
16 lady lived next to me that worked at the plant
17 for many years, and she worked there before 1978.
18 She had glioblastoma, cancer of the brain, and
19 she got her claim awarded. A security guard there
20 got the same condition and wound up dying.

21 He was denied because he wasn't in the
22 SEC years. Anyway, I'm speaking for a lot of the
23 Fernald workers. They made a lot of sacrifices.

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1 These people are patriots of the highest degree,
2 which everybody in here is, and some of them
3 already left. They should be considered as that.
4 All of us in this country owe our freedom to this
5 group of people. If it wasn't for these people,
6 we'd be speaking German or Russian. I'm
7 currently on the Fernald Medical Monitoring
8 Committee that oversees the program that was
9 started by a lawsuit that was won by [identifying
10 information redacted]. It was resolved in 1991.
11 [identifying information redacted] is also on
12 this committee. This lawsuit, there was some
13 monetary payout, but most importantly, everybody
14 that worked there before 1985 got a yearly
15 physical for life.

16 Employees that worked after that, they
17 get a physical every year. This lawsuit was won,
18 in part, because of [identifying information
19 redacted] having flawed records, lost records,
20 insufficient records, and missing records. This
21 begs the question of how there are accurate
22 records to do dose reconstruction in figuring
23 claims. In a 2001 study by NIOSH of remediation

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1 workers, found in their summary of findings that
2 workers can't be identified.

3 Accurate and complete exposure work
4 history and medical record data are not available
5 for this population of workers. Individual
6 workers cannot consistently be linked to their
7 exposures and medical data. At the present time,
8 the necessary information to conduct
9 epidemiologic exposure assessment or hazardous
10 surveillance studies of remediation workers is
11 not available. NIOSH had another -- this is part
12 of that finding that I just read. This is on
13 Page 24 of this. It says some personnel record
14 systems exclude subcontractors, while others
15 cannot differentiate remediation workers from
16 visitors or from production workers. Second,
17 work history exposure monitoring and medical data
18 records appear to have similar deficiencies and
19 are not reliably available for mediation workers.

20 A lack of codified monitoring and
21 reporting requirements in the area of individual
22 hygiene is particularly problematic. I know you
23 mentioned stories, but I worked there for 21

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1 years. There was a lot of them, but I'm just
2 going to use one here. There was a time in the
3 late 1980s where a lathe in Plant 9 had never
4 been monitored for the workers.

5 In the late '80s, it was monitored for
6 the very first time, and it got a stay time of 15
7 minutes. I was involved in this incident. The
8 people that worked on that lathe for years,
9 sometimes seven days a week, went ballistic, as
10 did the area superintendent, for different
11 reasons, the workers for being over-exposed for
12 years, and the superintendent because production
13 would be affected. I asked the workers did they
14 ever come up high on their dosimeter badge, and
15 they said no. That's where I questioned the
16 dosimetry program. I already talked about the
17 concern about not using cancer rates in the
18 general population for figuring claims. That's
19 a ready number that you could choose using cancer
20 rates in the general population.

21 I listened to your teleconference over
22 two weeks ago, and there was times when something
23 was brought up about we had to pick a figure, but

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1 every time they said that, they said they picked
2 it in favor of the claimant, which is good. But
3 already we have that cancer rate in the general
4 population. The study I gave you about Fernald
5 workers, you'll see a big impact on that.

6 Some of the people in that study that
7 you have right there were salaried workers.
8 There was some hourly workers included in it, but
9 if you could put an hourly worker in place of the
10 salary worker for the cancer rates that are shown
11 on that handout, you can imagine it would be
12 higher for hourly workers because they're in it
13 all the time. In the 1980s --

14 CHAIR MELIUS: Can you, sir, wrap up?
15 We've got a lot of other people waiting.

16 MR. SADLER: Okay, let me see where I
17 can do this quick. I'll just talk about -- we
18 had a manager at the plant, when all this stuff
19 was imploding with this dust collector, and he
20 went on television. He was trying to cover his
21 rear end and the government and everybody else,
22 I guess, but he made a statement on television
23 that nothing would hurt you at Fernald unless it

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1 fell on your head.

