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CENTERS FOR DISEASE CONTROL

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NATIONAL INSTITUTE FOR OCCUPATIONAL
SAFETY AND HEALTH

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ADVISORY BOARD ON RADIATION AND
WORKER HEALTH

+ + + + +

86th MEETING

+ + + + +

TUESDAY
SEPTEMBER 18, 2012

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The meeting convened at 8:30 a.m.,
Mountain Daylight Time, in the Denver Marriott
Tech Center, 4900 South Syracuse, Denver,
Colorado, James M. Melius, Chairman,
presiding.

PRESENT:

- JAMES M. MELIUS, Chairman
- HENRY ANDERSON, Member
- JOSIE BEACH, Member
- BRADLEY P. CLAWSON, Member
- R. WILLIAM FIELD, Member
- MARK GRIFFON, Member
- DAVID KOTELCHUCK, Member
- RICHARD LEMEN, Member
- JAMES E. LOCKEY, Member
- WANDA I. MUNN, Member
- DAVID B. RICHARDSON, Member

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PRESENT: (CONT.)

GENEVIEVE S. ROESSLER, Member
PHILLIP SCHOFIELD, Member
LORETTA R. VALERIO, Member
PAUL L. ZIEMER, Member
TED KATZ, Designated Federal Official

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ADAMS, NANCY, NIOSH Contractor
ADAMS, WANDA
ADKINS, MILA
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KROL, KATHRYN
LAUGHLIN, LYLE
LEREW, TIM
LEWIS, GREG, DOE
LIN, JENNY, HHS
LOGAN, MIKE
LUJAN, BEN, Representative, 3rd
Congressional District of New Mexico
MEHTA, PUSHPA
MAKHIJANI, ARJUN, SC&A
MARTINEZ, MICKEY
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P-R-O-C-E-E-D-I-N-G-S

8:34 a.m.

CHAIRMAN MELIUS: This is meeting number 86 of the Advisory Board on Radiation and Worker Health. And, Ted?

MR. KATZ: Thank you, Jim. Welcome to everyone in the room and on the line. We're happy to be here in Denver for this.

Let's just run through a few things. Materials for this meeting, all the presentations and background materials that are available for the public, they're both in the room on the back tables and they're online on the NIOSH website under the meeting page. If you go for this date and open that page you'll find all the presentations posted there.

Public comment session. Today and tomorrow there are public comment sessions that begin at 6, end at 7, but if you plan to comment please register. If you're here, you

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1 can register in the books. If you're on the
2 line, if you're on the phone you can't
3 register but please plan to attend at the
4 beginning of that session because it runs from
5 6 to 7, but if we get through early we'll end.

6 So please don't wait till later in the
7 session to join us.

8 And the last thing, for people on
9 the line, please mute your phones. Do not
10 leave your phones open. If you don't have a
11 mute button on your phone press *6, that'll
12 mute your phone. And if you are a petitioner,
13 for example, who's going to be addressing the
14 Board, at the point you address us, press *6
15 again to come off of mute. But please keep
16 your phones muted and please do not put the
17 call on hold at any point. Hang up and dial
18 back in. Thank you.

19 (Roll call.)

20 CHAIRMAN MELIUS: Okay. Thank
21 you, Ted, and we'll start with our program.
22 And first up, Stu, there you are. Stu

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1 Hinnefeld for the NIOSH program update.

2 MR. HINNEFELD: Thank you, Dr.
3 Melius. Am I close enough to the mic? Okay.

4 Just a real brief run-through of
5 mainly news items. The presentation on the
6 back table and in the package includes our
7 normal report on statistics on how we're doing
8 on dose reconstructions and SECs, but I had
9 not planned to go through that in the interest
10 of brevity. But I'll be glad to try to answer
11 any questions anyone may have about those
12 items.

13 A few program news items. One is
14 personnel on detail. I think most of you will
15 remember several months ago Chris Ellison, who
16 is our communications team lead, served a
17 detail as the deputy director for the
18 division, so I think maybe a number of you had
19 interactions with Chris during that time or
20 maybe as communications team lead. She did
21 that because our own deputy director, Dave
22 Sundin, was on detail to another organization.

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1 Well, Chris went back to being
2 communications team leader and decided, I
3 guess she is a detail-oriented person, because
4 she's gone on another detail. This is to the
5 World Trade Center program. It's not a full-
6 time detail, though, so we still have some
7 portion of her time available to us, but the
8 majority of her time is being spent on the
9 World Trade Center program where NIOSH has a
10 large and well-publicized role in a program
11 that's in its formative stages, much like this
12 program was 10 years ago.

13 One other personnel item that I
14 think may affect a few things for a few of you
15 who have interest in particular sites,
16 [identifying information redacted].

17 The next piece of news I have on
18 here is about a dose reconstruction workshop.

19 This may be of interest to the Board. We run
20 this workshop with our outreach contractor,
21 ATL International. ATL International does the
22 groundwork, sets it up. They identify people

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1 that we consider claimant advocates, and these
2 are usually site-specific personnel. Often
3 they are union officers or representatives of
4 the union at the covered facilities, or a
5 union or unions at the covered facilities.
6 And we invite them to Cincinnati for a
7 workshop.

8 And our feeling being is we're
9 trying to get to people who are a resource or
10 can be a resource for the workers at those
11 facilities, in order to assist them with the
12 program, answer questions about the program,
13 assist them with paperwork if need be and
14 things like that, and also be able to answer
15 some questions, rudimentary questions about
16 the program for claimants and attempt to
17 provide better information to -- and easy
18 access to information for the claimant
19 community.

20 We bring the people to Cincinnati
21 and run through a couple of days of dose
22 reconstruction activities, SEC. There's some

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1 activities, you know, hands-on activities
2 where they actually watch a fake interview,
3 what we used to call a CATI, a claimant
4 interview where we have our actual -- an
5 actual claimant interviewer call one of the
6 attendees and that attendee goes through the
7 interview process. So they understand more
8 what's that -- they get to see that.

9 We also have an activity to
10 navigate them around our website. Our website
11 has quite a lot of information on it, but
12 unless you know where to look or know to look
13 there it may not be really apparent. So
14 activities like that. And it provides an
15 opportunity for them to get to know several
16 DCAS staff members as people rather than names
17 on a page. And so it seems to have done that.

18 We've done that for a number of
19 years now. We generally, we are doing one of
20 these per year. We do similar type of
21 workshops on an abbreviated basis at
22 facilities where we can get a broader audience

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1 for a particular facility to attend. We do
2 that about two or three times a year and we
3 abbreviate that workshop down to about one day
4 to do those.

5 And then my final piece of news is
6 that recently the National Council on
7 Radiation Protection and Measurement has
8 published its Report No. 171, "Uncertainties
9 in the Estimation of Radiation Risks and
10 Probability of Disease Causation."

11 And I brought a copy and left it
12 in my room so I'll bring it down at the break
13 if anyone is interested to look through it.
14 I'll bring it down at the break and give it to
15 Ted, so you can look through it at your
16 leisure, just so I can take it home with me at
17 the end of the week.

18 The release or I believe it's a
19 press release from the NCRP about this report
20 describes the topics addressed in this report
21 include uncertainties associated with
22 extrapolation of dose response relationships

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1 observed in primary epidemiological studies to
2 estimate the risk-per-unit dose, i.e., organ
3 dose or whole body dose, in the U.S.
4 population and other exposed population.
5 Applications of meta-analyses or pooled
6 analyses to increase the statistical power in
7 evaluating uncertainties in dose response
8 relationships for exposed human populations.

9 Uncertainties associated with
10 extrapolation of dose response relationships
11 observed for populations exposed to acute
12 doses of high-energy gamma rays to estimate
13 the risk-per-unit dose in populations exposed
14 to fractionated or low-dose rate chronic
15 exposures.

16 Uncertainties associated with
17 extrapolation of the dose response
18 relationship observed for populations exposed
19 to high-energy gamma rays to estimate the
20 risk-per-unit dose in populations exposed to
21 low-energy photons, low-energy electrons,
22 alpha particles and neutrons with various

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1 energies.

2 Comparison of uncertainties
3 associated with risk estimated for individual
4 tissues or organ sites with the uncertainties
5 associated with estimating risk of all tumors
6 combined due to whole body exposure,
7 evaluation of opportunities for using
8 additional epidemiological and laboratory-
9 based biological information to modify
10 estimates of uncertainty in risk estimates for
11 cancer, non-cancer effects and severe
12 heritable disorders.

13 Procedures for accounting for dose
14 uncertainty in epidemiological dose response
15 analyses and evaluation of the combined effect
16 of uncertainty in dose estimation with the
17 uncertainty in estimation of risk-per-unit
18 dose in estimating the overall risk.

19 So I'll leave, I don't want to
20 expose anybody -- I certainly can't remember
21 that. I'll leave the press release with Ted
22 this morning and then I will go get the report

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1 at the break and leave that with Ted as well,
2 if anyone wants to look through it.

3 I believe that's the extent of the
4 news I was going to provide. Normally, since
5 we're at the end of the fiscal year I try to
6 provide some budget news at this time.
7 There's not a lot of budget news.

8 I believe we have a continuing
9 resolution that will run for 6 months. It
10 certainly seemed like it was a foregone
11 conclusion. I don't know if it's actually
12 been passed and signed yet, but it seems like
13 we will have a continuing resolution for a 6-
14 month period, which will allow for spending at
15 approximately the previous year's rate for
16 that period of time.

17 There's of course the open
18 question of sequestration and what does that
19 do at the end of the calendar year? I don't
20 know. I've heard various things. Mainly you
21 hear percentages. You hear percentages
22 applied to discretionary spending, which our

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1 program is not considered discretionary
2 spending. We're considered mandatory
3 spending.

4 So that's just one big question
5 mark if it comes to that. I think most people
6 think it's not going to come to that. So
7 unfortunately, I don't have any budget news
8 except that it seems like at least for the
9 next few months at least or couple of months
10 things should proceed apace as they have this
11 past year.

12 So that kind of ends, I believe
13 that is the end of the news I had. I still
14 have a few more minutes. I might just show
15 one of the slides. I don't want to go through
16 all these.

17 Our numbers have been pretty
18 similar for quite some time. We are pretty
19 much keeping up with the input. We're getting
20 to the point now where it's hard to reduce the
21 backlog. We have maybe 1,000, 800 to 1,000
22 cases in-house that we have to do that are not

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1 in the hands of claimants, as with a draft
2 dose reconstruction, are not complete and done
3 already.

4 At this level, given the amount of
5 time it takes to go through a case including
6 getting the information, exposure history
7 requests and things like that we're pretty
8 much staying even. We're not really focusing
9 on reducing the backlog. We're trying to get
10 cases out within 9 months, actually quicker
11 than that once we have all the information
12 available to us. And we're doing a pretty
13 good job of getting cases out 9 months from
14 the time we get the initial referral to us.
15 And of course we always try to do better than
16 that.

17 The Probability of Causation
18 fraction hasn't changed very much. We're
19 still at about a third of the dose
20 reconstruction cases -- boy, this is
21 backwards. That's backwards. We're about a
22 third of the cases are compensable, not two-

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1 thirds.

2 Now, those dose reconstruction
3 numbers, of course, do not include cases that
4 were compensated through the SEC process. So
5 the actual total percent compensated is
6 somewhat higher, because there have been quite
7 a number of cases compensated through the SEC
8 process.

9 And distribution, you know, at
10 this point this probably isn't going to
11 change. The shape of the this graph isn't
12 going to change anymore.

13 You can see our production kind of
14 moves along, has a relatively steady pace.
15 These are, let's see, these are I believe
16 quarterly numbers because we get about 200 a
17 month. And there's some variation in that but
18 it's been moving that way for quite a long
19 time now.

20 Our first 5,000 claims. The
21 reason there are claims in the first 5,000,
22 the first 10,000 aren't done is that they keep

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1 coming back, you know, get reopened for
2 additional cancers or things like that.

3 One complicating factor now is the
4 addition of chronic lymphocytic leukemia as a
5 covered cancer, that rule change occurred
6 awhile ago, has resulted in some CLL cases
7 being referred. These were some cases that
8 were closed. The person had CLL in addition
9 to other cancers. And so they've come back
10 for new things.

11 And the CLL model, which is
12 finalized and developed and the risk model is
13 chosen are -- the model has a fair amount of
14 probabilistic calculation in it. And so the
15 actual programming of the arithmetic to do
16 that is causing a bit of consternation. We're
17 moving along but it's not moved as quickly as
18 possible. So as of yet, we have not turned
19 out dose reconstructions for CLL cases. That
20 should happen later on this year, I believe.

21 Department of Energy's response to
22 exposure request I believe is not considered,

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1 we don't consider problematic. They seem to
2 be responding in most cases promptly. I think
3 Bomber will give you more information on the
4 SEC whenever we get to his update.

5 And the fraction of cases, at one
6 point we were pretty even between 83.13 and
7 83.14. 83.13 is pulling ahead, largely
8 because we finished the research of our
9 unresearched sites. We had a big push of
10 83.14s a couple of years ago. As we finished
11 researching sites that we had not researched
12 up to that point, these were sites with not a
13 lot of claims and we would reach a
14 determination that we didn't have all the
15 information needed so we would go down the
16 83.14 SEC pathway. We've kind of finished
17 that process, and so now the 83.13s are
18 pulling ahead a little bit.

19 And that's the end. Yes, Jim?

20 MEMBER LOCKEY: The 4,000
21 potential claims, is that those denied and
22 approved?

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1 MR. HINNEFELD: No, those would be
2 the claims that from the information available
3 to us in our database looked like they would
4 be approved. So those are ones we would pull
5 and send to the Department of Labor.

6 Oh, I'm sorry. Whether we pulled
7 them or not, these were the cases that looked
8 to us as if they would be compensated via SEC.

9 I say it that way because, once these claims
10 go back to DOL for adjudication, they may take
11 another look at the cancer or the employment
12 period or things like that. So there may be a
13 handful that don't exactly match our
14 expectation, but by and large that's the
15 expectation. And that's regardless of whether
16 we pulled them.

17 What I mean by, if we have a case
18 in our house when the SEC Class is added we
19 pull that -- and if it looks like an SEC-
20 payable case we pull that case and send it
21 back to the Department of Labor. And it shows
22 up as pulled as its status on our database.

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1 If we've completed the dose
2 reconstruction and it's already back at the
3 Department of Labor and then an SEC Class is
4 added that includes that case and it has what
5 appears to be -- or it has an SEC-payable
6 cancer, that case will get paid but we won't
7 consider that a pull. It won't change the
8 status in our database.

9 CHAIRMAN MELIUS: I have just sort
10 of a question/comment on the issue of the
11 sequestering of the funds. My understanding
12 is that unless the program was specifically
13 exempted, even though it's mandatory spending
14 it is subject to sequestering. So for
15 example, the World Trade Center funding is.

16 And so I don't know the status of
17 EEOICPA but it would be helpful, since this
18 goes into effect relatively soon and could
19 likely trickle down to this program. And my
20 understanding, there was a report from the
21 administration outlining at least the broad
22 categories that were included, not all the

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1 specific programs. But if someone could look
2 into this and inform the Board I think it
3 would be information in terms of how we're
4 thinking.

5 MR. HINNEFELD: Well, certainly if
6 I hear anything, I can just inform the Board.

7 And we'll certainly give an update in
8 December if nothing is resolved about it by
9 the December Board meeting.

10 But I have heard essentially
11 nothing about sequestration planning within
12 the Agency. Ted, do you have an opinion?

13 MR. KATZ: No, I was just going to
14 say we can look into it.

15 CHAIRMAN MELIUS: That's all I'm
16 asking.

17 MR. KATZ: We'll do that. Right.

18 CHAIRMAN MELIUS: Any other Board
19 Members with questions for Stu? Okay, thank
20 you.

21 MR. KATZ: Just while DOL is
22 getting ready, let me register. We had a

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1 teleconference in August, so I'm just
2 registering votes for that. So, at the
3 teleconference, the Board voted in favor of a
4 motion to add a Class at Ventron Corporation.

5 And Mr. Gibson, Dr. Lockey and Dr.
6 Poston were absent, but they voted, completed
7 their voting on September 6th and all voted in
8 favor. So that motion passed unanimously and
9 that SEC will be on its way to the Secretary.

10 CHAIRMAN MELIUS: Is it on its
11 way? A little early.

12 MR. KATZ: Will be on its way.

13 CHAIRMAN MELIUS: Will be, okay.
14 Okay, welcome. Our next is a program update
15 from the Department of Labor. And Jeff,
16 welcome back.

17 MR. KOTSCH: Good morning. I'm
18 Jeff Kotsch with the Department of Labor and
19 this is the routine update for the program.

20 Just a brief overview of the
21 enactment of the Act. It was enacted in
22 October of 2000. Part B is a mandatory

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1 federal entitlement by the Department of
2 Labor. Part D is a state workers comp
3 assistance which was initially, well, at that
4 time it was a Department of Energy program.

5 In October 2004 it was amended.
6 Part D was abolished and Part E was created,
7 transferred and transferred to the Department
8 of Labor.

9 As of, and I think most of these
10 slides, if not all, are October 26th, 2012.
11 We had 1,056 -- I mean, 156,026 cases were
12 filed with over 8.4 billion in total
13 compensation. And obviously the actors or the
14 agencies involved are Labor, Energy, Health
15 and Human Services and the Department of
16 Justice for the RECA program.

17 Just a quick note to the locations
18 of the DOL offices. There's the national
19 office in Washington, and we have district
20 offices in Jacksonville, Cleveland, Seattle
21 and here in Denver.

22 Referring to the cases that have

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1 gone to NIOSH, there are 38,147 cases that
2 have been referred for dose reconstruction.
3 Of those 35,604 were returned by NIOSH, a
4 little over 30,100 with dose reconstructions
5 and a little under 5,500 without dose
6 reconstructions. The latter ones were
7 generally pulled, either they were in an SEC
8 Class and they were pulled or perhaps there
9 was information that Labor found that no
10 longer allowed that case to be viable.

11 There are 2,543 cases currently at
12 NIOSH by our count. 1,313 are initial
13 referrals and 1,230 are reworks or returns.
14 Again, these are things, cases that primarily
15 involve new cancers, new employment and there
16 could be other minor issues.

17 The general overview of the dose
18 reconstruction status is that we have 30,106
19 cases that have been returned by NIOSH with a
20 dose reconstruction and 25,107 of those with
21 dose reconstructions have a final decision
22 from the Department of Labor. 8,911 of those

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1 are final approvals with -- based on a dose
2 reconstruction and a Probability of Causation
3 of 50 percent or greater. And 16,196 are
4 final denials, that is, a PoC less than 50.
5 So you see the breakdown percentage-wise,
6 essentially 35 percent approval.

7 This is the breakdown of the Part
8 B cancer cases with a final decision to
9 accept. First bullet, 8,339 accepted cases
10 with dose reconstructions which encompasses
11 11,730 payees or claimants. Again, there's
12 always more claimants than cases because of
13 the cases that have survivors. That totals
14 out to \$1.23 billion in compensation.

15 For the SEC Classes that have
16 resulted in accepted cases there are 16,989
17 cases paid to 28,015 payees for a total
18 compensation of \$2.5 billion.