2 That was the safety culture there.
3 The workers and the residents, we all knew there
4 were a whole lot of somethings at Fernald that
5 would hurt us. My concern is when the dose
6 reconstruction and the monthly badges were read,
7 that production was paramount to everything else.
8 That's why dust collectors dumped stuff all over
9 the place for years and years, thousands of tons.
10 Anyway, I made my point, and you'll hear from
11 [identifying information redacted], and he'll
12 follow up on the handout I gave you. Thanks for
13 letting me be here.

14 CHAIR MELIUS: Okay, thank you.
15 Terrie Barrie? I saw her leaving. Oh, there you
16 are. I saw you heading towards the door. Okay.
17 I would have come back to you; don't worry.

18 MS. BARRIE: Okay. Thank you, Dr.
19 Melius, and Members of the Board. I'm Terry
20 Barrie, with the Alliance of Nuclear Worker
21 Advocacy Groups. I have just a couple of issues
22 to address tonight. I want to start off with
23 LANL. In 2006, I received an email from a

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1 now-deceased subcontractor.

2 I quote, in April of 2002, I worked a
3 two-week job for Eaton Corporation at Tech Area
4 55 at Los Alamos. I was doing electrical
5 maintenance in Building PF-4 at night. There was
6 an air monitor in the room, and when it alarmed,
7 we all evacuated. I was called back to work for
8 a nose swab and could not leave until the results
9 came back negative.

10 At first, I thought the problem was
11 external radiation because of the sheer volume of
12 waste, end of quote there. He went on to add
13 that he was, quote, not wearing a dosimeter, only
14 a criticality badge, end quote. This worker said
15 that the evacuation happened every other day
16 during the two-week job, and I have his original
17 email if you'd like to have a copy of that. So
18 here we have a worker who LANL thought would not
19 be exposed to enough radiation to require a
20 dosimetry badge, but apparently he was. This
21 email mentions that nasal -- he mentions nasal
22 smears, but no bioassay.

23 This worker died in 2010, eight years

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1 after his two-week stint at LANL. NIOSH presumes
2 that January 1, 1996 is the date that all DOE
3 contractors not only complied, but implemented
4 the requirements of Statute 10 CFR 835, and that
5 they can bound dose for all those years for all
6 workers and at all sites. This, to us, is a
7 non-starter.

8 Workers, some of whom were supposedly
9 not in a labor category where they would have
10 received more than 100 millirems CEDE actually
11 did receive measurable dose. Additionally, the
12 Advisory Board on Toxic Substances and Worker
13 Health already weighed in on this issue.
14 Department of Labor had a similar policy
15 regarding the exposures after December 31, 1995.
16 That Board recommended that DOL rescind that
17 policy, and DOL accepted that recommendation.
18 EEOICPA must be administered consistently.
19 Consistency is vital to the program. I urge the
20 Work Group and the Board not to waste any more
21 time on whether this issue -- and reject NIOSH's
22 premise that those can be bounded after 1995.
23 Lastly, a brief thought on Rocky Flats, and

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1 you're going to love me for this one.

2 You remember that the Board voted to
3 not expand the Rocky Flats vote in March. We're
4 talking about consistency. We have two sites
5 that have been going on, one for over ten years,
6 one for close to eight years or whatever, knowing
7 that there's more information out there. The
8 Board also knows that NIOSH has not reviewed,
9 from what I hear now, thousands of boxes of Rocky
10 Flats documentation.

11 Also, the secretary has not made a
12 decision on the Board's recommendation on Rocky
13 Flats. So in order to be consistent on this, I
14 do respectfully ask this, that you consider
15 rescinding your letter or your recommendation to
16 the secretary until NIOSH does review the
17 documents that they plan on reviewing. I thank
18 you.

19 CHAIR MELIUS: Thank you, Terry. It's
20 sort of out of our hands right now. [identifying
21 information redacted]. You sure can. Okay.

22 ([identifying information redacted])
23 says that she will email her presentation to Mr.

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1 Katz.)