19 And the next bullet is ones
20 accepted for both SEC and the PoC greater than
21 50. There's 572 of those, which totals out to
22 all accepted SEC and dose reconstructed cases,

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1 25,900. That's 40,446 payees or \$3.8 billion
2 in compensation.

3 This is just a bar chart for the
4 Part B cases where there are final decisions
5 for all the applications under the program.
6 The left are final decisions approved, there's
7 38,201. On the right side the denied 23,479.

8 And you see the breakdowns for cases as well
9 where there are survivors that are not
10 eligible, where there are PoCs which is, the
11 bulk of those PoCs, less than 50 percent and
12 the other block, or the other bar are the
13 medical information -- where there is medical
14 information that is insufficient to support
15 the claim.

16 Just an update. This is a summary
17 over basically the last year of the SEC
18 outreach events that Department of Labor has
19 conducted starting with November 1st, 2011
20 with Sandia National Labs for that SEC.
21 There's actually two of them recently, this
22 was the first.

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1 There's a column there with
2 attendance, 385, and just a notation that at
3 that meeting we, the Department of Labor,
4 worked with people to file 48 additional
5 claims, new claims.

6 GE Evendale had a meeting on
7 November 2nd of 2011. There were about 80
8 people in attendance and we had 13 new claims
9 at that meeting.

10 On January 18th of this year we
11 had the Y-12 plant SEC meeting, 133 attendees
12 and 30 new claims at that point. And the
13 Pantex plant meeting was on March 14th, where
14 we had 283 attendees and 28 new claims filed.

15 Then on April 17th, there was a
16 Savannah River Site SEC. There was a sizable
17 crowd of about 500 attended, and we had 40 new
18 claims at that point.

19 Linde Ceramics meeting was on
20 April 25th. There were 19 attendees and one
21 new claim for that meeting.

22 Brookhaven National Lab was a

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1 Joint Outreach Task Group event that was held
2 on July 17th of this year. There were 200
3 people in attendance and 19 new claims were
4 gathered.

5 The Sandia National Labs, this is
6 the other SEC Class. That meeting was August
7 22nd. There were 60 attendees and 16 new
8 claims.

9 And some of the things that are
10 coming up, the Fernald SEC town hall meeting
11 is -- I'm not sure of the exact date but
12 that's -- Tuesday of next week.

13 Then we -- Labor is also doing
14 some home healthcare training outreach for
15 physicians and home healthcare providers in
16 the Denver area, that's also next week. And I
17 know they have other ones. I don't know when
18 they're scheduled. I know there's at least
19 one scheduled in New Mexico, or to be
20 scheduled in New Mexico and one in I think
21 around Oak Ridge, Tennessee at least.

22 There's the Hanford SEC town hall

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1 meeting in October, Clarksville SEC town hall
2 meeting in October, a Medina SEC traveling
3 resource center, because it's a smaller
4 population there of claims. That's also in
5 October. And as noted, in cases of even
6 smaller SECs the Department of Labor releases
7 information through press releases or
8 notifications.

9 I think Greg will probably talk
10 more about this so I'll just touch on the
11 Joint Outreach Task Group quickly. It's
12 composed of our division in Labor, NIOSH, DOE,
13 the ombudsmen from both Labor and NIOSH and
14 the DOE Former Worker Medical Screening
15 Program. And they have monthly conference
16 calls.

17 And then there's a series of
18 slides here, I won't go through all the
19 numbers, where we basically provide data on
20 cases and compensation, both Part B and Part E
21 for the facilities that are either local to
22 the meeting or that are due to be discussed

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1 during the meeting. Obviously, in this
2 location we have the Rocky Flats plant where
3 we've had a total of 6,310 Part B and E cases
4 with 1,485 with dose reconstructions that have
5 been returned by NIOSH. There have been 2,908
6 final decisions for Part B. There are 1,557
7 Part B approvals, 1,553 Part E approvals and
8 total compensation of \$277 million.

9 I'm not going to really go through
10 the rest of the numbers. They are in the
11 handout. But there is information there for
12 Hanford, Los Alamos, Oak Ridge, General Steel,
13 Weldon Springs, Mound, United Nuclear, Nuclear
14 Metals, the Pantex plant.

15 And then behind that in the
16 handout is information, and again I'll just
17 quickly go through this. It's primarily
18 information on employee eligibility for Part B
19 and Part E. We've done this, I think, at
20 every meeting. It's primarily there for if
21 there are any new people in the audience that
22 may not have seen this.

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1 Other things that are covered
2 under the program beyond the NIOSH dose
3 reconstructions, there's CBD, there's
4 beryllium sensitivity, chronic silicosis or
5 toxic exposure on the Part E side. And then
6 you see the differences in the survivor
7 definitions, the survivor benefits between the
8 two parts as Congress wrote that information
9 in the statute. And that's it.

10 CHAIRMAN MELIUS: Okay, thank you.

11 Yes, Brad.

12 MEMBER CLAWSON: Jeff, I was
13 looking on here and you were talking about
14 home healthcare and stuff. One of the
15 questions that I had is when we have a SEC go
16 in, do we do anything for the local physicians
17 around there? The reason being, at Pantex I
18 know that there was a lot of comments coming
19 back that the doctors and stuff in that area
20 did not recognize the card and said that it
21 was for only beryllium.

22 I was wondering, I know it may be

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1 out of your realm or whatever, if we can do
2 anything to make sure the physicians in those
3 areas understand the change when an SEC comes
4 in.

5 MR. KOTSCH: As far as the cards,
6 again I'm not that familiar with that part of
7 the program. I know that is worked through
8 the auspices of some of the contacts for the
9 home healthcare as well as our outreach
10 portion of our program.

11 MEMBER CLAWSON: Well, this was
12 brought to my attention. I told them to bring
13 it to your ombudsman and make sure, because
14 there was, especially in towns like that that
15 have already dealt with some of this, it
16 becomes, I guess, quite a problem. So I
17 thought I'd just make sure that you were aware
18 of it.

19 MR. KOTSCH: I'll pass that along,
20 Brad.

21 CHAIRMAN MELIUS: Can you explain,
22 Brad, what you're --

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1 MEMBER CLAWSON: What came in,
2 when the SEC came in at Pantex and the people
3 started going to the doctors, they were not
4 recognizing the medical card that was given to
5 them. They said, that's not good for any
6 medical expenses, it's only for beryllium
7 sensitivity. You guys don't understand what
8 you're talking about. And it was quite
9 chaotic. And the physicians didn't understand
10 what had changed at Pantex.

11 CHAIRMAN MELIUS: Okay. Okay, I
12 was getting that confused with the home
13 healthcare issue. It's a little bit
14 different.

15 MEMBER CLAWSON: Yes, that's why I
16 was wondering if maybe they were doing a
17 little bit more kind of in these outreaches if
18 the local medical profession that would be
19 dealing with a lot of this were involved with
20 it a little bit more.

21 CHAIRMAN MELIUS: What I think is
22 happening is that you're now dealing with

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1 cancer care rather than, you know, pulmonary
2 physicians and so forth with the beryllium.
3 So it's a different set of physicians.

4 Usually, I mean, there may be some
5 -- people aren't used to dealing with the
6 reimbursement rates and procedures within the
7 Department of Labor, though it's a pretty
8 standard set. It's my understanding in most
9 part a very reasonable reimbursement rate. So
10 it may take some explanation but that would be
11 -- do you do that through outreach centers or
12 through DOL central, I think, wouldn't it be?

13 MR. KOTSCH: It's more DOL. I
14 mean obviously the claimants get their, you
15 know, in their letters they're provided with
16 the necessary information to work with those
17 cards.

18 CHAIRMAN MELIUS: Yes. Okay.
19 David, go ahead.

20 MEMBER RICHARDSON: Going back two
21 slides, I think, where you had the covered
22 conditions for Part B and Part E.

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1 MR. KOTSCH: Oh, in the back.

2 MEMBER RICHARDSON: I was trying
3 to get in my head an understanding of, for
4 example, for Rocky Flats there are 1,557 Part
5 B approvals and there's a smaller number of
6 Part E approvals, 1,553.

7 If I was looking at this table, I
8 would see that Part B covers a set of
9 conditions and Part E covers all those
10 conditions plus other conditions related to
11 toxic exposure. So could you help me to
12 understand, under what conditions would you
13 get a Part B approval and not get a Part E?

14 MR. KOTSCH: Well, Part B would be
15 only if you had a cancer.

16 MEMBER RICHARDSON: If you have
17 1,557 who were covered under Part B and a
18 smaller number who were covered under Part E,
19 why weren't they covered under both, I guess
20 is the question?

21 MR. KOTSCH: Yes, I mean, and I'd
22 have to check that number because usually I

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1 think you're right, the Part E number is
2 higher than the Part B number.

3 MEMBER RICHARDSON: But if we look
4 at the table, it seems that across all the
5 facilities the number is lower that have been
6 approved under Part E than under Part B. I
7 would be expecting radiation plus all other
8 toxic hazards, there should be more people
9 compensated.

10 MR. KOTSCH: And I agree. I'll
11 have to check that. You also notice there was
12 an absence of some of the other slides we
13 normally had. We were having a problem with
14 our tracking system so I'll have to actually
15 check those numbers because that generally is
16 the trend is that the Part E is higher because
17 that includes both the cancer which you would
18 have under Part B and any additional toxic
19 exposures.

20 MEMBER RICHARDSON: Like at
21 Hanford, it looks like 2,000 claimants fewer
22 have been approved under Part E than under

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1 Part B. I realize that we're not focused here
2 on that, but I'm still trying to understand
3 what's going on.

4 MR. KOTSCH: Right, I'll have to
5 check that because you're right, usually the
6 Part E number is higher than the Part B number
7 because it would include both the cancer and
8 medical conditions related to toxic exposure.

9 So I'll check on that and we'll correct that
10 if that's incorrect.

11 MEMBER RICHARDSON: Can we flip
12 back just one more slide so I can look at it
13 just for a question and then ask you about --
14 does Department of Labor -- there.

15 MR. KOTSCH: I'm sorry. No, not
16 there.

17 MEMBER RICHARDSON: Go up to the
18 table that shows Rocky Flats, Hanford.

19 MR. KOTSCH: Oh, that way. I'm
20 sorry. I'm going the wrong way, hang on.

21 MEMBER RICHARDSON: There. So
22 like for Rocky Flats or for Hanford does

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1 Department of Labor help the claimants to move
2 their claims simultaneously through Part B and
3 through Part E?

4 MR. KOTSCH: Yes. Actually right
5 now when a claim comes in it's basically filed
6 as a -- if it has a cancer and a toxic
7 exposure it's basically started as a Part B
8 and an E. Initially, in the earlier days they
9 were actually separated as Part B and Part E
10 but now they're actually combined and worked
11 together.

12 MEMBER RICHARDSON: And so the
13 major categories are ways in which you would
14 be compensated under Part B, those being an
15 SEC. If an SEC was granted under Part B, then
16 the claimant should move through Part E as
17 well.

18 MR. KOTSCH: Yes. And the effort
19 was also made since they're both treated
20 essentially simultaneously is to figure the
21 best path forward. So if there's an SEC, that
22 obviously will progress quickly to get that

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1 compensation paid as the rest of those
2 essentially Part E piece follows that.

3 MEMBER RICHARDSON: So if these
4 numbers were right, I would be left very
5 confused how thousands of people at Hanford,
6 for example, who were compensated under Part B
7 weren't receiving approvals under Part E.

8 MR. KOTSCH: Right. And again,
9 like I said, I'll have to check that because
10 looking at that now those numbers don't look
11 quite right.

12 MEMBER RICHARDSON: Okay, thank
13 you.

14 CHAIRMAN MELIUS: Any other --
15 Brad, you have another question? Okay. Yes,
16 Wanda.

17 MEMBER MUNN: I have a question.

18 CHAIRMAN MELIUS: Can you use the
19 microphone, please?

20 MEMBER MUNN: Is the Board going
21 to have electronic downloads of our status
22 reports? We usually have the slides for

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1 ourselves.

2 MEMBER ZIEMER: I have the flash
3 drive and I've not been successful in
4 downloading anything from it.

5 MEMBER MUNN: I hadn't seen the
6 flash drive. That was my question.

7 MEMBER ZIEMER: Well, it doesn't
8 want me to take it out yet either. It gives
9 me bad language, messages if I try to remove
10 it.

11 MEMBER MUNN: May we all use your
12 computer?

13 CHAIRMAN MELIUS: And the last
14 time it destroyed the computer. If you
15 remember, right, remember?

16 MEMBER ZIEMER: I have not been
17 able to download anything but it doesn't want
18 me to remove the flash drive either. So I'll
19 need some tech help here.

20 MR. KATZ: Wanda, the vast
21 majority of these, with very few exceptions,
22 I've emailed you everything. So you should

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1 have just about everything.

2 MEMBER LEMEN: Actually, Ted, you
3 sent around an email of all this stuff. And
4 just to our regular emails too.

5 MR. KATZ: Yes.

6 CHAIRMAN MELIUS: But I don't
7 think all of it's included.

8 MEMBER BEACH: They're all
9 available on the NIOSH website as well.

10 CHAIRMAN MELIUS: We're looking
11 for a computer flash drive surgeon to help.

12 MEMBER RICHARDSON: And Henry, the
13 password is all lowercase. Even though it's
14 written as mixed upper and lower, it's all
15 lowercase. So that may help you.

16 CHAIRMAN MELIUS: We have extra
17 levels of security for these things. Any
18 other questions for Jeff? Okay, thank you
19 very much.

20 MR. KOTSCH: Okay, thank you.

21 CHAIRMAN MELIUS: And by the way,
22 just a comment. I'm glad you're doing the SEC

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1 outreach. Those sessions are good. It looks
2 like you're getting good attendance there.

3 MR. KOTSCH: Yes, it's pretty
4 good.

5 CHAIRMAN MELIUS: Our next update
6 is Greg Lewis from Department of Energy and
7 he'll give the DOE program update.

8 MR. LEWIS: Good morning,
9 everyone. I'm Greg Lewis from the Department
10 of Energy Office of Health, Safety and
11 Security. My office is the Office of Worker
12 Screening and Compensation Support and we
13 support both EEOICPA activities as well as our
14 Former Worker Medical Screening Program.

15 Okay, so first I'll go through a
16 couple of news items. Before I get to the
17 National Day of Remembrance, we have a new
18 staff member that's joined our team that's
19 here today. Cecelia Kenney is in the back and
20 she's been with DOE and with HHS for probably
21 close to 10 years or so, but she's been
22 working in the front office and now she's

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1 transitioned into our office to get some
2 experience on the program side.

3 So she's going to be working with
4 a lot of our sites, you know, work
5 troubleshooting issues responding to
6 individual requests as well as the NIOSH
7 projects. She's also going to be getting
8 involved in the budget and financial end of
9 things. So I think it's going to be, I think,
10 a tremendous help to our office. So please
11 welcome her to the program.

12 And then to the National Day of
13 Remembrance. On July 16th of this year the
14 United States Senate designated October 30th -
15 - that says 2010. That's because we didn't
16 update it from previous years. That's October
17 30th, 2012 as the National Day of Remembrance
18 for Nuclear Weapons Workers.

19 It's the fourth year in a row that
20 the Senate has chosen to do so. In past years
21 there's been various events and ceremonies
22 around the complex and there will be again

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1 this year.

2 I know the Office of Health,
3 Safety and Security is partnering with the
4 Atomic Testing Museum and a non-profit, the
5 Cold War Patriots, to promote an event out in
6 Nevada at the Atomic Testing Museum. That
7 event's going to be on October 26th.

8 And in addition to that, I know
9 there's going to be various ceremonies
10 throughout the complex which we will be
11 putting on our website in advance of the day.

12 Probably in the next couple of weeks, we'll
13 be putting up an item on the National Day of
14 Remembrance. So if you're interested if there
15 are events in your local community you can
16 check in on our website.

17 So our core mandate which I read
18 every time, is to work on behalf of program
19 claimants to ensure that all available worker
20 and facility records and data are provided to
21 DOL, NIOSH and the Advisory Board. So
22 basically our primary role in the program is

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1 to provide records.

2 Our three main responsibilities
3 are to respond to individual records requests
4 for individual claims. So that's the
5 employment verification, the exposure records
6 and then the dosimetry information for NIOSH.

7 The second major responsibility is
8 to work with DOL and NIOSH on large-scale
9 records research projects like the Special
10 Exposure Cohort research projects.

11 And then the third, which is
12 smaller but equally important, is to work with
13 DOL and NIOSH to conduct research on covered
14 facility issues, whether years should be added
15 or deleted or whether additional facilities
16 should be included in the program.

17 So for our role within the
18 program, we at DOE rely heavily on our site
19 contacts out in the field. Our site POCs as
20 we call them, our point of contacts, they
21 coordinate all large-scale research activities
22 with NIOSH, the Advisory Board and their

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1 contractors.

2 They set up site visits and tours.
3 They arrange for worker interviews and
4 identify subject matter experts on the various
5 topics that NIOSH or DOL might be interested
6 in. And they also manage the day-to-day
7 activities at the site, responding to the
8 individual records requests that we get.
9 They're the backbone of our program and
10 they're probably the most important part at
11 DOE in terms of getting things done and
12 responding in a timely manner.

13 So, for individual records
14 requests at DOE we respond to about 16,000
15 records requests a year and those are split
16 between employment verification through DOL,
17 the dose records for NIOSH and then what we
18 call a DAR, which is a Document Acquisition
19 Request, which essentially is all other
20 exposure information that might be relevant to
21 a party claim.

22 And again, it was about 16,000

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1 records requests in 2011. We haven't done our
2 final numbers this year, we close the books at
3 the end of September, but we're anticipating
4 about 16,000 again this year. And, you know,
5 we have no reason to believe that that's going
6 to change significantly next year, so we're
7 planning for about the same number next year.

8 So, our numbers are not going to
9 match exactly with NIOSH or DOL. And the main
10 reason for that is that claimants often worked
11 at multiple DOE sites, particularly at a place
12 like Oak Ridge, your average worker -- you
13 know, we consider kind of the Oak Ridge sites
14 to be the three gaseous diffusion plants as
15 well as the National Lab and the Y-12
16 facility.

17 And I think we've found that on
18 average a worker would typically have worked
19 in three of those sites, especially if they
20 had a long career. Maybe for a couple of
21 years that might not be the case, but if they
22 were, you know, in those Oak Ridge sites for

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1 an extended period of time they probably got
2 around to multiple sites at one point or
3 another. So, even though it's one EEOICPA
4 claim, we have to go to three different sites
5 and at each of those sites we'll have to fully
6 develop the request and search all of their
7 databases and resources. So that would count
8 as three different requests for us.

9 And the responses to these records
10 requests can be hundreds of pages long, even
11 thousands of pages for those with an extended
12 history at the site who may have worked in
13 various areas. So we have sent boxes of
14 records on single individuals in the past.

15 So we have to go to multiple
16 different departments and various records
17 sources and databases for your typical claim.

18 One DOE site here I listed goes to about 40
19 different sources for responsive records
20 including hard copy paper records, microfilm,
21 microfiche, databases and scanned electronic
22 records.