2 CHAIR MELIUS: Okay, thank you. Hugh
3 Stephens.

4 MR. STEPHENS: Thank you, Dr. Melius
5 and Members of the Board. I'm here for the third
6 in-person meeting to talk about the fact that
7 radiation dose for certain workers with non-SEC
8 cancers are not having their complete doses
9 estimated. We talked about it last time. I've
10 looked into it a little further, and I have some
11 comments about it. First of all, I'd like to say
12 I'm an attorney from Buffalo, New York. I
13 represent lots of workers, many of whom, their
14 claims have been denied. So I spend a lot of
15 time defending the program. I think it's a great
16 program. So while I'm here to complain that we
17 should change the program, my goal here is to
18 make a good program better, and not to complain
19 about the way the program is run.

20 The decision not to perform the
21 certain aspect of the dose reconstruction
22 happened many, many years ago, I believe, and I
23 think back at that time, it probably took NIOSH

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1 as many as two or more years to do a dose
2 reconstruction. The program has matured. It is
3 in a position now where things are kind of closing
4 up. We're finishing the work that needs to be
5 done, and this is another piece of that work that
6 needs to be done.

7 What I'm talking about here are claims
8 where you have skin cancer or prostate cancer or
9 some other non-SEC cancer, where an SEC has been
10 passed, there's been a decision that if you can't
11 estimate dose with sufficient accuracy, then you
12 can't estimate dose. I think that is not at all
13 true. We talk about surrogate data, and we are
14 able to estimate dose. The question for the SEC
15 purposes is can you estimate dose with sufficient
16 accuracy to deny a claim in a claimant-favorable
17 program? When you're estimating dose for someone
18 who has a non-SEC cancer, that is not the standard
19 that should be applied. There are two sections
20 in the statute, itself, one that addresses dose
21 reconstructions. That's 7384(n).

22 It says the president shall estimate
23 dose, or he shall promulgate regulations with

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1 respect to how dose will be estimated for workers
2 whose monitoring -- workers who were not
3 monitored, workers whose monitoring was
4 inadequate, and workers whose monitoring records
5 are missing. In effect, 7384(n) says estimate
6 dose, and no excuse will do. You will estimate
7 dose. That's what 7384(n) says.

8 7384(n) is about dose reconstruction.
9 7384(q) is about Special Exposure Cohorts. It
10 says where you cannot estimate dose with
11 sufficient accuracy, you must establish a Special
12 Exposure Cohort. A decision was made that if you
13 can't estimate dose with sufficient accuracy,
14 then those people who have non-SEC cancers will
15 not receive a dose estimate for that dose. The
16 problem here is this language related to not
17 feasible to estimate with sufficient accuracy the
18 radiation dose, that's Special Exposure Cohort
19 language. That Special Exposure Cohort language
20 is being used in these non-SEC cancers to deprive
21 these workers of a full and complete dose
22 reconstruction. Now, the dose reconstruction
23 statute directs the president to estimate dose,

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1 and then it says -- then it defines what is a
2 sufficient dose.

3 It doesn't talk about accuracy. It
4 says a sufficient dose is reasonable. That's all
5 it requires, reasonable, scientific. What needs
6 to be done in a dose reconstruction for a non-SEC
7 cancer is a reasonable and scientific dose. It
8 doesn't need to be terribly accurate, and just
9 because it's not terribly accurate is not a good
10 enough reason to substitute zero for the dose.

11 Zero is not the dose. The dose is
12 something we aren't sure what it is. I've got a
13 client, his family -- my client's father has dose
14 reconstruction. It's got a 49.18 percent
15 Probability of Causation. He worked at
16 Electromet between 1942 and 1945. During that
17 time period, you don't get internal dose because
18 that's the dose that caused the SEC at
19 Electromet. But I think we can all agree that
20 between 1942 and 1945, he got a big dose, or at
21 least, if we were going to estimate it, we would
22 estimate it relatively high. That would cause
23 this family to receive the compensation they

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1 deserve. Now, my client's father had a dose
2 reconstruction done in 2016, after the SEC was
3 passed.