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1 And, you know, while that seems
2 like quite a bit for one individual, a lot of
3 that has to do with if there was contract
4 changeover at the site the site might have,
5 you know, the new contractor would have a new
6 database for dosimetry records or a new
7 database for medical records. These databases
8 or sources were not always migrated into the
9 next source, so if an individual worked for,
10 say, 20 years we might have to go to one
11 location for the first 5 years for dosimetry
12 information, then a separate database for the
13 next 5 years and so on.

14 So it gets a little bit
15 complicated but we've developed search
16 procedures and we have, as I said before, our
17 site POCs at each site that manage and
18 coordinate that response and make sure there's
19 some QA/QC to make sure that we're going to
20 all of the places that we should and we're
21 providing a complete records package.

22 So the second major responsibility

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1 that we have in the EEOICPA program is for
2 large-scale records research projects. These
3 are with Department of Labor. We did the Site
4 Exposure Matrix a few years back and I think
5 they're looking to do an update of that in the
6 next year or so, so we're preparing for that.

7 And then currently, the major one
8 is the Special Exposure Cohort projects or the
9 Site Profile reviews that are done by NIOSH
10 and the Board and their contractor.

11 We do have to review much of this
12 information for classification concerns,
13 especially at the NNSA and the weapons sites.

14 So we have protocols in place to do that.
15 We've reviewed millions of pages. We try to
16 do so in a timely manner. In certain cases,
17 we've brought back retirees or additional
18 staff to augment the current classification
19 staff. We try to get those back in a manner
20 that allows NIOSH and their contractors to hit
21 their deadlines and targets.

22 We're often supporting four to

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1 five projects at once, although some will be
2 right in the thick of it and others will be
3 just starting or just concluding. So as an
4 example, you know, here's about six sites that
5 we're working with now. We're probably
6 supporting smaller-scale research at other
7 sites. I notice I think I didn't put the Oak
8 Ridge National Lab on there, so there's
9 another one. And, as you see, Rocky Flats is
10 the first one on there as the local DOE site.

11 And as far as classification
12 reviews and our requirements there, we've come
13 up with a DOE EEOICPA Security Plan, which can
14 be found at the link on the page, and there's
15 copies in back if anyone wants to go take a
16 look at that. It provides the requirements
17 and protocols that we go through and that
18 NIOSH and the Advisory Board have to adhere to
19 as well.

20 For headquarters reviews, I guess
21 50 documents have been submitted since the
22 last Advisory Board meeting. The average

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1 turnaround time was about 8 working days. In
2 certain cases, we've returned documents in 1
3 to 2 days. And actually, before this meeting
4 with the Rocky Flats SEC Evaluation Report we
5 were able to return that in 1 day or even, I
6 think it was less than 1 day, to make sure
7 that NIOSH could get it out to everyone in
8 advance of this meeting.

9 Actually, and to go back to the
10 previous slide, I also mention this every
11 time. The headquarters reviews are what we
12 have direct control of in our office. We work
13 with our Office of Classification, which is
14 within the Office of Health, Safety and
15 Security. So all final NIOSH-generated
16 reports or the Board-generated reports will go
17 through DOE headquarters. And those are the
18 documents that, you know, we turn around in an
19 average of 8 working days and sometimes less.

20 At the DOE sites we do run into
21 difficulty sometimes, one because we have less
22 direct control over the DOE sites, but two,

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1 because these are often the source documents.

2 While the reports are typically, you know,
3 40, 50, 60, 100 pages long, some of these
4 source documents that NIOSH and the Board are
5 requesting to actually use for the research
6 can be hundreds of pages long and they can be
7 requesting reams of documents. So they can
8 have, you know, thousands of pages in front of
9 them. So it does take them a little bit
10 longer and they have competing resources, or,
11 you know, competing projects, I guess, onsite.

12 So we do the best we can to work
13 with those sites to get these out in a timely
14 manner. In some cases we use our EEOICPA
15 funding to augment their staff or bring back
16 retired classification officers or contractors
17 from other sites. But it is a more difficult
18 proposition than these headquarters reviews.

19 And then the third main
20 responsibility that DOE has under the program
21 is the facility research. Currently there are
22 over 300 facilities covered under the EEOICPA

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1 including the DOE facilities, Atomic Weapons
2 Employers and beryllium vendors. The full
3 listing is on our DOE website.

4 And then just wanted to talk about
5 a few of the initiatives we have at DOE. We
6 always have an ongoing effort to identify
7 additional records collections that are useful
8 for EEOICPA. You know, because many of these
9 sites are huge in terms of large footprint,
10 many buildings, a lot of different projects,
11 particularly at the labs. So on occasion we
12 will discover additional records collections,
13 or records collections that we think are well-
14 identified we may find some records in there
15 that we didn't realize were in there, were not
16 in the index. So in those cases we will try
17 to go through those collections, index them,
18 get them into a format that we can access and
19 use for this program.

20 Currently, at the Sandia National
21 Lab we identified a database actually that the
22 Nevada Test Site had that Sandia had sent some

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1 source records to Nevada back in the eighties
2 and Nevada put them in a database and had done
3 some things to index and make it more
4 accessible. Until about a year ago we didn't
5 realize that Nevada had that collection.

6 Once we -- through some of the
7 NIOSH SEC work they realized that there was
8 some Sandia records at Nevada. Now we're
9 trying to work between the two sites to see if
10 there is some overlap or if these are new
11 records and better organized. And if so we'll
12 get that into the mix down at Sandia and have
13 them use that for both their individual
14 records requests and for their records
15 research, the SEC research.

16 And then the other really big
17 project we have going on now is the SERT, the
18 Secure Electronic Records Transfer System, is
19 about to go live. We're hoping within the next
20 about 2 weeks. Sometime this week, we should
21 be selecting a go-live date.

22 This is a web-based records

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1 transfer system that's going to allow DOE,
2 NIOSH and DOL to securely and electronically
3 send these case files back and forth. So
4 NIOSH and DOL can request the records from DOE
5 and DOE can upload and send them back to NIOSH
6 electronically.

7 It will allow for more
8 transparency. So, you know, as soon as it's
9 uploaded DOE will see it. There will be no
10 FedEx issues, there won't be a couple of days
11 loss there. There will be no "we sent it"/"we
12 didn't get it"/"did you send it" kind of
13 thing. It'll be all up there on the website.

14 We'll be able to answer real-time. There
15 will be very easy reporting as far as
16 timeliness and responsiveness.

17 It's also going to enhance the
18 protection of data. Currently, we're using
19 encrypted thumb drives but they are sent over
20 the mail. So on occasion things are lost in
21 the mail or envelopes are ripped open. We
22 believe these thumb drives, because of the

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1 encryption, cannot be accessed even if they
2 were to fall into the wrong hands. But
3 nevertheless, this system here should enhance
4 the protection of this information.

5 We have a two-factor
6 authentication system on there. So you need
7 both -- every user who accesses the system
8 needs both something that only they know,
9 a.k.a., a password, and then they also need a
10 piece of hardware that has a randomly
11 generated number or they can use their -- or
12 they will be able to use in the future their
13 HSPD-12 badge which is particularly coded to
14 them. So they'll need both of those pieces to
15 access the system. So we think it'll be a
16 really great system. We're very excited to
17 get that rolled out.

18 And then Jeff mentioned it briefly
19 and I'll just mention it again. The Joint
20 Outreach Task Group was created a few years
21 ago to combine resources between DOL, DOE,
22 NIOSH and then the DOE Former Worker Medical

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1 Screening Programs. They're all trying to
2 reach the same individuals for slightly
3 different purposes but with the same audience.

4 We felt that by combining
5 resources, we could reach more individuals and
6 provide more comprehensive information.
7 Instead of having three separate meetings, an
8 individual could attend one and get all of the
9 information.

10 Also, something we're preparing to
11 roll out hopefully within the next month is a
12 JOTG, Joint Outreach Task Group, video where
13 members of NIOSH, DOE, DOL, the ombudsman's
14 offices and we have a very brief introduction
15 from the directors of the three offices at
16 DOL, NIOSH and DOE.

17 It provides basically the same
18 information that we would give at a live Joint
19 Outreach Task Group meeting, but this is aimed
20 at areas where there might not be enough
21 individuals to facilitate a meeting. You
22 know, we don't want to have more people

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1 presenting than listening, so in situations
2 like that we can set up a viewing for this
3 video. We could also have -- we're planning
4 to do kind of question and answers after the
5 video through video teleconference, and then
6 we're also going to have it on the respective
7 websites so people can access at home.

8 And then I just want to mention
9 our Former Worker Medical Screening Program
10 which provides free screenings to former DOE
11 workers anywhere throughout the complex, any
12 DOE site.

13 (Whereupon, the above-entitled
14 matter went off the record for a fire alarm at
15 9:35 a.m. and resumed at 9:47 a.m.)

16 CHAIRMAN MELIUS: If everyone will
17 get seated, we'll get started again. So for
18 those of you on the phone, we believe the fire
19 alarm has been taken care of. We still have
20 flashing lights but not noise. We're going to
21 reconvene. Sorry for the interruption.

22 So I believe that Greg was just --

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1 were you about at the end of your
2 presentation?

3 MR. LEWIS: Yes, there's one more
4 slide.

5 CHAIRMAN MELIUS: Okay.

6 MR. LEWIS: So I'll be quick.

7 CHAIRMAN MELIUS: Go ahead.

8 MR. LEWIS: Okay. I think -- yes,
9 the Former Worker Program serves all former
10 workers from all DOE sites and we do it in
11 locations close to their residence. We have
12 some clinics very near the DOE sites but the
13 alternative is, if you've retired to Florida
14 or moved to an area where there's no DOE
15 presence, we contract with clinics all over
16 the country. So we can typically get a
17 screening done within 40 to 50 miles of your
18 residence max, and most times much closer.

19 For the local site, for Rocky
20 Flats there's two Former Worker Programs that
21 cover the Rocky Flats workers. One is for
22 production workers and that's through our

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1 National Supplemental Screening Program. And
2 the principal investigators are Donna Cragle,
3 John McInerney and Lee Newman. And I've
4 provided a number there to contact them.

5 And then for construction and
6 trade workers, we've got the Building Trades
7 Medical Screening Program and the principal
8 investigator there is Knut Ringen. And we've
9 provided his number. And again those are also
10 on the slides that are in the back of the room
11 and that will be posted online if anyone wants
12 that contact info.

13 And with that are there any
14 questions?

15 CHAIRMAN MELIUS: Yes, David.

16 MEMBER RICHARDSON: This is just
17 one question. One of the activities that you
18 described was facility research. And I know
19 over time the database that you maintain, the
20 facility list has continued to grow.

21 And I was wondering if you could
22 describe -- I mean, I don't know how closely

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1 you work with this, but for example, the last
2 three or four facilities that have been added,
3 what was the process by which those facilities
4 were encountered and got into the database?

5 MR. LEWIS: So, a lot of times
6 honestly, what causes it -- it can be for any
7 number of factors. An individual can submit
8 some information, say, I think this is wrong.

9 You know, it really should be 2 years before
10 or you know, it should be a year after. I
11 know we were doing work, we were doing this
12 type of work. And it can be started just with
13 a request. Typically we'd prefer if they had
14 any kind of documentation, something they
15 found online or anything that could point us
16 in the right direction that gives us a leg up.

17 But even if they just say, you know, we think
18 that work was done at a particular site 2
19 years earlier than it's listed there we'll
20 forward it.

21 We have a primary researcher, a
22 gentleman with the Office of Legacy Management

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1 who was formerly involved in the FUSRAP
2 program, which was our cleanup program. And
3 on that program they did a lot of site
4 characterization work with research into the
5 site. So he has a fairly good knowledge of
6 site history, things like that. And so he'll
7 research the facility, he'll coordinate with
8 NIOSH and DOL. A lot of the NIOSH folks with
9 these SEC projects have been out and about at
10 the sites and have a pretty good knowledge as
11 well.

12 And actually, that's probably --
13 individuals will submit the request some of
14 the time, but the majority of these things are
15 initiated when NIOSH in their research out at
16 a site will come across information that
17 suggests a facility designation is incorrect.

18 Whether it's the site they're doing research
19 on, or they've even come across information.

20 I think we had a question about,
21 it was either the Medina or Clarksville
22 facility. We resolved it, but that came out

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1 of research into the Pantex plant, I believe.

2 They were looking at documents there and
3 happened to come across something else.

4 MEMBER RICHARDSON: And those
5 concern modifications to the dates that bound
6 a given site. But when a new site is added to
7 the list, I guess is what I was wondering.
8 And is this kind of the origin --

9 MR. LEWIS: It's basically the
10 same, it's the same process. It's more rare
11 because we think -- I'm trying to remember the
12 last time a brand new site was added. I think
13 some of the uranium mills and mines were added
14 and that was DOL who came across information
15 that suggested they should be added.

16 But it's basically the same
17 process. You know, we'll do research, we'll
18 also float it by NIOSH and DOL to see if they
19 have anything to add because they have a
20 fairly extensive records collection. SME,
21 subject matter experts as well. And once all
22 of the groups have gotten a chance to look at

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1 it.

2 Now, the split is that DOE will
3 add new Atomic Weapons Employers and DOL will
4 add new DOE sites, and DOL will also amend the
5 time frame for both DOE sites and AWE sites.
6 So it's a little odd, this split, but that's
7 the way it was worked out under the law.

8 MEMBER RICHARDSON: Okay. I mean,
9 and my impression could be wrong. My
10 recollection when the program started was that
11 there were in the ballpark of 200 covered
12 facilities and that there's now more than 300
13 but, I mean, maybe that's not correct. So the
14 number of --

15 MR. LEWIS: I thought --

16 MEMBER RICHARDSON: -- facilities
17 that have been added are less than that. Much
18 less, or?

19 MR. LEWIS: I don't have an exact
20 number but my impression is that the majority,
21 the vast majority of the sites were part of it
22 initially and then there's been a few added

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1 here and there. Stu?

2 MR. HINNEFELD: Yes, I'm working
3 from memory here, but I'm pretty sure there's
4 not been 100 additions. There was a bulk
5 addition of uranium mills recently, so there
6 were a number of them added recently, but I
7 don't recall a lot of additions of new sites.
8 I don't remember any specific examples.

9 There have been cases we've run
10 across researching that looked like AWE work
11 happened that we would forward when we were
12 researching something else. It looked like
13 hey, maybe this other site should be on there.

14 And so there may be a few, but I don't
15 remember any large-scale additions except for
16 the uranium mills and I don't remember how
17 many there were. It seems like on the order
18 of a dozen, I think.

19 MR. LEWIS: Yes, I think recently
20 it was about 16 maybe is what I had, something
21 like that.

22 MEMBER RICHARDSON: And right now

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1 the process by which --

2 CHAIRMAN MELIUS: We have a
3 petition, an SEC petition we need to address
4 and we've scheduled that for 5 minutes ago.

5 MEMBER RICHARDSON: Okay, I'm
6 sorry.

7 CHAIRMAN MELIUS: The questions
8 are fine, but I just -- somebody is on the
9 line. We've already had trouble with somebody
10 putting us on hold and I don't want to --

11 MEMBER RICHARDSON: That's fine.

12 CHAIRMAN MELIUS: -- have that
13 person --

14 MR. LEWIS: And David, I'd be glad
15 to -- I can get to the specifics of exactly
16 what was added when if you're interested. We
17 can talk about this offline.

18 MEMBER RICHARDSON: Just my final
19 point was that right now it's external forces
20 that are leading to changes to the facilities
21 list, not internal research that's going on.

22 MR. LEWIS: I would actually say

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1 the bulk of the changes have been initiated by
2 NIOSH.

3 MEMBER RICHARDSON: Okay.

4 MR. LEWIS: I mean, there's a few
5 that have come from outside but many more that
6 have come from NIOSH, I would say.

7 CHAIRMAN MELIUS: Okay. Thank
8 you, Greg. Okay, we are going to move onto
9 the Oak Ridge.

10 Do you want to do your reminder
11 about the phone thing?

12 MR. KATZ: While we're at it, we
13 had -- while we were on break, someone put the
14 call on hold and then everyone else on the
15 call had to listen to that and couldn't hear
16 us. So please, just a reminder, I know some
17 people have joined the call since we've
18 started, but don't ever put the call on hold.

19 Please just hang up and dial back in if you
20 need to leave the call at any piece.

21 And again, another reminder,
22 please mute your phone. Use *6 if you don't

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1 have a mute button, but your phone should be
2 muted while you're listening to this call.
3 Thank you.

4 CHAIRMAN MELIUS: Thank you, Ted.

5 Okay, we're going to move onto Oak Ridge
6 National Laboratory and SEC petition. And
7 presenting for NIOSH will be Tim Taulbee.
8 Welcome back, we haven't seen you for awhile.

9 DR. TAULBEE: Thank you, Dr.
10 Melius. Thank you, ladies and gentlemen of
11 the Board. I'll be presenting today the Oak
12 Ridge National Laboratory Special Exposure
13 Cohort Petition Evaluation Report. This would
14 be SEC 189.

15 Before I get started, let me
16 recognize the team that did the lion's share
17 of this work. The SEC lead from the Oak Ridge
18 Associated Universities was Mike Kubiak. The
19 lead technical evaluator was Mike Domal. He's
20 the one who really pulled this whole thing
21 together and was responsible for drafting the
22 report and organizing the team. And he was

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1 assisted by Roger Halsey, Keith Varnado and
2 Ray Clark. I just have the privilege of
3 presenting their work today, so thank you very
4 much.

5 The petition overview: on July
6 18th, 2011 we received an 83.13 petition for
7 Oak Ridge National Laboratory. The petition
8 qualified on October 11th, 2011. On January
9 6th, we notified the Advisory Board that we
10 would not be meeting the 180-day time limit
11 due to data retrieval difficulties that we
12 were experiencing around the
13 Thanksgiving/Christmas holiday time frame.

14 And then in August of this year,
15 we submitted the Evaluation Report here to the
16 Board and the petitioner received the
17 Evaluation Report on August 31st, 2012.

18 The petitioner requested a Class
19 of employees of all contractor employees,
20 subcontractor employees and AEC employees who
21 were monitored or should have been monitored
22 for any of the various radionuclides and

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1 fission products present at the X-10 plant
2 while working in all areas of the Oak Ridge
3 National Laboratory X-10 from January 1st,
4 1943 through December 31st, 1952.

5 Now, notice the December 31st,
6 1952. The Class we evaluated was all
7 employees at the Department of Energy, its
8 predecessor agencies and their contractors and
9 subcontractors who worked in any area of X-10
10 in Oak Ridge, Tennessee from January 1st, 1943
11 through July 31st, 1955. We extended this
12 particular evaluation due to known work that
13 Savannah River was doing with irradiating
14 thorium from another petition that we had, and
15 we had evidence that they were sending that
16 irradiated thorium back to Oak Ridge for
17 processing for separation of uranium-233. So
18 we took the initiative, if you will, to extend
19 the evaluation Class out into 1955 so we could
20 look specifically at that work.

21 Today the proposed Class that we
22 are going to be recommending to you all is

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1 that all employees of the Department of
2 Energy, its predecessor agencies and their
3 contractors and subcontractors who worked in
4 any area -- pardon me just a second, but I've
5 got to turn off the auto-slide on here that is
6 advancing these slides on me.

7 Again I apologize for this, folks.

8 So the Class we're recommending is for all
9 employees at the Department of Energy, its
10 predecessor agencies and their contractors and
11 subcontractors who worked in any area at the
12 Oak Ridge National Laboratory X-10 in Oak
13 Ridge, Tennessee from June 17th, 1943 through
14 July 31st, 1955 for a number of work days
15 aggregating at least 250 work days occurring
16 either solely under this employment or in
17 combination with work days within the
18 parameters established for one or more other
19 Classes of employees in the Special Exposure
20 Cohort.

21 So how did we come to this
22 recommendation? That's what I want to focus

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1 my presentation on today. I'm going to go
2 through a little bit of the historical
3 background of Oak Ridge National Laboratory,
4 talk about the critical exposure issues that
5 we looked at, the monitoring data and then the
6 feasibility for dose reconstruction.

7 So a little bit of background.
8 Oak Ridge National Laboratory, the
9 construction of X-10 site started in February
10 of 1943. And here I've got a couple of
11 photographs of -- one of Building 205, this
12 would be the separations building, in May of
13 1943 where they're pouring the foundation of
14 that particular facility.

15 And then Building 105 would be the
16 graphite pile in June of 1943. And you can
17 see they're still pouring the foundation and
18 beginning to set the steel.

19 The reactor itself went critical
20 on November 4th, 1943. And in this photograph
21 you can see a few months later, October 1943,
22 both Building 105 and 205 are nearly complete.

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1 The separations building is there behind it
2 and the graphite reactor is the structure
3 there toward the center. And you can see it
4 doesn't even have the siding around the
5 building just yet as of 1943. But within that
6 month they put the siding on and they actually
7 started the operation.

8 So for our evaluation, the start
9 of radiological operations we've determined to
10 be June 17th, 1943. As I mentioned, the
11 groundbreaking was in February. The
12 photographic evidence indicates construction
13 still underway in June of 1943. But we found
14 records from the Aluminum Company of America,
15 Alcoa, where they shipped the first uranium
16 slugs to the Clinton Laboratories on June 17th
17 of 1943. So somewhere onsite began receiving
18 the uranium from Alcoa after June 17th and
19 then around October 31st, around Halloween of
20 1943 they started loading the uranium into the
21 reactor. So it was somewhere onsite during
22 that time period.

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1 As I mentioned the reactor went
2 critical on November 4th. The first discharge
3 of irradiated uranium targets was at the end
4 of that month in November of 1943. By
5 December 31st, 1.54 milligrams of plutonium
6 had been separated and sent to the University
7 of Chicago. So within the first 2 months of
8 operation you have exposure to uranium, you
9 have exposure to mixed fission products and
10 exposure to plutonium. So it was a very rapid
11 startup of the facility.

12 The first shipment of plutonium to
13 Los Alamos occurred in February of 1944 and by
14 the end of the war Oak Ridge National
15 Laboratory had created 326 grams of plutonium.

16 This is a map of the X-10
17 facility. And in the upper right-hand corner
18 is where you'll see the graphite pile along
19 with the separations facility behind it. And
20 then there's a couple other areas that I
21 wanted to mention.

22 So up here is the graphite reactor

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1 and then right behind it is the separations
2 building. Here's a couple other reactors that
3 I'll be talking about, the low-intensity test
4 reactor and bulk shielding reactor.

5 This area right here is called
6 isotopes alley. This is where a lot of exotic
7 radionuclides were separated and I'll be
8 talking about those. Then here you have the
9 main radiochemistry building from the 1944 --
10 1943-1949 time period. These were al new
11 facilities that were being built there in 1955
12 time frame.

13 So to talk a little bit about the
14 reactor development. As I mentioned, the
15 graphite reactor, 1943. They did some
16 critical experiments in Building 205. This
17 would be the separations building and the hot
18 cells. But then the next big reactor that was
19 started was in 1949 and that would be the low-
20 intensity test reactor. This was a full-scale
21 mockup of the MTR reactor at Idaho for fluid
22 hydraulics testing. And then in 1950, the

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1 bulk shielding reactor. This was a swimming
2 pool-style reactor. 1952, the homogenous
3 reactor experiment. Then also in '52 the
4 tower shielding experiment and then the
5 aircraft reactor experiment in 1953.

6 And here's some photographs of the
7 different reactors. This would be the core of
8 the LITR reactor as it was published in
9 Scientific American in October 1951. This is
10 the tower shielding reactor facility and you
11 can see here where they would raise the
12 reactor up between the two towers and take
13 radiation measurements around it. Off to the
14 lower left here is the homogenous reactor
15 vessel. This was an aqueous fuel solution
16 that they brought to criticality for a test
17 demonstration. And then the bulk shielding
18 reactor here. And this is a swimming pool
19 with the small reactor core down there about
20 20 feet under the water.

21 Another component of work that
22 ORNL did was isotope production. In addition

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1 to the polonium-210 that they produced for the
2 Dayton Laboratories and the radioactive
3 lanthanum for Los Alamos they began to produce
4 radionuclides for medical research.

5 The first of these was in August
6 of 1946. The picture that I've shown here is
7 when they were taking the first radionuclides
8 out of the reactor for medical research in
9 August of 1946.

10 In the first year of production
11 they shipped 60 different radionuclides that
12 were produced in that time period. The main
13 isotopes produced were carbon-14, phosphorus-
14 32 and I-131.

15 There's an interesting Y-12
16 connection that I'll go into in more detail a
17 little bit later where materials made in the
18 calutron as well as the cyclotron at Y-12 were
19 sent back to X-10 for further separations
20 before shipping offsite. And the buildings
21 here I've shown is from isotopes circled there
22 with the different hot cell type of facility

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1 structures that were used in that time period.

2 Another operation that they did at
3 Oak Ridge National Laboratory was uranium-233
4 production. In 1944 they did some lab-scale
5 preparation and testing of thorium carbonate.

6 1946 you've got research and development work
7 for U-233 extraction. And remember, thorium
8 is the target material here, it's irradiated
9 inner reactor, thorium-232. And it becomes
10 uranium-233 through neutron absorption and
11 then you separate out the uranium-233.

12 By 1948, there's a temporary pilot
13 plant for thorium extraction was built behind
14 the radiochemistry lab in 706HB. In 1949, the
15 main thorium extraction runs began. Then by
16 1954, the Thorex Pilot Plant up in Building
17 205 which is now Building 3019 was installed
18 and that's where the bulk of the thorium
19 extraction occurred.

20 So the critical exposures that we
21 evaluated from internal dose is plutonium,
22 uranium, mixed fission products, thorium and

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1 exotic radionuclides. For external dose,
2 beta/gamma and then neutrons.

3 So let me focus first on the
4 internal dose monitoring. And within NIOSH
5 for dose reconstruction, we have a hierarchy
6 of data that we use for dose reconstruction.
7 The first, our preference is to use personal
8 bioassay. This would be urine samples, fecal
9 samples, whole body counts or chest counts.

10 Our second main source that we'd
11 like to use is personal breathing zone
12 sampling. This is where a person wears an
13 individual lapel sampler on their collar.

14 Another is represented breathing
15 zone sampling. And this might be where health
16 physics has positioned an air sampler amongst
17 where the workers were working in front of a
18 fume hood at head height to try and estimate
19 what their air sampling was. This is
20 different than general air monitoring from the
21 standpoint of a sampler on the wall. This is
22 where they physically went around and

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1 positioned an air sampler on a stand.

2 Also, surface contamination
3 measurements. If it's a stable environment
4 and you know what the re-suspension is, you
5 can estimate dose that way. And then finally
6 from source term data. So this is our
7 hierarchy that we go for. And so I'll be
8 trying to talk about these as I go through the
9 individual radionuclides.

10 So let me start with plutonium.
11 When we started the Evaluation Report, the
12 first plutonium bioassay that we had was
13 really 1949 that we were able to locate.
14 Through this evaluation we were able to locate
15 additional plutonium bioassay. And so the
16 first plutonium bioassay that we've been able
17 to locate was dated back to February of 1945.

18 The urine samples were collected at Clinton
19 Laboratories and they were sent to Argonne
20 National Laboratory for analysis, and then the
21 results were sent back to Clinton Labs.

22 Some of these results were

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1 positive, indicating some fairly significant
2 plutonium doses. The lab was concerned about
3 this and so the lab began to investigate more
4 as to what was causing this. And one of the
5 potentials for it although it wasn't the only
6 reason for the high results was that there was
7 some impure lanthanum carrier that was used
8 that had some alpha contamination in it and so
9 it was resulting in some more false positives
10 if you will, although it didn't fully explain
11 all of the exposures that we were seeing.

12 As a result of this the sampling
13 and analysis continued to improve over a 6-
14 month period from February through August of
15 1945 and then the bioassay results began to
16 come down.

17 The plutonium production
18 operations actually ended in 1945. However,
19 the research continued. They continued to do
20 work in the radiochemistry laboratories but
21 the main production operations ended at the
22 end of the war.

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1 What you see here in the graph is
2 the plutonium bioassay that we have. And you
3 can see the 1945, we have nearly 200 bioassay
4 samples that were taken. 1946, there's
5 virtually none at the end of the war. And
6 then 1947, as research began to continue and
7 pick up again, the plutonium bioassay began to
8 increase again as one would expect.

9 In addition to the bioassay we
10 have approximately 1,500 air samples available
11 from 1944 through 1947. The sample
12 description of many of these samples is that
13 they were taken 6 inches in front of the fume
14 hood, or 6 inches in front of a glove box in
15 room 220 in front of glove box 2A or something
16 like that.

17 We interviewed former workers who
18 indicated that these air samples were on a
19 stanchion and they were positioned at head
20 height with the intent of measuring the
21 breathing zone of an individual worker.

22 Most of the samples were from the

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1 706 radiochemistry building. In other words,
2 these were for research purposes, not in the
3 separations building or in the graphite
4 reactor building.

5 So with plutonium, based on the
6 availability of the plutonium bioassay results
7 in conjunction with these alpha air sample
8 data from the research facilities, dose
9 reconstruction from plutonium exposures is
10 believed to be feasible for this cohort.

11 Uranium on the other hand, NIOSH
12 has not located any uranium bioassay results
13 until 1949. In 1949, plutonium bioassay
14 logbook shows results for uranium where the
15 samples were split and a co-analysis for gross
16 alpha -- they called it uranium-233 -- was
17 conducted. And here you can see the number of
18 samples that we have by year from this data
19 set.

20 Now, according to a 1954 review of
21 their urinalysis program that was conducted
22 internally, we found this memo in the central

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1 files, ORNL began processing plutonium and
2 uranium urinalysis onsite in 1947. But we've
3 not located any results until 1949.

4 The majority of the air sample
5 data from 1944 to 1947 is for the
6 radiochemistry building. Only limited data,
7 only about 8 percent is for the separations
8 facility 205 where the plutonium was separated
9 from the uranium and the mixed fission
10 products.

11 We did find a few air sample log
12 sheets attached to some correspondence. It
13 was a standard form with a number dated at the
14 bottom of it that would indicate there was a
15 routine air monitoring program going on post-
16 1947. Interviews with former workers in that
17 time period post-1947 confirmed that there was
18 a routine air monitoring program. Our review
19 of monthly reports also indicate a routine
20 monitoring program that actually lists the
21 number of air samples that were collected,
22 about 60 samples per week in 1948 totaling to

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1 about 3,000 per year.

2 But to date neither NIOSH nor DOE
3 has been able to locate these air sample
4 results even though we've done an exhaustive
5 records search. We've looked for those forms,
6 we've looked for all the keywords on the forms
7 in the databases and we've not been able to
8 find them.

9 So as a result NIOSH finds that
10 reconstruction of internal doses to uranium is
11 infeasible from June 17th, 1943 through
12 December 31st, 1948. Starting in 1949, is
13 when we have the bioassay results during that
14 time period.

15 Mixed fission products follows a
16 very similar path as the uranium did. There's
17 no mixed fission product bioassay until 1950.

18 Again, that 1954 review of the
19 urinalysis program indicated that there is a
20 capability to monitor mixed fission products,
21 and that capability was developed in 1949.
22 This was confirmed in August 1949. ORNL 368,

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1 a procedure for radiochemical analysis of
2 barium, strontium and rare earths in urine was
3 published.

4 We do have some limited incident-
5 based sampling that was conducted in 1949.
6 We've been able to see this from the weekly
7 and monthly reports when an incident occurred.

8 They would list the small number of workers
9 to be sent for analysis.

10 The difficulties in obtaining
11 fission product sampling was noted in the 1954
12 memo. This resulted in a change in their
13 monitoring methodology. In 1951, they really
14 had a more robust monitoring program. It was
15 a problem they identified with how to identify
16 which workers were exposed to mixed fission
17 products. When they changed their sampling
18 they started getting a lot more samples.
19 People were participating more and so post-
20 1950, '51 time frame is when we have a lot of
21 data for mixed fission products that we feel
22 is pretty robust.

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1 Most of the air sampling data that
2 we have is for alpha. It was product
3 contamination in air, meaning plutonium or
4 uranium-233, not for beta/gamma emitters.
5 Only limited sampling was for beta/gamma
6 emitters.

7 And again, as I mentioned, there's
8 limited data for the separations facility in
9 Building 205. Most of the sampling was from
10 the 706 building.

11 The evidence indicates that
12 there's no bioassay program for mixed fission
13 products till 1949, limited air sampling in
14 the separations facility. Therefore, NIOSH
15 finds that the reconstruction of internal
16 doses to mixed fission products is infeasible
17 from June 17th, 1943 through December 31st,
18 1949. NIOSH believes that dose reconstruction
19 from January 1st, 1950 through July 31st, 1955
20 may be feasible for mixed fission products.

21 So with thorium, ORNL began
22 conducting the research involving thorium in

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1 1944. Most of the early research was
2 conducted in the radiochemistry building 706
3 where we've located extensive alpha air
4 sampling results.

5 As I indicated earlier we've
6 confirmed through the records and interviews
7 with former workers that these were
8 representative of breathing zone samples in
9 the chemistry laboratory environment.

10 However, we've only been able to
11 locate the air sampling data from 1944 to
12 1947. Coincidentally, 1947 is when Monsanto
13 left and Union Carbide took over, so there was
14 a change most likely in the records, the way
15 the records were kept, and we've lost the
16 trail as to where these records are.

17 We've not been able to locate any
18 air sample data post-1947. And as discussed
19 in the uranium section, we know they were
20 conducting air samples, we know there was a
21 routine monitoring program, but we haven't
22 been able to find the records.

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1 As I indicated, NIOSH has not been
2 able to locate any thorium bioassay prior to
3 August 1955. In August 1955 they began a
4 bioassay program for thorium specifically.
5 Generally, urinalysis for thorium results in a
6 dose that's been characterized as
7 insufficiently accurate. It results in so high
8 of a dose that it's infeasible.

9 However, ORNL didn't monitor via
10 urinalysis, they monitored via fecal analysis
11 of these workers. We've obtained the thorium
12 fecal results from ORNL starting in 1955.
13 Uranium-233 separations increased
14 significantly upon the receipt of the
15 irradiated thorium from Savannah River in 1956
16 and 1957. As you see here in this graph this
17 is the number of thorium fecal bioassay that
18 we have. And you can see in '56-'57 it is
19 somewhere around 100 samples or so per year,
20 and then in 1958 it jumps up to 800 following
21 the completion of those initial separations.

22 So due to the extensive

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1 representative air samples available from 1944
2 to 1947, NIOSH believes dose reconstruction
3 for thorium may be feasible. Due to the lack
4 of air sample data from `48 through July of
5 `55, NIOSH finds the dose reconstruction of
6 thorium is infeasible. Due to the
7 availability of the thorium fecal samples in
8 August of 1955, NIOSH believes that dose
9 reconstruction for thorium exposures may be
10 feasible again. So what we have is the early
11 time periods covered, the middle we don't have
12 any data, and the latter time period we have
13 fecal analysis.

14 So exotic radionuclides. Starting
15 in 1944 ORNL began producing the polonium-210
16 and lanthanum-140. By 1946 is when they
17 really began a commercial production operation
18 for various radionuclides for medical
19 research. And here you see they produced
20 carbon-14, P-32, I-131, yttrium-90. By 1948,
21 hundreds of isotopes were being produced.

22 There was a special isotopes

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1 production division at ORNL. Based upon our
2 research to date, this division appears to
3 have operated not only the graphite reactor
4 columns where they were irradiating samples to
5 make some of these radionuclides, they were
6 also operating the calutrons and the 86-inch
7 cyclotron at Y-12. So it's a separate
8 facility, but it was the same ORNL division
9 that was operating both of them.

10 This is our best impression to
11 date as to how the movement of materials would
12 have been between X-10 and Y-12. Across the
13 top line you've got the three main production
14 sources of the graphite reactor, the cyclotron
15 and the calutron. Next you've got chemical
16 separations or purification of some of these
17 radionuclides. Some isotopes produced in the
18 graphite reactor could have been separated in
19 the ORNL labs and then shipped offsite or used
20 onsite. Some samples irradiated in the
21 graphite reactor are actually sent directly
22 offsite, no processing onsite.

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1 You've got some that were produced
2 in the cyclotron at Y-12 that could have been
3 sent over or were sent over to the ORNL labs,
4 further separated and then sent offsite or
5 used onsite at ORNL. And the same with the
6 calutrons. So this is rather complex, and
7 with an SEC we look at one facility, X-10.

8 And so the good news here is that
9 in March of 2012 NIOSH initiated an 83.14 to
10 evaluate the isotope productions at the
11 cyclotron and calutrons at the Y-12 facility.

12 As the 83.14 team began to do this
13 research and my team was working on this,
14 began to evaluate radionuclides, we discovered
15 that there was a significant overlap between
16 our two research efforts. We were requesting
17 the same documents and looking for things that
18 were very similar but with a different twist
19 to them.

20 Table 5-3 and 5-4 in the
21 Evaluation Report lists the isotope production
22 that we've found to date. We know that that

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1 table is incomplete at this time due to what
2 was produced at Y-12. That table was
3 generated just upon what we knew was produced
4 at X-10. So we need to supplement that.

5 But due to the resource overlap,
6 NIOSH decided to reserve the exotic
7 radionuclide evaluation at ORNL and combine it
8 with the Y-12 83.14 effort once this SEC was
9 completed and presented. And I can report to
10 you on that. August 30th, 2012 we had our
11 kickoff meeting of these two joint teams and
12 it was very nice to hear the two team leaders
13 talking and sharing information back and
14 forth. And gaps that had been identified
15 under both efforts already were already
16 beginning to be filled where there were some
17 Y-12 reports that my team didn't know about
18 and vice versa. And we'll continue to keep
19 the Board updated as we progress in this
20 evaluation.

21 So in summary of the internal dose
22 monitoring, going down here line by line with

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1 plutonium you can see 1944, we have the air
2 sample data, 1945 we have bioassay, 1946 we
3 have air sample data, and then `47 forward we
4 have bioassay for plutonium.

5 The uranium we have no data up
6 until 1948 -- or up through 1948. For thorium
7 we have the air sample data in the 706
8 radiochemistry building where the thorium work
9 was being conducted from `44 to `47. Starting
10 in `48, we don't have any more of that air
11 sample data or have not been able to locate
12 it. However, by August of 1955 we have the
13 thorium fecal bioassay, so we feel we can do
14 dose reconstruction again.