4 He also had a dose reconstruction
5 performed in 2012. In 2012, they estimated that
6 between 1942 and 1945, he received 8,159
7 disintegrations per minute, per day, for those
8 three years. NIOSH did the dose reconstruction.
9 We don't have to go searching around for a new
10 number. We could just use the number that they
11 used in 2012.

12 In this specific instance, I don't
13 think anybody can seriously disagree that these
14 people deserve to get an estimate. What is the
15 rationale? The rationale is that the dose isn't
16 sufficiently accurate for purposes of the Special
17 Exposure Cohort, and this claim does not fit
18 within the Special Exposure Cohort. I've
19 submitted my letter. Hopefully, the Members of
20 the Board will read it. I'm here to find
21 out -- if I'm mistaken about this, I'd be happy
22 to hear about it, but otherwise, I'm going to
23 have to take this to some federal judge and have

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1 him or her decide what the answer is. I think
2 this is a pretty clear one. I think it shows
3 that there was a mistake made a long time ago,
4 and it can be fixed without very much effort.
5 Well, maybe with a lot of effort, but that effort
6 is worthwhile. Thank you.

7 CHAIR MELIUS: Is anybody else here?

8 MR. FROWISS: That was what I wanted
9 to comment about, Dr. Melius. I fully support
10 Hugh Stephens' letter. I read it, and the
11 rationale looks logical to me. Thank you.

12 CHAIR MELIUS: Okay. Can we go to the
13 phone? Is anybody on the phone? I have a Ralph
14 Stanton that, I think, called in, said he was
15 going to comment from the phone.

16 MR. STANTON: Yes, this is Ralph
17 Stanton.

18 CHAIR MELIUS: Okay.

19 MR. STANTON: Am I on? Okay. Thank
20 you, Dr. Melius and Members of the Board. My
21 name is Ralph Stanton. I worked at the Idaho
22 National Laboratory, and I was involved in a
23 radioactive release in November of 2011. My

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1 experience with the aftermath of this accident
2 has direct bearing on the LANL and other SEC
3 petitions. I've been very frustrated in
4 gathering dose-related information through the
5 FOIA process.

6 I put in a request for copies of the
7 log books that were used to document the facility
8 surveys, as well as my own radiological surveys,
9 and the DOE FOIA officer tells me that they're
10 now missing. This is only six years ago, so
11 sounds like it's not only happening at LANL, but
12 other places, as well.

13 The long-time rad employee who, for a
14 short time, had possession of one of these log
15 books, came forward in January of 2014 and said
16 that there was a very big difference between the
17 survey levels that Battelle reported and the
18 levels he saw in those log books. Battelle had
19 a legal duty to preserve this evidence, due to
20 the litigation over the accident, but now this
21 very crucial dose evidence is gone, and this
22 accident just barely happened, compared to
23 others. I've still been able to gather a lot of

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1 evidence pertaining to my dose, and every bit of
2 it points to falsification and manipulation of
3 the data. Now, your dose calculations in
4 records, they're very crucial to receiving
5 benefits from an exposure, and it would seem to
6 me that NIOSH would be just as concerned with the
7 dose falsifications, especially if you can prove
8 it, than anything because if the doses are not
9 ethically calculated and the logs are
10 disappearing, then sick workers have no chance of
11 proving their sicknesses are at least 50 percent
12 caused by working at one of these DOE facilities.

13 I shared some of my dose data with
14 NIOSH experts in November of 2014. They agreed,
15 at that time, that my dose calculations had
16 issues, but very strangely, they didn't document
17 their conclusions in the report they sent me.

18 Since then, I've acquired much more
19 evidence that overwhelmingly points towards
20 falsification, and I would be glad to share all
21 of this incriminating evidence with anybody who
22 has any doubts. NIOSH is trying to tell you that
23 everything was okay after January 1, 1996. In

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1 light of the overwhelming evidence to the
2 contrary, I'm telling you that this is done
3 completely wrong, and you cannot assume that the
4 contractors obeyed the law in every instance. I
5 ask that you reject NIOSH's presumption. That's
6 all I have.