15 Fission products, again, no data
16 up through 1949. Starting in 1950, we have
17 fission product bioassay. And then we've
18 reserved the exotic radionuclides. Overall,
19 the internal dose reconstruction due to
20 different parts and pieces is infeasible from
21 June 17th, 1943 through July 31st, 1955.

22 External monitoring. From the

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1 beginning Y-12 did a tremendous amount of
2 external monitoring, film badges and pocket
3 ionization chambers. To give an example, for
4 the month of December 1943, this would be the
5 second month of operation, they read over
6 12,000 pocket ionization chambers for
7 individual doses for workers. 1944, they
8 started film badge dosimeters.

9 And then for neutrons, 1944,
10 there's neutron and photon surveys. 1947 is a
11 special fine-grain alpha film, a predecessor
12 to NTA that I'll discuss shortly. And then
13 1949 you have NTA film.

14 This is an example of the beta and
15 gamma monitoring data that we have from 1943-
16 1945. And you can see it's a number of names,
17 there's thousands of workers listed there, so
18 we feel the development of a coworker model
19 here is feasible for dose reconstruction for
20 people who were not monitored. But a large
21 fraction of the people were actually
22 monitored.

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1 Neutron monitoring. In doing this
2 research, we stumbled across something that I
3 had not run into at any other facility and
4 this was the ability of a neutron badge to
5 measure both the thermal and fast neutrons.

6 And the capability comes out of
7 using a neutron-proton reaction on nitrogen-14
8 that's embedded in the fine-grain alpha films
9 as well as in NTA film. It produces a 584 keV
10 proton which looks like a 1.1 MeV neutron from
11 a track standpoint. So it would be 607 grains
12 when you're looking at it under a microscope.

13 It's very easy to see.

14 They actually calibrated this
15 dosimeter in the thermal column of the
16 graphite reactor. And so with the cadmium
17 filter on it, the cadmium would absorb the
18 thermal neutrons and so there would be a lower
19 number of tracks behind the cadmium filter in
20 the open window portion. They would have both
21 the thermal and the fast and the delta between
22 the two would give them the thermal neutron

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1 response. This was unusual compared to what
2 we've seen at virtually every other site
3 throughout the entire complex.

4 And this was all done by Dr.
5 Joseph Checka from a very long time ago. And
6 interestingly, these early fine-grain alpha
7 films in 1947, we've also located a fading
8 study that he conducted, never published but
9 it was there in the central files, a very
10 well-done study of how much these tracks would
11 fade over time. So it was a very beautiful
12 program that he was running for neutron
13 monitoring.

14 Other neutron monitoring data that
15 we have for the graphite reactor, there's
16 neutron and photon surveys. Low-intensity
17 test reactor as I mentioned was a full-scale
18 mockup of the MTR reactor. And we have
19 neutron-photon measurements from that one
20 indicating a ratio of about 0.58.

21 The bulk shielding reactor,
22 typically the neutron dose is zero. As

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1 Admiral Rickover once wrote, "Water has no
2 cracks," so once you get to 20 feet below
3 water the shielding of the neutrons is pretty
4 good.

5 The experiments were generally
6 lowered into the pool. In some instances they
7 lowered the pool level to conduct experiments.

8 And we actually have neutron and photon
9 surveys of when they did that what those dose
10 rates were.

11 The homogenous reactor experiment.

12 We've looked at workers that were working
13 with that particular reactor. We've confirmed
14 that they wore that special neutron dosimeter
15 that could measure both thermal and fast. The
16 aircraft reactor experiment, we have neutron
17 and photon surveys. For the tower shielding
18 reactor, neutron and photon surveys as well as
19 neutron spectra. The whole purpose of that
20 reactor was for radiation shielding. They
21 were very interested in what the spectra would
22 look like.

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1 So in summary, beta/gamma
2 exposures, pocket ionization chambers and film
3 badge data, neutron exposures. We've got the
4 neutron-photon surveys as well as the neutron
5 dosimeter with fast and thermal capability.
6 Due to the availability of these pocket
7 ionization chambers, film badge dosimeters,
8 neutron surveys and the neutron dosimetry, we
9 believe that external dose reconstruction is
10 feasible.

11 So the conclusion of our research:
12 we've evaluated the available information and
13 determined that we do not have access to
14 sufficient personnel monitoring, workplace
15 monitoring or source term data to estimate the
16 potential internal exposures to uranium from
17 June 17th, 1943 to December 31st, 1948,
18 fission products from June 17th, 1943 to
19 December 31st, 1949, thorium from January 1st,
20 1948 through July 31st, 1955. Combined
21 infeasibility, again, is June 17th, 1943
22 through July 31st, 1955.

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1 So why are we recommending
2 everyone in this Class? Unlike other large
3 facilities such as Savannah River, Idaho, ORNL
4 has a relatively small main campus. The main
5 campus is actually about the same size as the
6 700/300 area combined at Savannah River.

7 The facility was largely open.
8 Once you enter through the guard checkpoints,
9 you could pretty much go wherever you wanted
10 to. NIOSH could not find any practical way to
11 identify uranium, mixed fission product and
12 thorium-exposed workers. We could go through
13 organizational charts and find those that were
14 likely exposed to these, the people that did
15 the hands-on work per se, but other people,
16 construction trades or others who might have
17 come into that area and been exposed, we
18 didn't have any way to identify who those
19 people were.

20 So what about employees not
21 included in the SEC? We intend to use any
22 internal and external monitoring data, medical

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1 doses that may become available in an
2 individual's claim and that can be interpreted
3 using existing dose reconstruction processes
4 or procedures. And this includes that
5 plutonium bioassay that we found from 1945.
6 We had several people who were claimants from
7 that data set that we located and the response
8 back from DOE did not have those records in
9 there. But we would add those in and we would
10 use that data for their dose reconstruction.

11 Therefore partial dose
12 reconstructions for individuals employed at
13 Oak Ridge National Laboratory during the
14 period from June 17th, 1943 through July 31st,
15 1955 but who do not qualify for inclusion in
16 the Special Exposure Cohort may be performed
17 using these data as appropriate.

18 Health endangerment. The evidence
19 reviewed in this evaluation indicates that
20 some workers in the Class may have accumulated
21 chronic radiation exposures through intakes of
22 radionuclides and direct exposure to

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1 radioactive materials. Consequently, NIOSH is
2 specifying that health may have been
3 endangered for those workers covered by this
4 evaluation who were employed for a number of
5 work days aggregating at least 250 work days
6 within the parameters established for this
7 Class or in combination with work days --
8 within the parameters established for one or
9 more other Classes of employees in the SEC.

10 Again, our proposed Class is all
11 employees of the Department of Energy, its
12 predecessor agencies and their contractors and
13 subcontractors who worked in any area of the
14 Oak Ridge National Laboratory X-10 in Oak
15 Ridge, Tennessee from June 17th, 1943 through
16 July 31st, 1955 for a number of work days
17 aggregating at least 250 work days occurring
18 either solely under this employment or in
19 combination with work days within the
20 parameters established for one or more other
21 Classes of employees in the Special Exposure
22 Cohort.

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1 This is just a summary of our
2 feasibility table indicating that we believe
3 plutonium dose reconstruction may be feasible,
4 uranium is feasible post-1949, or post-January
5 `49, thorium from `44 to `47, and then after
6 July of `55. Fission products is feasible
7 January `50 through `55. Exotic radionuclides
8 is reserved, due to that complexity that I
9 talked about. Beta/gamma, neutron and
10 occupational medical X-rays we believe to be
11 feasible.

12 And that's that same table. I
13 just wanted to pop it up there again so you
14 can see. The red is where the infeasibility
15 occurs.

16 Claimant statistics. Total number
17 of ORNL claims submitted as of July 10th this
18 year, 2,036. Total number of claims with
19 employment in the proposed Class, 1,302.
20 Number of dose reconstructions we've completed
21 is 1,074. Number with internal dosimetry is
22 only about 25 percent or 20 percent of this

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1 really, 236. Number with external dosimetry,
2 668 or about 67 percent were monitored for
3 external dose.

4 And with that I'll be happy to
5 answer any questions that you may have. Thank
6 you.

7 MR. KATZ: Thanks, Tim. Just
8 before Tim goes to questions, let me just note
9 for the record for the deliberative part of
10 this session, Dr. Ziemer and Dr. Lockey both
11 had conflicts and they recused themselves from
12 this session.

13 CHAIRMAN MELIUS: Thank you.
14 Questions for Tim? Yes, Wanda.

15 MEMBER MUNN: Tim, I didn't go
16 back and check the original documents. Is
17 there any evidence with respect to the thorium
18 issue, is there any evidence that there was a
19 change in the activities onsite that would be
20 in any way affected by thorium? During that
21 period from `48 through `55, when we know the
22 irradiated material began to come in and the

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1 program picked up, is there any reason to
2 assume that the air data that was taken in the
3 four preceding years would not be a viable
4 surrogate for thorium exposures during that
5 period of time?

6 DR. TAULBEE: Yes. And the reason
7 here is -- I've jumped back to this slide for
8 the U-233 production. In 1948 is when they
9 built the temporary pilot plant for thorium
10 extraction. And so 1944 to 1947 was
11 laboratory radiochemistry type of work that
12 was going on. They expanded this into
13 effectively a semi-works with this 706HB
14 building. And then by 1949, they began large-
15 scale extraction runs. In '54 it was moved up
16 to the separations area.

17 MEMBER MUNN: I didn't correlate
18 that when I was looking at it. Thank you.

19 CHAIRMAN MELIUS: Other questions?
20 Bill, yes.

21 MEMBER FIELD: I'm looking at the
22 internal dose monitoring chart that you have.

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1 And you said that plutonium dose
2 reconstruction is feasible through that
3 period. And that's based primarily on the
4 bioassay results you have?

5 DR. TAULBEE: Correct.

6 MEMBER FIELD: But in '44 and '46
7 you don't have bioassay. You're going to just
8 be depending on air monitoring at that point
9 for those two years?

10 DR. TAULBEE: That's correct.

11 MEMBER FIELD: I was just
12 wondering if you'd looked -- do you have air
13 monitoring data for '45?

14 DR. TAULBEE: We do, yes.

15 MEMBER FIELD: And I just wondered
16 if you looked to see if that air monitoring
17 was reflective of the bioassay results that
18 you received or that the workers received.

19 DR. TAULBEE: I don't know that we
20 have looked specifically at that because of
21 the late identification of this bioassay.
22 However, that would be a very interesting

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1 review to do.

2 MEMBER FIELD: I think it would be
3 helpful to help validate the utility of `44
4 and `46 if in fact it is predictive of the
5 bioassay results for `45.

6 DR. TAULBEE: Okay. It is
7 probably more predictive of the 1946. The `44
8 might be a little more questionable because
9 `44 and `45 is when they were still producing
10 plutonium. 1946 is when it switched more to
11 the research scale.

12 CHAIRMAN MELIUS: Gen.

13 MEMBER ROESSLER: It was a good
14 presentation, Tim. This is a fascinating
15 story and I think you put it together very
16 well so that we can all understand it.

17 My conclusion is that it's pretty
18 clear that they had really good health physics
19 practices across the board considering the
20 time period and all, but unfortunately there
21 are big gaps, as you presented. So it seems
22 to me that this is the type of situation that

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1 this program is designed for. That's the end
2 of my comment, then I have a question.

3 You showed the gap in the uranium
4 air monitoring data that apparently they did
5 it, but you can't find the records. And I
6 assume you talked to old-timers and talked to,
7 you know, tried to explore that as to what
8 could have happened to all of the data that
9 apparently had been taken but is just gone.

10 DR. TAULBEE: Thank you very much.

11 And you're absolutely right, we did talk to
12 former workers and many who were health
13 physicists, and yes, they were concerned with
14 where did this data go because they knew they
15 took it. And you know, we asked where might
16 it have been filed, might it have been sent
17 off to a federal records center or something
18 like that. And nobody could really identify
19 it. They were very puzzled, just like we
20 were. As to the indications and monthly
21 reports this data was taken, but we have not
22 been able to lay our hands on it whatsoever.

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1 So they were very concerned, just like we
2 were.

3 CHAIRMAN MELIUS: Dick.

4 MEMBER LEMEN: Have you gone to
5 the Atlanta Federal Records Center to look at
6 their data?

7 DR. TAULBEE: Yes, sir, we have.

8 MEMBER LEMEN: Okay, because I
9 know there's a lot of Oak Ridge stuff there,
10 because I used some of it about 18 years ago.

11 DR. TAULBEE: You don't happen to
12 know how they filed the air sample results, do
13 you?

14 (Laughter.)

15 MEMBER LEMEN: I wasn't looking
16 for that. I was trying to set up a cohort,
17 but I didn't look for the air samples. There
18 are hundreds of boxes there so if you want to
19 go back and look.

20 CHAIRMAN MELIUS: Let's go to
21 Dick's garage and see what's there.

22 MEMBER LEMEN: I don't have

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1 anything in my files.

2 (Laughter.)

3 CHAIRMAN MELIUS: Any other --
4 yes, Bill.

5 MEMBER FIELD: I had a question.
6 I like this table because I think it's
7 interesting. So, the air sampling that was
8 done for plutonium, is that alpha then?

9 DR. TAULBEE: Yes. All the air
10 samples in the early years were gross alpha.

11 MEMBER FIELD: Okay, so how do you
12 differentiate between the thoron or the alpha
13 from that versus the alpha from the plutonium?

14 DR. TAULBEE: Good question. Some
15 of the air samples actually had been decayed
16 out that we have. So that these should be
17 just the gross alpha of the product
18 contamination.

19 CHAIRMAN MELIUS: Seeing no more
20 at least immediate questions, I know it's a
21 lot to absorb in a short time but -- and I
22 think some of these, I mean, one of the

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1 thoughts I had was that certainly for some of
2 the issues related to what's considered to be
3 feasible and what is still ongoing research,
4 it may be very well worthwhile setting up a
5 Work Group to follow through on this.

6 But I guess the question would be
7 how do you want to deal with sort of the
8 immediate infeasibility issues? I think the
9 question is those, do we agree with NIOSH on
10 those and want to take action today or how
11 does, how do people feel? Yes, Brad.

12 MEMBER CLAWSON: Personally, I'd
13 like to -- you know, NIOSH has already told us
14 that it's unfeasible to be able to do it. I
15 think that we ought to accept that today and
16 continue on. And I don't know if we've got a
17 Work Group.

18 CHAIRMAN MELIUS: We don't. We'd
19 need to set one up.

20 MEMBER CLAWSON: I propose that we
21 accept NIOSH's 83.14, I believe it is.

22 CHAIRMAN MELIUS: It's 83.13.

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1 DR. TAULBEE: 83.13.

2 CHAIRMAN MELIUS: Can you go to the
3 definition slide, Tim? There we go, thanks.
4 So I think we have a motion. I'll take that
5 as a motion from Brad to accept NIOSH's -- do
6 I have a second for that?

7 MEMBER SCHOFIELD: Second.

8 CHAIRMAN MELIUS: Okay, from Phil.
9 Any other further discussion on that portion
10 of it? I will add, just for the record, that
11 the petitioner did not wish to comment. He or
12 she may well be listening in, but they are not
13 wishing to comment. I'm not trying to ignore
14 them. Okay. No further questions? Ted, do
15 you want to do the roll call?

16 MR. KATZ: Absolutely.

17 CHAIRMAN MELIUS: Sorry to
18 surprise you.

19 MR. KATZ: No, no surprise. That
20 was just a dramatic pause. Very good. Dr.
21 Anderson?

22 MEMBER ANDERSON: Yes.

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1 MR. KATZ: Ms. Beach?

2 MEMBER BEACH: Yes.

3 MR. KATZ: Mr. Clawson?

4 MEMBER CLAWSON: Yes.

5 MR. KATZ: Dr. Field?

6 MEMBER FIELD: Yes.

7 MR. KATZ: Mike Gibson, are you on
8 the line? And if you are, you might be muted.

9 Okay, I assume he's absent. And we collect
10 Board Members' votes who are absent after the
11 meeting. Mr. Griffon?

12 MEMBER GRIFFON: Yes.

13 MR. KATZ: Dr. Kotelchuck?

14 MEMBER KOTELCHUCK: Yes.

15 MR. KATZ: Dr. Lemen?

16 MEMBER LEMEN: Yes.

17 MR. KATZ: Dr. Lockey is recused.
18 Dr. Melius?

19 CHAIRMAN MELIUS: Yes.

20 MR. KATZ: Ms. Munn?

21 MEMBER MUNN: Yes.

22 MR. KATZ: Dr. Poston is absent

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1 and would be recused in any event. Dr.
2 Richardson?

3 MEMBER RICHARDSON: Yes.

4 MR. KATZ: Dr. Roessler?

5 MEMBER ROESSLER: Yes.

6 MR. KATZ: Mr. Schofield?

7 MEMBER SCHOFIELD: Yes.

8 MR. KATZ: And Ms. Valerio.

9 MEMBER VALERIO: Yes.

10 MR. KATZ: Okay. And Dr. Ziemer
11 is recused, so that's 13 ayes, no nays. The
12 motion passes. Thank you.

13 CHAIRMAN MELIUS: Good. And thank
14 you, Tim, and the people, whoever put together
15 the report and worked on it. I thought it was
16 -- for a very complicated situation I thought
17 you did a very good job of pulling that
18 together.

19 DR. TAULBEE: Thank you very much.

20 CHAIRMAN MELIUS: We are scheduled
21 for a break now, which we will take and
22 reconvene at 11:00. Please try to get back

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1 here sharply at 11 because we do have another
2 SEC petition to discuss. And a petitioner may
3 be on the line, so I'd like to try to stay on
4 schedule.

5 (Whereupon, the above-entitled
6 matter went off the record at 10:44 a.m. and
7 resumed at 11:05 a.m.)

8 CHAIRMAN MELIUS: Okay, we're now
9 going to have an update on the Hanford SEC
10 Petition Number 155. We'll have a
11 presentation from Arjun in just a second. But
12 I just want to introduce this by pointing out
13 just to the Board the Work Group on this met
14 last week to go through this presentation and
15 review the SC&A review of the NIOSH Evaluation
16 Report.

17 And at this point the Board is not
18 recommending any -- excuse me, the Work Group
19 is not recommending any Board actions, but
20 rather we'll be scheduling another Work Group
21 meeting. There's another issue that is not
22 contained in these slides so I think Arjun

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1 will probably mention it that we felt we
2 needed to address before bringing a final
3 recommendation to the Board. So, that is our
4 plan.

5 So this will probably be sort of
6 the major part of our review of this SEC
7 Evaluation Report but we are not prepared to
8 make a recommendation yet, so view this
9 accordingly. And why don't you go ahead,
10 Arjun?

11 MR. KATZ: And while Arjun is
12 getting ready just let me note for the record
13 that Ms. Munn and Ms. Beach are recused from
14 this session. Thanks.

15 DR. MAKHIJANI: Thank you, Dr.
16 Melius.

17 CHAIRMAN MELIUS: And Ms. Munn
18 says she'll see us all after lunch.

19 (Laughter.)

20 DR. MAKHIJANI: So just to give
21 you a little background. SEC Petition 155 is
22 for a very limited period and very specific to

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1 a certain issue. It covers 1987 to '89 for
2 the 200 area Plutonium Finishing Plant.