7 CHAIR MELIUS: Okay, thank you.

8 MR. STANTON: Thank you.

9 CHAIR MELIUS: Anybody else on the
10 phone that wishes to make public comments?

11 MR. KISPERT: Yes.

12 CHAIR MELIUS: Identify yourself,
13 please.

14 MR. KISPERT: Robert Kispert, Fernald.

15 CHAIR MELIUS: Okay, go ahead.

16 MR. TABOR: My name is Robert Tabor.
17 I'm just going to be extremely brief. If Bob
18 Kispert is still tuned in, I want him to have an
19 opportunity to speak, also, concerning Fernald.

20 MR. KISPERT: I'm here, and my
21 concern, like many others, is with how well the
22 sit profile adequately covers all the operational
23 periods and the range of materials that were

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1 processed at the site through 1989, when
2 production stopped abruptly. Of particular
3 concern is the recycled uranium from Hanford,
4 reprocessing the spent rods from the N reactor.
5 This was an enriched uranium stream that they
6 processed to separate out uranium and plutonium
7 together, and other transuranics came along, like
8 plutonium, and also tech-99. What's not clear is
9 that this material was adequately profiled,
10 adequately known, and the recycle -- what's not
11 really clear is how much the repeated use of
12 recycle material over the decades built the
13 profiles up of these materials, without them ever
14 being monitored routinely.

15 One indicator was when the recycle for
16 the enriched stream began operating in 1968, the
17 parts per million level of U-236 that was formed
18 in the Hanford reactor was less than 100 parts
19 per million. By the time the 1980s rolled around,
20 with repeated use, this profile increased to more
21 than 500 ppm U-236 and posed a problem to the
22 efficient operation of the reactor.

23 How many other things, such as

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1 plutonium, itself, neptunium, tech-99 built up in
2 this profile? These are undefined. Along with
3 it, we had to use sweetener material, higher
4 enriched U-235, to blend with the tails from
5 Hanford, in order to restore the U-235 level to
6 product assays. The source of sweetener was
7 widespread, both within DOE and external. We
8 routinely received enriched UNH solutions from
9 Savannah River and Nuclear Fuel Services, a
10 commercial subsidiary of WR Grace, that
11 eventually became the DOE responsibility. They
12 were located in West Valley, New York.

13 We routinely received them and used
14 them, eventually, for blending the isotopics.
15 There were other scraps that we got in enriched,
16 from unused fuel enriched from the Piqua reactor
17 in Ohio, the Hallam reactor in Nebraska that were
18 processed to recover the U-235. The point is
19 that these have never been characterized, and
20 it's doubtful that the Site Profile could
21 adequately construct a model that would permit
22 the assessment of how likely or not a person was
23 exposed to radiation.

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1 I could go on. Over the years, a total
2 of almost 60,000 metric tons of enriched uranium
3 came in the form of recycled material from
4 Hanford. That quantity contained 208 grams of
5 plutonium and 19,000 grams of neptunium and
6 328,000 of tech-99. This is all documented in a
7 thorough study of U recycled material completed
8 in 2000 for the Ohio field office. I was on that
9 team that studied it. I will defer to Bob Tabor,
10 at this point. Bob, are you there?

11 MR. TABOR: I am.

12 MR. KISPERS: I forgot to mention the
13 POOS materials, another indicator, what we called
14 at Fernald POOS, plutonium out of spec material.
15 Our spec for getting Hanford recycle was two
16 parts per billion. By the 1980s, there was an
17 excursion of plutonium levels that increased the
18 plutonium level on many lots to well above that
19 spec, including the range of 1,530 ppm plutonium.

20 This had to require special processing
21 techniques that weren't really known until it was
22 identified that the plutonium was that far above
23 spec. It couldn't be waived. All in all, in

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1 the bottom line that you really come to, all in
2 all, these kind of materials were processed in
3 equipment that was never envisioned for
4 processing enriched, and even containing these
5 transuranics in trace quantities.