3 And it was specifically related to
4 the question of the bioassay data generated by
5 US Testing Company and said that they were not
6 trustworthy and should not be used for dose
7 reconstruction because of fraud and
8 mishandling of data by the company, and cited
9 EPA investigations into this issue among other
10 things. There's a fair amount of
11 documentation to that effect.

12 The NIOSH Evaluation Report of
13 2011 found that fraud did not affect bioassay
14 data and that it could be used for dose
15 reconstruction in that period. And the Board
16 asked SC&A to review the matter. So it's a
17 sensitive and complex issue as you imagine and
18 we went into it in considerable detail.

19 And these are the things we did.
20 We reviewed the petition and the Evaluation
21 Report, of course. We reviewed documents
22 related to the EPA investigation of US

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1 Testing. We reviewed the internal self-
2 assessments by US Testing and the PNL audits
3 of bioassay data. And as I'll explain the PNL
4 audits were not really full audits but double-
5 checks of what US Testing was doing.

6 After the 1989 EPA investigations
7 there were two external reviews of the US
8 Testing program in 1990 and `91. We reviewed
9 those. We reviewed documents supplied by the
10 petitioner and petitioner's representative,
11 and we also -- there were a lot of non-public
12 documents that were not public because of
13 various issues I understand, whistleblower and
14 other issues. There was a joint review of
15 these documents between NIOSH and Board Member
16 Brad Clawson and an SC&A representative.

17 We also did a lot of other work
18 besides document reviews. We interviewed the
19 petitioner and the petitioner's
20 representative. We looked at the external --
21 we interviewed the external bioassay expert
22 who was there during the May 1990 review, one

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1 of the two external experts who participated
2 in that review on behalf of DOE, and two of
3 the external experts who conducted the 1991
4 retrospective review.

5 Board Member Brad Clawson
6 participated in the interviews. Sam Glover
7 from NIOSH was present as was a DOE
8 classification officer who reviewed all the
9 interviews.

10 All the interviews were also
11 reviewed by the interviewees and approved. We
12 made the necessary corrections. You have them
13 in your report.

14 We also sent questions to two PNL
15 personnel who were familiar with the bioassay
16 program who responded and you have their
17 responses as well.

18 Finally, we reviewed data quality
19 issues extensively, including minimum
20 detectable activities and we reviewed bioassay
21 data of plutonium, uranium, americium,
22 strontium-90 and neptunium specifically. And

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1 because of an issue raised by the petitioner
2 we also reviewed four completed dose
3 reconstructions to examine the use of a
4 certain kind of bioassay data, specifically
5 fecal data.

6 So, the biggest question was did
7 fraud affect the US Testing bioassay data. So
8 we conducted extensive research to locate any
9 evidence of fraud or mishandling of data in
10 the bioassay program similar to what had been
11 discovered by EPA in their findings. We asked
12 the petitioner to provide specific
13 information, direct documentation of fraud and
14 none was forthcoming. Petitioner did provide
15 documents but they did not contain direct
16 evidence of fraud in the bioassay program. We
17 conducted the interviews.

18 There were two issues that could
19 have potentially been related to fraud or data
20 mishandling that were mentioned in the
21 reviews. One was an edit to a quality control
22 file which had been changed without a paper

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1 trail, but it had been mentioned that there
2 had been a change. And one, there was a
3 report, the 1991 review stated that data had
4 been withheld. And so we investigated both of
5 those issues.

6 We did not find any motive for
7 fraud. You know, the EPA discussed motives
8 for fraud in its investigation of chemicals.
9 We did not -- the reviews in '90-'91 concluded
10 that they could have detected crude levels of
11 fraud and did not find any. They also were
12 very, very specific that they were not set up
13 to detect sophisticated fraud. And as I
14 mentioned the PNL audits were also not
15 designed to detect fraud.

16 So, while we didn't find evidence
17 of fraud and to all available evidence, US
18 Testing bioassay data were not affected by
19 fraud. But the all available evidence should
20 be underlined because none of the
21 investigations that were done at the time of
22 bioassay data were structured to find

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1 sophisticated fraud.

2 And we went into this during the
3 interviews of the people who did the reviews
4 and asked them again and they reaffirmed that
5 they could not have found sophisticated fraud,
6 but crude fraud they could have discovered.
7 So no definitive conclusion but all evidence
8 points to the conclusion that there was no
9 fraud in the bioassay program.

10 So, the bottom line on this is
11 there are two views relating to how the
12 evidence about fraud should be handled. There
13 was some evidence about fraud with US Testing.

14 It was discussed extensively by EPA and the
15 implications of that for the bioassay program
16 were also discussed and there were two views.

17 The petitioner's view and supported by
18 documentation from the time by DOE, the DOE
19 manager specifically, Pacific National Lab and
20 EPA all indicated that, because some part of
21 the data had been affected by knowing and
22 willful manipulation of data, none of the data

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1 could be trusted and so all of the data should
2 be regarded as suspect.

3 This reasoning was explained.
4 There was a lawsuit subsequent to the
5 termination of contract of US Testing and the
6 manager of DOE testified in that lawsuit. And
7 he explained this reasoning very explicitly,
8 that if there were -- any of the data were
9 affected by this willful manipulation then
10 none could be trusted and so the contract was
11 terminated.

12 In the bottom bullet you can see
13 that the court that reviewed this concluded
14 that PNL's termination of the contract for
15 default was not warranted. The termination
16 for convenience was permissible, and the court
17 referred to this, the unease by various
18 parties with accepting any of the data and so
19 thought that termination for convenience was
20 permissible. I'm not a legal expert so I
21 can't tell you the difference between those
22 two things but I at least wanted to put that

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1 record before you.

2 Now, in contrast to the
3 petitioner's view and these views of the
4 various agencies and their representatives in
5 1990, I think it was, '91, the external
6 oversight and retrospective reviews in 1990
7 and '91 found the bioassay data to be usable.

8 They found problems in quality assurance,
9 they found some problems of various kinds, but
10 they didn't think that the data should be
11 thrown out.

12 During one of the interviews one
13 expert interviewee qualified his -- the
14 qualification was not there in the review
15 itself but he said that he would give a
16 qualified yes to the usability of the data,
17 so.

18 There were quality assurance
19 issues with US Testing's bioassay work
20 stretching back to the nineteen sixties. The
21 report does mention therefore, you know, that
22 this raises some questions about the nature of

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1 the oversight. They're not directly related
2 to the 1987-89 questions. We did review the
3 latter quality assurance. We didn't go back
4 to the 1960s data and review the quality
5 assurance problems from that time since they
6 were not related to this particular period.

7 Some of the problems related to
8 the failure to achieve contractual minimum
9 detectable activities. In some cases the
10 problem was that the contract was -- seemed to
11 us to be more stringent than prevailing norms
12 for minimum detectable activities. And in any
13 case there were problems with MDAs and some
14 other problems in quality.

15 As regards the two issues where
16 there could have been potential for
17 mishandling or fraud, we investigated them.
18 The editing of the quality control file
19 appears to have a reasonable explanation based
20 on a memory of one of the experts.

21 There's no paper trail so again we
22 can't give you any definitive conclusion but

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1 it appears that there was a name change of the
2 person in the quality control header but no
3 data had actually been changed. The fact of
4 the change had been flagged in the file itself
5 so that provides some evidence that there
6 wasn't an intent to manipulate the information
7 since, by common sense, if you were trying to
8 manipulate information you wouldn't flag the
9 file as having been changed.

10 So, the overall evidence is that
11 there's a reasonable evidence for the change.

12 There was no intent to do fraud and data was
13 not manipulated. But again, some caveats to
14 that conclusion, no auditable paper trail.
15 And the review actually recommended that --
16 quite strongly that there should be a paper
17 trail whenever data were changed and the old
18 data should be appended and so on.

19 We also investigated whether data
20 were withheld from the 1991 review. We could
21 not make a definitive conclusion about this.
22 There is some uncertainty about what data were

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1 available to the review team in 1991. It does
2 appear that not all the data were in the
3 possession of Pacific National Lab.

4 The way the review team worked was
5 it went through the records of what PNL had
6 and requested records from that. And they
7 were able to get everything they wanted from
8 that set. And they were satisfied that they
9 had what they needed to arrive at valid
10 conclusions but they did note that data were
11 withheld in their report.

12 We interviewed two of the
13 reviewers and it wasn't quite a very clear
14 resolution of this, which is why we went to
15 one of the PNL people who were present at the
16 time who informed us that the reason that
17 there may not have been complete data in
18 possession of PNL was not a US Testing issue.

19 It was a policy of PNL to request the data,
20 the transfer of the data at the convenience of
21 PNL. So that may have been the main reason
22 why not all the data was in the possession of

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1 PNL at the time of the review.

2 Based on the interviews and the
3 report we didn't think that the review team
4 had any contact with US Testing. So they
5 didn't directly request any data from US
6 Testing and US Testing said no, we're not
7 going to give you that.

8 So the central conclusion of the
9 team in the report and during the interview
10 was that overall the program was sound and
11 there was no evidence of fraud, again with the
12 caveat that I mentioned earlier.

13 So in our review we concluded that
14 there is kind of a -- there's not a technical
15 question so much, the technical questions have
16 some caveats which I have mentioned to you,
17 but it's really basically the fraud issue is a
18 policy question.

19 If a company has, there's evidence
20 of fraud in one set of data, not bioassay
21 data, should the petitioner's view and the
22 view of PNL and others in 1990 or 1989 be

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1 taken as the reasonable view that none of the
2 data should be trusted? Or should you say
3 well, there's no evidence of fraud in the
4 bioassay data and they are unaffected by fraud
5 and they should be trusted for use in dose
6 reconstruction? We felt that this was really
7 an issue for the Board to resolve.

8 There are a couple of other issues
9 I'd like to mention. There were some problems
10 with quality assurance including the failure
11 to detect minimum detectable activity. One of
12 the other problems for instance was in the
13 reviews by PNL, in the quality assurance
14 reviews by PNL of US Testing work there were
15 supposedly blind samples. The blind samples
16 were often not truly blind so US Testing knew
17 which were the blind samples. Of course that
18 defeats the purpose. The fecal data which are
19 being used in dose reconstruction were never
20 subjected to quality assurance sampling, so
21 that is an issue.

22 And we concluded that these

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1 problems didn't invalidate the data, we also
2 raised these in the interviews with the
3 experts from the time, but that NIOSH did need
4 to make appropriate adjustments in a dose
5 reconstruction. This was the issue that came
6 up that Dr. Melius was mentioning came up
7 during the Work Group meeting and that will be
8 the subject of NIOSH's presentation as to how
9 they're going to take it into account.

10 We had two findings. We had a
11 number of observations which I have detailed
12 to you in regard to the matters of fraud and
13 data manipulation, but we also had two
14 findings.

15 As I mentioned we reviewed four
16 cases to -- not a statistically valid sample
17 to see how NIOSH was using fecal data in dose
18 reconstruction. In one of the four cases our
19 conclusion was that fecal data were not used
20 in accordance with the established procedure
21 and that this failure to adhere to the
22 procedure appears to have resulted in an

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1 underestimate of the plutonium intake,
2 significant underestimate of the plutonium
3 intake I think it says in the report.

4 Our second finding is that there's
5 less confidence in the fecal sample result
6 since no QA samples were ever analyzed in the
7 period under review. And as one of the May
8 1990 oversight experts noted, QA samples are
9 needed to assure that results are credible.
10 It does not necessarily mean the results are
11 not credible, but it certainly is a weakness
12 of the program. We think that some way should
13 be found for NIOSH to look at this issue and
14 if necessary adjust the fecal sampling data.
15 We didn't investigate how that might be done
16 and left that question open for the Board or
17 for NIOSH to address.

18 Thank you. I think that was my
19 last slide.

20 CHAIRMAN MELIUS: Yes. I wanted
21 you to get to the question slide here so I can
22 ask if anybody has questions for Arjun.

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1 This is not something we've done
2 commonly in this program and I would credit
3 both NIOSH and SC&A for very thorough reviews
4 of an issue, going back in time and trying to
5 evaluate this, the fraud issue.

6 I would add that I think our
7 perspective is a little different than sort of
8 PNL's was at the time. I think our question
9 is more technical, did the fraud in some way
10 affect the -- fraud in the other programs
11 potentially affect the quality of the data
12 that was being used for dose reconstruction.
13 And so a little different. I think we still
14 needed to do due diligence in reviewing this
15 overall issue and I think Arjun's laid out a
16 very good and very thorough review of this
17 which I think it required.

18 DR. MAKHIJANI: Thank you.

19 CHAIRMAN MELIUS: Board Members
20 with questions on this? Yes, Bill and then
21 David.

22 MEMBER FIELD: I guess I had a

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1 question with your finding number 1. It
2 appears out of the small sample size that you
3 used there was just one that had a deficiency
4 as far as an underestimate.

5 Were the other three cases
6 reviewed, were they -- did they not have that
7 or was it a totally different procedure that
8 would have to use the method that was faulty
9 for the fourth case?

10 DR. MAKHIJANI: The question the
11 petitioner raised, Dr. Field, was whether the
12 procedure was being followed. And the
13 petitioner raised it in relation to their own
14 claim but we couldn't do that because it's
15 under litigation. We were advised by CDC that
16 we should investigate other dose
17 reconstructions that had already been
18 completed and were not in question or in
19 process so far as NIOSH was concerned.

20 And so we picked four cases in
21 which fecal data had been used and we only --
22 we did not review the whole dose

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1 reconstruction. We only reviewed that aspect
2 and specifically to see whether the procedure
3 was followed. And so in three of the four
4 cases we concluded the procedure was followed.

5 And in one case we concluded procedure was
6 not followed.

7 We also found other technical
8 defects in that that are detailed in the
9 report, interpolating between a urine sample
10 and a fecal sample and some other problems.
11 We didn't feel that the dose reconstruction
12 method was correct.

13 MEMBER FIELD: I think the
14 question was for these four was the procedure
15 the same for all of them.

16 DR. MAKHIJANI: The procedure that
17 NIOSH adopted or that we adopted?

18 MEMBER FIELD: The procedure that
19 was followed.

20 DR. MAKHIJANI: By whom?

21 MEMBER FIELD: US Testing.

22 DR. MAKHIJANI: By US Testing? We

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1 didn't look at the origins of -- so we didn't
2 go into US Testing's files. We looked at the
3 DOE records of course that had been supplied
4 to NIOSH but they are the DOE records that are
5 supplied when NIOSH requests data for dose
6 reconstruction. We didn't try to go back --

7 MEMBER FIELD: No, I was just
8 trying --

9 DR. MAKHIJANI: I'm not
10 understanding your question.

11 MEMBER FIELD: Yes, I guess -- I
12 guess I'm trying to figure out if there's a
13 systematic bias that affects all the samples,
14 all four of the samples, or if this one was a
15 special case where it required another
16 procedure that the other three didn't have to
17 utilize.

18 DR. MAKHIJANI: No, no, we treated
19 all the data as equal. We didn't address the
20 issue of bias. We couldn't actually because
21 there were no QA data on fecal sampling. We
22 took the data at face value in all cases and

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1 examined whether the NIOSH-specified procedure
2 for dose reconstruction was followed.

3 And that was the limited -- that
4 was the question raised by the petitioner. We
5 felt we should examine a few cases and see if
6 there were any issues and then leave it up to
7 the Work Group to instruct us so we weren't
8 expending a whole lot of resources. And we
9 did find one problem.

10 CHAIRMAN MELIUS: I think Jim has
11 a comment.

12 DR. NETON: Yes, this is Jim
13 Neton. I think the specific dose
14 reconstruction method that was evaluated was
15 the application of the Super S methodology for
16 plutonium. And I think in three of the cases
17 the Super S methodology was appropriately
18 employed. And I think in this other case it
19 was not or it appears to have not been and
20 therefore the dose would have been
21 underestimated.

22 So that's an internal NIOSH

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1 procedure. It has nothing to do with the
2 quality of the bioassay data that we received
3 from US Testing. It's a separate issue.

4 DR. MAKHIJANI: Correct. I agree
5 with that.

6 MEMBER FIELD: The
7 representativeness of these findings, like you
8 say, it's not a very big sample. It's just
9 hard to gather much from it or form an
10 impression with such a limited sampling.

11 I mean you could do 100 -- there
12 could be 1 that was faulty out of the 100, or
13 you could do 100 and there could be 25 percent
14 based on this. It's just hard to say.

15 DR. MAKHIJANI: Right. Obviously
16 difficult to extrapolate this, yes.

17 CHAIRMAN MELIUS: Yes, David.

18 MEMBER RICHARDSON: You had laid
19 out a question about whether sophisticated
20 types of fraud could or could not be detected
21 through the evaluation. And I was wondering
22 about in places where, in those scenarios

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1 where the conclusion has been that there was
2 some sort of manipulation of recorded
3 information from test results for chemicals,
4 was that grossly apparent on examination of
5 the records or did it appear to be that that
6 manipulation was in some sense sophisticated?

7 DR. MAKHIJANI: I've not examined
8 the original records. That was done by Bob
9 Bistline, another member of our team. But I
10 have read the investigation report.

11 I don't think the fraud was very
12 sophisticated in my judgment. It seemed to
13 have been -- there were a number of different
14 problems.

15 One of the most evident problems
16 was they were not supposed to send samples
17 from one lab to another for analysis. They
18 were supposed to be analyzed where they were
19 assigned.

20 Another was chemical samples in
21 some cases where the volatile chemicals
22 involved needed to be tested within the dates

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1 and then the dates had been changed, and the
2 change was apparently not very sophisticated
3 so it was discovered. So it seemed that the
4 kind of data manipulation that was done and
5 document manipulation that was done was fairly
6 easily detectable. You had to look.

7 CHAIRMAN MELIUS: I think -- Sam I
8 think has some comments.

9 DR. MAKHIJANI: Yes, Sam has
10 looked at the documentation.

11 DR. GLOVER: So there were several
12 different pieces of fraud. I think we
13 detailed some of that but some of it's
14 protected under criminal investigation and
15 that's why -- anyway.

16 They actually modified the
17 spectrographs and actually changed data. Some
18 of it again as you said was where it was
19 conducted. They misinformed DOE about how it
20 was done and what equipment was used. So
21 there were numerous pieces that were
22 fabricated or modified as part of this, and

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1 that is all part of a separate laboratory.
2 There's a laboratory in Hoboken and then
3 there's a laboratory in Richland, Washington
4 which is where all the rad chem was done.

5 MEMBER RICHARDSON: And so those
6 sound like the types of processes or
7 manipulations that occur irrespective of the
8 true magnitude of the measured value. There
9 is some sort of manipulation which leads to a
10 distortion of the recorded value in the record
11 and -- because there's other sources of fraud
12 in which you say high values are recorded low.

13 Given the true value you're going to distort
14 it in some direction.

15 These are -- yes, these aren't lab
16 error I guess I would say, but these have the
17 flavor of being another type of measurement
18 error problem that's not dependent on the true
19 value for a given worker.

20 I mean -- so I'm imagining this as
21 layering on the types of measurement error
22 problems which we have with internal

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1 dosimetry. There's lots of sources of
2 uncertainty and this becomes another important
3 and difficult one to tease out.

4 This is just helping me understand
5 what was meant by fraud and manipulation here
6 and what kind of processes.

7 DR. MAKHIJANI: Actually the data
8 in question were not worker data for
9 chemicals. They were I think pretty much
10 exclusively environmental data. Am I wrong
11 about that?

12 DR. GLOVER: It was environmental
13 sampling. And a lot of it is -- reminded me
14 that it was changing the time to make sure
15 that they met contract specs.

16 MEMBER RICHARDSON: Right.

17 DR. GLOVER: So they were trying
18 to change things so they met their contractual
19 obligation regarding that.

20 DR. MAKHIJANI: But that could
21 also have resulted in the case of volatile
22 chemicals in a distortion of the true value.

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1 I mean, there was a reason that there were
2 time limits. As I understand it. Again, you
3 know, it's not my area of expertise, chemical
4 laboratory work, but as I read the documents
5 there was some reason why these time limits
6 were put.

7 MEMBER RICHARDSON: Okay.

8 CHAIRMAN MELIUS: Any other Board
9 Member questions? I don't know if the
10 petitioner is on the line. If the petitioner
11 is on the line, wishes to speak they may. It
12 wasn't clear. Okay, apparently not.

13 Any other comments? If not --
14 yes, Phil?

15 MEMBER SCHOFIELD: Just one
16 comment and that's the fact that I'm still
17 uncomfortable with how valid the data is. And
18 I -- this conversation hasn't really given me
19 a great deal of assurance about what it is if
20 they're not QA-ing their equipment.

21 CHAIRMAN MELIUS: Well, I think
22 it's a separate question and I think the Work

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1 Group is going to have another meeting to
2 discuss that specific issue. The original
3 issue in the petition that was brought up in
4 the evaluation petition for the most part
5 related to the fraud issue. So we asked SC&A
6 to review that.

7 We're going to have a follow-up
8 Work Group meeting to talk about the QA issues
9 and then -- which is why we -- the Work Group
10 has not reached a recommendation yet and will
11 be coming back to the Board with a
12 recommendation. Because we felt it needed to
13 address both issues but we had to get the
14 fraud issue out of the -- deal with that
15 first. That was the more complicated one and
16 one that would take more time and effort. So
17 if that answers your concern. Yes, Bill.

18 MEMBER RICHARDSON: I just thought
19 of something. You said that these two groups
20 were at two different locations. So the
21 chemical analysis was done at one site and the
22 radionuclide analysis was done at another

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1 site.

2 DR. MAKHIJANI: The bioassay was
3 done at Richland. As I understand it,
4 chemical analysis was supposed to be done in
5 both places and they were supposed to -- I
6 think Sam can give you more detail about that.

7 The chemical analysis was done at
8 Hoboken and a lot of the problems arose there.

9 But I think Richland also collected samples
10 and they were not supposed to transfer them to
11 Hoboken. Sam, and I saying that correctly?
12 And so that was one of the problems that arose
13 in terms of Richland not being true to its
14 contract because they were not supposed to be
15 transferring samples from one facility to
16 another and they did that. And that's to the
17 best of my memory.

18 CHAIRMAN MELIUS: Any other
19 questions? Okay. If not we will be back --
20 yes, Brad.

21 MEMBER CLAWSON: This isn't really
22 a question. Being involved with this I would

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1 really like to make sure that all the Board
2 Members realize with NIOSH and SC&A of what
3 level of detail that they have gone into this
4 has been very exemplary. I mean, they've done
5 a superior job on what they've done. I'd
6 really like to compliment both Arjun and Sam
7 on this because this has been a very, very
8 difficult -- to go through and deal with all
9 these different agencies and they've really
10 done a tremendous job.

11 DR. MAKHIJANI: Could I just?

12 CHAIRMAN MELIUS: Yes.

13 DR. MAKHIJANI: Since my name was
14 -- I had a team I worked with.

15 (Laughter.)

16 CHAIRMAN MELIUS: You can object
17 now. He disagrees.

18 DR. MAKHIJANI: I do take some
19 credit for this work. I really appreciate the
20 compliments but I worked with Joyce Lipsztein
21 and Bob Bistline and Lynn Ayers who
22 facilitated a lot of the interviews. And we

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1 really, you know, we had a wonderful team.
2 And so thank you.

3 CHAIRMAN MELIUS: So you stand
4 corrected, Brad. Withdraw. Okay. I believe
5 that finishes up our discussion on this issue.

6 Since we're missing at least one Board
7 Member, I think we will take our break for
8 lunch now, return at 1:30. And we're
9 expecting Representative Lujan to be here at
10 1:30 to speak to us so try to be back on time.

11 We've got plenty of time for lunch and follow
12 up then. Thank you.

13 (Whereupon, the above-entitled
14 matter went off the record at 11:39 a.m. and
15 resumed at 1:33 p.m.)

16 CHAIRMAN MELIUS: Ted, do you want
17 to?

18 MR. KATZ: Just one thing. Can
19 you un-mute the line for a second? Let me
20 just check on the line. Mike Gibson, are you
21 on the line? Board Member Mike Gibson, are
22 you on the line?

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1 (No response.)

2 Okay, then.

3 Let me just remind people on the
4 line to mute your phones. Press *6 if you
5 don't have a mute button. Keep your phone on
6 mute. And please do not put this call on hold
7 at any point. If you need to leave the call,
8 hang up and dial back in because if you put
9 the call on hold it will disrupt the meeting
10 and especially the people trying to listen in
11 on the phone. Thank you.

12 CHAIRMAN MELIUS: Okay. The first
13 item on our agenda for this afternoon is the
14 LANL SEC petition. And we have a number of
15 people that will be speaking on this in
16 follow-up. And I think we've all received a
17 revised Evaluation Report from NIOSH issued,
18 what, about a month ago. Maybe a little bit
19 longer on that.

20 But before we hear about the
21 Evaluation Report Representative Lujan is here
22 and would like to speak. Remember he was

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1 talking to us from Washington last time so now
2 we get to see him and hear him. And we
3 welcome you, Congressman, and go ahead.

4 CONGRESSMAN LUJAN: Mr. Chairman,
5 thank you very much. It's an honor to be with
6 you today and all of the Board Members. Good
7 afternoon and thank you for allowing me to
8 share a few words with you on this important
9 matter that impacts many of my constituents in
10 northern New Mexico.

11 And before I begin I also want to
12 acknowledge Michele Jacquez-Ortiz who is with
13 United States Senator Tom Udall's office who
14 is present today as well.

15 And Mr. Chairman, as you mentioned
16 thank you for allowing me to share my thoughts
17 with you back in June. That was very kind and
18 gracious of the Board to allow me to share
19 words with you then.

20 I again reiterate my strong
21 support for Special Exposure Cohort Petition
22 00109 regarding Los Alamos National Laboratory

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1 support services workers from January 1st,
2 1976 through December 31st, 2005. Many of my
3 constituents have been negatively affected by
4 the inaction of NIOSH on this petition and I
5 am hopeful that a favorable decision by the
6 Board today will move this process forward and
7 result in an important step toward
8 compensation for workers who have suffered
9 from an illness that was caused by their work
10 at Los Alamos National Laboratory.

11 With hundreds of LANL employees
12 that have come forward thus far who appear
13 likely to qualify for compensation under an
14 SEC Class and who have been negatively
15 affected by long periods of inaction have hurt
16 them and their families which is why I
17 appreciate everyone being here today to being
18 to address this wrong.

19 Many people from New Mexico made
20 this important trek to be with you today to
21 share some important words. While I hope the
22 Board will enable workers up to 2005 to

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1 receive compensation the recently revised
2 NIOSH Evaluation Report recommending the
3 addition of a Class of LANL workers to the SEC
4 for the years 1975 through 1995 should make it
5 abundantly clear the need to help the people
6 and families who worked at LANL and were
7 impacted during this time frame.

8 I will also be corresponding with
9 the director of Los Alamos National Laboratory
10 seeking assurance that they are monitoring and
11 keeping accurate data and records for current
12 and future employees, and that there is 100
13 percent cooperation and timely availability of
14 requested information by and to the NIOSH team
15 in respect to the remainder of this petition
16 through 2005 and others that may occur into
17 the future. Once again, thank you for
18 allowing me to address you today and I urge
19 swift action in favor of SEC 00109.

20 Again, Mr. Chairman, to you and
21 the Board and to everyone present today not
22 only on the petition from LANL but other

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1 petitions across the United States, we
2 appreciate them making the time to be with us
3 today, many of them paying right out of pocket
4 because of their passion to be with us today.

5 And just in closing, Mr. Chairman,
6 I want to acknowledge Andrew for having the
7 courage to follow through with his petition.
8 It's not easy on employees and people across
9 the United States to do this and they should
10 be commended for that courage in moving this
11 forward. Thank you again, Mr. Chairman of the
12 Board, for your indulgence and I appreciate
13 your work here today.

14 CHAIRMAN MELIUS: Thank you. And
15 we also appreciate the effort that petitioners
16 and others make to support this. Andrew has
17 been very persistent and we've gotten to know
18 him quite well as well as other people both at
19 LANL and other sites. But we also appreciate
20 your interest and involvement in this. It
21 also helps. Thank you.

22 I believe, Michele, you have a

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1 statement from Senator Udall also?

2 MS. JACQUEZ-ORTIZ: Thank you,
3 Chairman Melius.

4 I don't know of too many United
5 States congressmen who travel to another state
6 for one of these Advisory Board meetings and I
7 just want to for the record and on behalf of
8 my boss Senator Udall commend Congressman Ben
9 Ray Lujan for appearing in person today and
10 making that statement on behalf of these
11 workers. He just does such an incredible job
12 for his constituents in northern New Mexico.

13 I have a short statement that I'd
14 like to read on behalf of United States
15 Senator Tom Udall. Thank you, Chairman
16 Melius, and Members of the Advisory Board for
17 allowing me to speak today on behalf of
18 Senator Tom Udall and his constituents from
19 New Mexico.

20 As you know, Senator Udall has
21 closely followed the post-1975 LANL SEC
22 petition since it was introduced in April of

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1 2008. The Senator commends LANL petitioner
2 Andrew Evaskovich for his courage and his
3 tireless efforts in support of the petition
4 and for his advocacy on behalf of so many sick
5 workers who have been hoping and praying that
6 this petition is approved.

7 The Senator is especially grateful
8 to the Advisory Board's LANL Work Group, its
9 Chair Mark Griffon and the Board's contractor
10 SC&A. They have been thoughtful and
11 conscientious in their review of the petition
12 and have navigated through the complicated
13 issues unique to LANL with just the right mix
14 of scientific scrutiny and adherence to the
15 law while also exercising fairness and good
16 common sense.

17 The Senator is delighted with the
18 decision by NIOSH to revise its Evaluation
19 Report and recommend the additional Class of
20 LANL workers for the years 1975 through 1995.

21 He hopes that the Advisory Board will support
22 the recommendation and approve the petition

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1 while reserving the right to continue
2 evaluating the years 1995 through 2005.

3 Approval of this petition will
4 bring closure for many of the Senator's
5 constituents who are sick and dying while
6 awaiting a determination on their claims. He
7 urges the Board to recognize the need to
8 compensate these Cold War heroes for their
9 efforts on behalf of our nation. And if the
10 Board grants approval, Senator Udall will urge
11 Secretary Sebelius to promptly approve the SEC
12 so that LANL claimants can be paid without
13 further delay.

14 Thank you for allowing me to share
15 this statement on behalf of the Senator.

16 CHAIRMAN MELIUS: Thank you,
17 Michele. And again, thanks to the Senator.
18 Certainly his interest and involvement has
19 also been appreciated and helpful through this
20 and earlier petitions at LANL also. Your
21 efforts, we appreciate also.

22 Okay. We'll now turn it over to

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1 Jim Neton from NIOSH who will now do a
2 presentation on the NIOSH new Evaluation
3 Report.

4 MR. KATZ: Right. And as Jim is
5 setting up, just let me note that Phil
6 Schofield and Loretta Valerio have recused
7 themselves for this session.

8 DR. NETON: Thank you, Dr. Melius.
9 It's been my experience that presenting right
10 after lunch, I can have an anesthetizing
11 effect on people.

12 (Laughter.)

13 DR. NETON: So I'll do my best to
14 keep everyone awake during my presentation.
15 Thank you.

16 I am here to talk about NIOSH's
17 latest revision to the Special Exposure Cohort
18 Petition Evaluation Report for SEC 00109.
19 This is something we took up a while ago but
20 we've taken a critical look at the data that
21 we have available and why we thought we could
22 do it and looked at it particularly through

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1 the lens of what's occurred at a number of
2 national laboratories with similar types of
3 diverse source terms and what decisions we
4 made there.

5 So I just wanted to give you a
6 little bit of our thinking behind that. But
7 I'd also like to go back and sort of make sure
8 we're all on the same page and rehash some of
9 the background information before we get
10 going.

11 There are previous NIOSH
12 evaluations that have established an SEC Class
13 at Los Alamos and right now that extends for
14 all employees from March 15th, 1943 through
15 December 31st, 1975. So those Classes are
16 there, it has happened through a number of SEC
17 petition evaluations.

18 If you remember we had SEC 51 that
19 added a Class but that was for all workers who
20 were monitored or should have been monitored.

21 We realize -- and it was for specific
22 technical areas. We revised the technical

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1 areas and then eventually we came to the
2 position that it had to be all workers because
3 the technical areas were not controlled in a
4 manner that one could establish with certainty
5 who was engaged in work activities in each of
6 those different areas. So right now based on
7 those three SEC Classes you see listed in that
8 first bullet we have a Class from `43 to `75.

9 The basis for that Class was the
10 infeasibility of internal dose reconstruction
11 which is pretty much true for a lot of the
12 SECs that are added. But in particular at Los
13 Alamos there were a number of radionuclides
14 that were not adequately monitored, at least
15 in our opinion, during that period. These
16 included americium, curium, neptunium, thorium
17 and strontium, and in addition mixed fission
18 and activation products.

19 These are sort of what have come
20 to be called in EEOICPA the exotic
21 radionuclides, that is radionuclides other
22 than uranium and thorium that were sort of

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1 part and parcel to the weapons complex in the
2 early years. These primarily existed at the
3 national lab type facilities where they were
4 doing research. So that Class was added for
5 those reasons.

6 And in that report, in SEC 51 we
7 recognized that these issues may persist
8 beyond 1975. We thought that, based on the
9 introduction of whole body counting, that
10 would add a lot of technical merit to the
11 program, make it more robust and we could
12 reconstruct doses. But on this basis,
13 however, that is, on the basis that we reserve
14 the right to go back and look after `75 for
15 the exotics, it was one of the reasons that
16 the current petition, SEC 00109, was qualified
17 for evaluation.

18 So, I don't want to dwell too much
19 on this but we all know Los Alamos was
20 involved in weapons development and testing in
21 the early years. Starting in `43 of course
22 weapons, particularly plutonium and uranium

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1 were quite prevalent. But their mission
2 morphed over time into various other
3 activities including reactors, reactor
4 development, critical assemblies, accelerators
5 were established.

6 Along with that a lot of variety
7 of X-ray equipment, radiography sources,
8 biomedical research. Project Sherwood and
9 fusion research which is the use of controlled
10 fusion to create energy sources presumably
11 down the line was there. And of course the
12 waste treatment and disposal of all the
13 miscellaneous materials that were handled
14 during operations. So quite a variety of
15 potential for source terms at the laboratory.

16 Just to list these, the internal
17 sources of exposure which I'd like to talk
18 primarily about today included cesium,
19 tritium, plutonium-238, -239 and uranium.
20 These are what we call the primary nuclides,
21 or I probably should have said the primary and
22 the routinely monitored nuclides.

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1 We literally have tens of
2 thousands of bioassay samples for plutonium
3 and uranium at Los Alamos, tens of thousands
4 of tritium samples, a lot of cesium
5 measurements, a lot of data. And in fact
6 NIOSH has established a TIB, OTIB-62 or -6? I
7 always forget. I think it's -62 that
8 prescribes how one could use all that abundant
9 data to create coworker models for plutonium
10 and uranium, tritium and cesium.

11 Again, these exotic radionuclides,
12 the ones that were present in much lesser
13 quantities, I mean in many cases we're talking
14 kilogram-type quantities, existed at the site.

15 And as defined in the original SEC 51 these
16 included mixed fission activation products.
17 Those could exist from one of two sources,
18 one, either from a reactor or from an
19 accelerator-type facility. So the combination
20 of the various fission activation products
21 could be different at those two facilities.

22 And also these other ones I've

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1 listed here. And it's not exhaustive but it's
2 pretty inclusive, actinium-227, americium-241,
3 curium-244, neptunium-239, protactinium-231,
4 strontium-90, yttrium-90, thorium-230 and
5 thorium-232. Not all of these persisted to a
6 large extent beyond 1975 but they were there,
7 many of them were there as legacy sources that
8 were there as contamination.

9 In particular, strontium-90 was
10 there as a fission activation product but also
11 as an individual source term because it was
12 used in the radium lanthanum program early on
13 at the Los Alamos facility. And there were
14 still pockets of contamination that needed to
15 be cleaned up.

16 And external sources of exposures,
17 fairly what you would expect, photon, beta,
18 neutron exposures from the various
19 accelerators, reactors, X-ray machines and the
20 various radionuclides that were present at the
21 facility.

22 Just a little bit about, we always

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1 like to talk about the number of potential
2 claims affected by our actions just so you get
3 a sense for the magnitude of what this means.

4 There's 1,361 as of August 8th claims
5 submitted to NIOSH and there are 863 claims
6 that have employment during the period 1976
7 through 2005. And 73 percent of those dose
8 reconstructions have been completed.

9 But it's a little misleading
10 because, remember, we have a Class already
11 before 1975. So if one looks at only the
12 claims with start dates of employment after
13 December 31st, 1975, there's 386 claims. So
14 that's not a hard and fast way to look at it
15 but it does indicate that there are many fewer
16 claims probably affected than the 863 that
17 have employment, at least some portion of
18 their employment between '76 and 2005.

19 Okay, just as we do in most of
20 these I'll just give a brief overview of the
21 petition. It was an 83.13 petition received.

22 It qualified May 2008 and we issued our

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1 original Evaluation Report January 22nd, 2009.

2 It was some years ago. And since that time
3 there's been a number of Working Groups that
4 have met to hash out and discuss NIOSH's
5 approach.

6 The Class evaluated was the
7 service support workers from January 1st, '76
8 through 2005. And we concluded in the
9 original Evaluation Report, that is Rev 0 of
10 SEC -- the ER for SEC 109 that we had
11 sufficient information to do dose
12 reconstructions and no additional Class was
13 recommended at that time.

14 As has been indicated earlier
15 we've gone through and looked at that
16 information and we now find that we do lack
17 sufficient information for certain
18 radionuclides, in particular those compounds I
19 talked about, the mixed fission activation
20 products and the exotic radionuclides.

21 So we did issue Revision 1 which
22 you all have a copy of to revise our decision

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1 to recommend a Class -- or revise our decision
2 now to say that we want to recommend a Class
3 and it will be all workers from 1976 through
4 1995. The 1995 end date is based on our
5 presumption that Los Alamos would have been in
6 compliance with 10 CFR 835 by that date and
7 some other things that hint to us that the
8 program is in much better shape to monitor
9 workers.

10 There was a Tiger Team evaluation
11 in 1990. This 1995 date would allow time for
12 those recommendations to have been
13 implemented.