6 All of the equipment was sized,
7 designed for high tonnage natural uranium
8 processing. By the time the '80s came around,
9 most of the equipment was held together by
10 maintenance, borrowed parts, cannibalizing other
11 parts. The equipment was old and aged. That was
12 a big factor in selling the modernization program
13 that never came about. I'm in full support
14 of -- I know it's too late.

15 You already decided the vote, but I'm
16 in full support of extending this SEC to 1989,
17 and really beyond because the materials remained
18 at the site until it was eventually closed in
19 2006. With that, I'll finish, and thanks for the
20 opportunity to have my say. I will now turn it
21 over to Bob Tabor from Fernald.

22 MR. TABOR: Good evening, folks. It's
23 evening here in the greater Cincinnati area. I

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1 appreciate the opportunity to speak briefly.
2 What I would like to say is that the accuracy and
3 reliability of the data to develop the Site
4 Profile, in my opinion, is flawed because to do
5 the most accurate dose reconstruction, you need
6 to factor in and consider a more complete picture
7 and understanding of the material composition and
8 the production processes, some of which Bob
9 Kispert has already elaborated on. With that in
10 mind, it is my opinion that not a thorough profile
11 has been done, in order to obtain a more complete
12 and good Site Profile, and these things that have
13 been mentioned by Bob Kispert concerning the type
14 of materials that we processed, the composition
15 of those materials, the assay of those materials,
16 the survey of those materials, and the modeling
17 that was done is basically -- has a lot to be
18 desired and basically should be considered in
19 order to do an accurate and reliable profile.

20 Something we do understand -- and I
21 listened in today and you've made a decision not
22 to extend, is my understanding, the SEC petition
23 for Fernald, but it appears to me that we put the

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1 cart before the horse here, in as much as there's
2 a lot lacking relative to Site Profile.

3 When you consider that still, from
4 1978 to 1989, we were still processing those
5 particular constituents, as far as that material
6 goes, then it just seems to me it would make
7 common sense to have extended that SEC. With
8 that said, I would really respectfully request
9 that the Board consider rescinding their decision
10 today until we can really investigate the things
11 that need to be considered, and there's
12 documentation for this, of all the things that
13 would impact that Site Profile, which certainly,
14 in my opinion, would impact some of the baseline
15 decisions or the decision making, as far as dose
16 reconstruction is concerned. That's all I have
17 to say.

18 CHAIR MELIUS: Okay, is there anybody
19 else on Fernald, or are you the last speaker? I
20 just want to comment that if you believe there's
21 additional information that's not been
22 considered, there is a process for resubmitting
23 an SEC petition, which will be reviewed by NIOSH,

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1 and then if that has adequate information to
2 re-open, then it will be fully evaluated.

3 MR. TABOR: (Simultaneous speaking)
4 knowing that.

5 CHAIR MELIUS: Pardon?

6 MR. TABOR: I said this is Mr. Tabor.
7 I'm glad to hear that there's other avenues here.

8 CHAIR MELIUS: Yes, and that's been
9 used many times, so it's not something that -- and
10 NIOSH will work with you, in terms if there are
11 questions or something about -- or clarification
12 needed and so forth, in order to be able to do
13 that. That's another option.

14 Then let me also mention, as the Work
15 Group and others on the Board looks at the Site
16 Profile, if they discover that there are
17 inadequacies or questions where dose
18 reconstruction can't be done, then NIOSH,
19 themselves, can generate an SEC for it. You may
20 want to talk to NIOSH about the process of putting
21 in a new petition.

22 MR. TABOR: Well, I'm quite familiar
23 with Stu Hinnefeld and a number of his associates

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1 that used to work at the Fernald site. I've
2 worked with those people for many years from a
3 safety perspective, so maybe we'll just address
4 this issue.

5 **Adjourn**

6 CHAIR MELIUS: Okay. Is there anybody
7 else on the telephone who wishes to make public
8 comments? Okay, thank you all. Anybody's that
9 left on the line and anybody's that left here
10 with us, thank you for your attention and time.
11 We reconvene in the morning, a little bit later.

12 (Whereupon, the above-entitled matter
13 went off the record at 6:54 p.m.)