14 I believe a site Technical Basis
15 Document for internal dosimetry was written
16 and issued in 1993 which would go a long ways
17 towards describing who was monitored and why.

18 There were upgrades to the air monitoring
19 program.

20 Various things have come together
21 by 1995 that leads us to believe that that's a
22 date that we believe we're fairly comfortable

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1 with although we're not done with that part of
2 the analysis and we continue to evaluate what
3 we have in hand to see if we stick with this
4 1995 date or whether the Class may be extended
5 beyond that. But we're not opining on that
6 today. Today we're just talking about `76
7 through `95.

8 I want to talk a little bit about
9 why we changed our position and to do that I'd
10 like to talk about what we proposed in the
11 original ER. As I mentioned we had extensive
12 monitoring data available for the routinely
13 handled nuclides, uranium, plutonium, cesium,
14 tritium. And we have coworker models in TIB
15 62.

16 There is a very sparse amount of
17 information available for what we've called
18 the exotics. For example, strontium-90, I
19 think there's a total of 200 samples over the
20 entire operating history of the facility, even
21 less, fewer samples when you talk about
22 curiums and neptuniums and those type of

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1 things.

2 In fact, one thing that gives us
3 some concern is there are some at the site
4 that believe that curium data was taken for
5 some programs but we have not been able to
6 find them and no one seems to know where they
7 are.

8 And that's sort of what happened
9 when we took over reviewing Los Alamos. There
10 are a lot of data that were collected but it
11 took us a long time to get the data sets
12 assembled even for the routinely monitored
13 ones, the plutoniums and the uraniums. We
14 actually had to provide a fair amount of
15 assistance to the site to collect and
16 consolidate all of the available information
17 for those nuclides into a single database. So
18 we're not even sure we, you know, even though
19 some data may have been collected beyond the
20 sparse data that we have for the exotics,
21 right now we don't know where it is.

22 So what we did propose was, given

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1 that we have this large amount of data
2 available for uranium, plutonium and cesium,
3 could we not use those as surrogates for
4 exposures to these non-routinely handled
5 radionuclides. That is, since the program
6 seemed to be fairly robust in place to monitor
7 for uranium and plutonium, why would we
8 believe they would handle protection and
9 exposure to workers to other radionuclides any
10 differently?

11 In other words, if one took the
12 50th percentile value for plutonium that was
13 being excreted in the urine, why couldn't you
14 use that value to reconstruct how much thorium
15 people would have been exposed to? It sounded
16 like a great idea when we proposed it,
17 probably still has merit but after
18 deliberation with the Working Group and
19 thinking this through it really just didn't
20 pass the reasonableness test in our mind.

21 There's a couple of reasons for
22 that. One is that the original assumption

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1 that the exotics were handled and controlled
2 in a similar manner we haven't been able to
3 establish. Since these were smaller bench-top
4 operations, the controls would not necessarily
5 have been the same as if you had a production
6 environment with engineering controls in
7 place, you know, pretty standardized
8 procedures, that sort of thing. Having worked
9 myself at a national laboratory I can
10 understand how small-type operations sometimes
11 are not as rigorously designed and handled as
12 a routine operation.

13 The other issue is the exotics
14 might -- exposure to the exotics were more
15 than likely on an intermittent experimental
16 basis leading to episodic exposures that are
17 not well represented by a chronic exposure
18 model. I mean, we would take a chronic
19 exposure model for plutonium and say okay,
20 this person worked with curium and so we're
21 going to assume that they inhaled curium over
22 this entire 10-year time period which is

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1 probably not true. I mean they would have
2 worked with curium in limited amounts for
3 limited periods of time. So it just didn't
4 seem to fit that criteria either.

5 The comparability of operations I
6 kind of touched on, you know, the experimental
7 bench-top type operations. And again the
8 short duration exposures. So there are a
9 number of significant differences that at the
10 end of the day made us feel uncomfortable with
11 the approach that we had prescribed.

12 So after looking at all this and
13 thinking it through we now say that the
14 available monitoring records and process
15 information source term data are inadequate to
16 complete dose reconstructions for the period
17 January 1st, '76 through December 31st, '95.

18 As I said earlier, based on a
19 presumption of compliance with 10 CFR 835 we
20 find that dose reconstructions is likely
21 feasible by the first of January 1976 but we
22 will continue to evaluate that to make sure

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1 that the data are there to support that
2 opinion.

3 I don't want to ignore the
4 external dose reconstructions, of course
5 that's a major part of it. We haven't changed
6 our position on that. We believed we could do
7 it in Rev 0 of the Evaluation Report. We
8 still continue to believe we can do it in
9 Revision 1. And I've listed some bullets as
10 to why we believe that to be true.

11 The majority of workers were
12 monitored after 1976 for external exposures.
13 I forgot the number but it's in the 70-75
14 percent range of all workers wore some sort of
15 an external monitoring device.

16 They were capable of measuring
17 photons as well as beta exposures and that can
18 be supplemented with a significant amount of
19 field beta measurements that were taken in
20 conjunction with a photon survey so you can
21 generate photon to beta -- beta/photon ratios.

22 Neutrons are always a sticky issue

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1 at a national laboratory but they were
2 monitored prior -- neutrons that were
3 monitored prior to 1988 can be assessed using
4 appropriate -- we have sufficient
5 neutron/photon ratios at the various
6 facilities to establish neutron exposure
7 levels. After 1980 there was a combination we
8 can use of the albedo and the NTA film. And
9 as far as medical dose reconstruction goes I
10 think as like many other facilities we believe
11 we can use dose reconstruction using one of
12 our TIBs.

13 So the summary of the feasibility
14 findings are listed here. As you see internal
15 reconstruction is not feasible for the exotic
16 nuclides that I had mentioned.

17 I will correct a minor error,
18 maybe not so minor. It says tritium there in
19 the second box under "Internal." What that
20 really should have said was stable metal
21 tritides. We have a lot, 10,000, 20,000
22 tritium samples, I forgot how many.

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1 But as you are probably well aware
2 when you start complexing tritium with various
3 metals the dose reconstructions become
4 difficult. And we're not -- pretty reasonably
5 sure we can't reconstruct some specific forms
6 of stable metal tritide exposures, but we can
7 do tritium. And also it says that we can
8 reconstruct the external dose.

9 Just to complete this, health
10 endangerment. We believe that these were
11 based on chronic exposures, not high exposures
12 similar to criticality. So the 250-day
13 criteria for membership in the Class would
14 apply here.

15 And we did recommend that it's all
16 employees from 1976 through 1995 the reason
17 being that we've gone through this before.
18 With the technical areas you just can't
19 establish who frequented which technical areas
20 and did work at what times. So we didn't feel
21 comfortable restricting it to anything less
22 than all employees. And that's pretty much

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1 what that bullet says.

2 And again, for those not included
3 in the SEC we'll use any available monitoring
4 information we have to do partial dose
5 reconstructions.

6 And I think that concludes my
7 presentation.

8 CHAIRMAN MELIUS: Okay. Thank
9 you, Jim. Questions for Jim from the Board?
10 Paul.

11 MEMBER ZIEMER: Jim, if memory
12 serves me correctly 10 CFR 835 was pretty much
13 in place in the DOE by January '93. And I'm
14 wondering if there's sort of a solid basis for
15 selecting January of '96 as the date when
16 compliance was achieved. Is this more
17 intuitive or is there something specific in
18 the Los Alamos records that would substantiate
19 that as a good start date?

20 DR. NETON: I don't have the facts
21 in my head right now but I don't think all
22 facilities were in compliance by '93 and I'm

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1 pretty sure Los Alamos wasn't. And I'm
2 guessing that that '95 date represents that.

3 MEMBER ZIEMER: Well, let me
4 clarify. I said that 10 CFR 835 was in place.

5 DR. NETON: Oh, yes.

6 MEMBER ZIEMER: Actually that was
7 basically when it was put into -- it became a
8 requirement.

9 DR. NETON: Requirement, right.

10 MEMBER ZIEMER: So I'd certainly
11 agree there's some time frame for compliance.
12 I'm wondering if there's any basis for saying
13 it would have been 3 years which -- seems a
14 little long.

15 DR. NETON: I can't offer you any
16 specifics as to why that is but I'm pretty
17 sure that's the reason here. Sites had
18 implementation plans in place and I think in
19 Los Alamos it wouldn't have been until this
20 time frame.

21 MEMBER ZIEMER: Well, that's sort
22 of what I was asking. Do you know if there

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1 was such a plan?

2 DR. NETON: I wish I could answer
3 that question. I don't think there's anyone
4 here that can answer that but I'm pretty sure
5 that's true.

6 MEMBER ZIEMER: I'd certainly feel
7 more comfortable if there was something like
8 that versus just a gut feeling, well, they
9 should have been in compliance by then because
10 then you could pick --

11 DR. NETON: Yes.

12 MEMBER ZIEMER: -- you know, '96,
13 '97, '93.

14 DR. NETON: Yes.

15 MEMBER GRIFFON: I was going to
16 put Joe Fitzgerald on the spot. I'm not sure
17 if he knows the date. I thought that Los
18 Alamos got their accreditation a little later.
19 I thought -- I don't know the date either.

20 DR. NETON: Yes, it's the
21 implementation plan and whether that
22 implementation plan -- how far -- I'm pretty

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1 sure that, I'm surprised I don't know that but
2 I can't put my finger on it. I don't want to
3 claim I know it if I don't for sure.

4 MEMBER ZIEMER: I just wanted to -
5 -

6 DR. NETON: Tim Taulbee may have
7 it.

8 MEMBER ZIEMER: -- if there was a
9 basis for it.

10 DR. TAULBEE: As I recall from
11 working at DOE sites in that time period all
12 DOE sites had to be in compliance by January
13 1st, 1996. So that would take it up to they
14 could have been doing implementation up
15 through 1995. But January 1st was the date
16 all sites had to be in compliance.

17 CHAIRMAN MELIUS: I'm sorry, Gen
18 and then Dave.

19 MEMBER ROESSLER: My question
20 probably doesn't have an answer but I still --

21 DR. NETON: Well, we'll just skip
22 it then.

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1 (Laughter.)

2 MEMBER ROESSLER: No, I want to
3 bring it up. Earlier in your presentation you
4 mentioned that these sources that are
5 questionable now with regard to dose
6 reconstruction were probably during this time
7 period legacy sources. And you mentioned, I
8 took it as very small quantities of them.

9 And as I think about that just
10 because somebody is exposed doesn't
11 necessarily mean there's a health
12 endangerment. That's where we of course get
13 into a problem situation if you believe the
14 linear non-threshold model. But I'm just, you
15 know, everything else, all these big
16 exposures, if you had any gaps there I
17 wouldn't have any problem with going with this
18 but the fact that these amounts that the
19 exposures were probably very low, it just
20 bothers me that we think there could be health
21 endangerment.

22 DR. NETON: Right. Well, this is

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1 a situation. We've taken this up at
2 Brookhaven National Laboratory, Lawrence
3 Livermore, the early years at Los Alamos.
4 There's no good answer to that. The fact that
5 they were there, they were worked with, they
6 were manipulated. I think there was some
7 actual machining involved in some of these
8 cases. We're not talking about trivial type
9 of exposures. And the fact is that we can't
10 put a reasonable upper bound on it.

11 I mean there's no way to -- our
12 approach originally was to say well, it
13 certainly would have been no less than the
14 plutonium exposures because they handle a lot
15 of it, but you really can't say. That's just
16 putting a high number and saying okay, we'll
17 assume that everybody was exposed to -- they
18 were excreting the 50th percentile of a
19 plutonium concentration and just pretended
20 it's curium and then we can bound that
21 exposure. So that would be just sort of
22 putting a high number on it just to put a high

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1 number on it to say we could do it. I don't
2 think, you know, it comes down to sufficient
3 accuracy I guess.

4 CHAIRMAN MELIUS: If we don't know
5 who did what work, what type of work. Because
6 we could focus on certain types of jobs but I
7 don't think the records support that either.
8 And I think that's also a ways into it. So
9 you don't --

10 DR. NETON: As far as health
11 endangerment goes I do know that for some of
12 these exotics there were some incidents that
13 occurred that created some significant doses.
14 They weren't trivial. As you know, working
15 with anything that's a long-lived alpha
16 emitter of transuranic type material, it
17 doesn't take much. A very small quantity can
18 result in a fairly large long-term dose which
19 I know in our program would you put you into
20 some Probability of Causation values that are
21 not trivial.

22 CHAIRMAN MELIUS: Dave Kotelchuck?

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1 MEMBER KOTELCHUCK: Yes. As a new
2 Member of the Board who came in I would say in
3 the midst of this discussion although as I
4 look back probably toward the end of the
5 discussion your presentation was clear and
6 very helpful in terms of helping to explain
7 how your opinion changed and on what basis.
8 It was convincing.

9 DR. NETON: Okay, thank you.

10 CHAIRMAN MELIUS: Okay, Bill.

11 MEMBER FIELD: Yes, I just had a
12 question about the 250 days. It sounds like
13 the quantity was fairly low for these but
14 there were these incidents that occurred. I
15 just wonder if you could just speak to that a
16 little bit more because I thought during your
17 presentation you mentioned that there weren't
18 any accidents.

19 DR. NETON: Well, yes. When you
20 speak about the 250 days versus present you
21 get into a whole different ball game than just
22 saying an incident occurred. It has to be

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1 something that is extremely high and we've
2 been down this path talking about something of
3 a dose of a magnitude similar to a criticality
4 is I believe what the regulation states. So
5 you get to some pretty high, high exposures
6 that were not in line with what we've seen in
7 the incidents. The incident levels were not
8 nearly that high to where you -- instantaneous
9 exposure would have put you in the Class.

10 CHAIRMAN MELIUS: Any other Board
11 Member questions at this point? If not then
12 Mark, you had some comments. We'll hear from
13 Mark. Then we'll hear from the petitioner.

14 MEMBER GRIFFON: I did a couple of
15 slides. I don't know if Zaida emailed them.
16 Okay, it just came through. And since I ran
17 out of power on my computer I'm not even going
18 to use the slides.

19 But four of them were actually
20 from the last presentation I made I just
21 included them in there to give context to what
22 the Work Group has gone through, especially on

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1 the two main issues that come up in NIOSH's
2 Evaluation Report which are the mixed
3 activation, mixed fission products and the
4 exotics. And it gives a little bit of a time
5 line of -- and I think Jim went over this very
6 well so I'm not going to repeat it, but it's
7 just in there from the last update I gave.

8 Yes, so if you have the slides.
9 And I mean, for the audience there's not much
10 to this. I think Jim did a very good
11 overview. But just in terms of what the Work
12 Group has done. I think since 2009 if I track
13 this correctly we have four Work Group
14 meetings related to this issue. And that
15 doesn't include last week's. We had a brief
16 phone call meeting so that would be five
17 total.

18 And if you look back at our notes
19 I think constantly the top two SEC issues as
20 we were tracking them were the mixed
21 activation product, mixed fission products and
22 the exotics. So we've looked at it and

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1 certainly NIOSH has looked into many different
2 possible ways to use surrogate data, other
3 possible means of bounding this.

4 And I think over the course of 2
5 years I think NIOSH sort of came to a position
6 which SC&A was questioning all along. And I
7 think we -- it wasn't for lack of trying is my
8 point.

9 And then the, like I said the next
10 six slides in what I just handed out to you
11 were from the previous meeting. So they just
12 give a breakdown of those two issues, mixed
13 activation products and fission products and
14 the Work Group's work on this.

15 And it leads up to the last slide
16 which is from our phone call last week. The
17 Work Group is coming to the Board today with a
18 motion and we voted on -- it was a 3-to-1 vote
19 from the Work Group voting to make a motion to
20 the full Board to accept the proposed Class as
21 identified in NIOSH's Revision 1 of their
22 Evaluation Report. And that would effectively

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1 add a Class of all workers from `76 to `95 as
2 Jim laid it out nicely.

3 The last point I would make is
4 that the Work Group will continue to work on -
5 - the original petition goes through
6 12/31/2005. And we do have some issues that
7 certainly would still be relevant for that
8 later time period. So we're not just going to
9 close up shop so to speak. We will continue
10 our work. But this motion we bring before the
11 Board.

12 CHAIRMAN MELIUS: Any questions
13 for Mark? Yes, Wanda.

14 MEMBER MUNN: No, I don't have a
15 question for Mark but I have a comment. I was
16 the opposing vote. What a surprise for
17 everyone I know.

18 CHAIRMAN MELIUS: I'm shocked.

19 MEMBER MUNN: Yes, I know everyone
20 is. I don't believe anybody wants to deny
21 benefits to workers who were injured by their
22 work for the federal government in these

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1 programs. Everyone feels very strongly about
2 that.

3 But all the people that moved
4 through the LANL workforce during that 20-year
5 period were not injured. And the few that
6 were -- the probability that people who were
7 not badged were as likely to be harmed as
8 people who were badged doesn't appear to be
9 feasible.

10 I feel that this SEC is too broad.

11 I understand the difficulties involved in
12 placing more limits on it but I can't agree to
13 it simply for the reasons I've just stated.
14 And those are the only reasons.

15 CHAIRMAN MELIUS: Thank you,
16 Wanda. Okay. Now we'd like to hear from the
17 petitioner. Andrew, welcome. Welcome back I
18 should say.

19 MR. EVASKOVICH: Well thank you,
20 Dr. Melius and the Board, thank you for taking
21 the time to listen to me.

22 I don't have too much to say today

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1 because I've been working on this for 6 years
2 and I think I've said everything that I can
3 say. I've presented my arguments and NIOSH
4 has agreed to -- you know, add a Class till
5 1995 with the caveat to investigate later
6 years and I'm happy with that.

7 I appreciate all the hard work
8 that NIOSH has done, SC&A has done, the Work
9 Group and the Board and I'm very grateful for
10 that. And at the last meeting I was told
11 there should be some entertainment so I'm
12 going to tell a joke.

13 (Laughter.)

14 MR. EVASKOVICH: An accountant, a
15 lawyer and a physicist were talking at a party
16 about the benefits of having a girlfriend or a
17 wife. The accountant says well, you should
18 have a wife. You have double the income and
19 you get a tax benefit. The lawyer says well
20 no, you should have a girlfriend because if
21 you get divorced then you have divorce issues
22 with alimony and child support so a girlfriend

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1 is better. The physicist says well no, you're
2 both wrong. You should have a girlfriend and
3 a wife. The girlfriend thinks you're with the
4 wife, the wife thinks you're with the
5 girlfriend and you've got all that time to
6 spend in a laboratory doing research.

7 (Laughter.)

8 MR. EVASKOVICH: And that
9 concludes my presentation.

10 (Laughter.)

11 CHAIRMAN MELIUS: We understand
12 what goes on down at Los Alamos more now.

13 (Laughter.)

14 CHAIRMAN MELIUS: Thank you. And
15 more seriously thank you, Andrew, for you and
16 others from the area and Danny also that got
17 people together to do presentations, bring
18 information in because I think it's really
19 been informative for everybody involved. And
20 I think that's --

21 MR. EVASKOVICH: If I could just
22 address that, I did have a lot of help on

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1 this. Danny's here, Michele is here.
2 Jennifer from Congressman Lujan's office. The
3 Congressman, the Senator. Senator Jeff
4 Bingaman's office, they were also
5 instrumental. Some of the research was done
6 by other persons.

7 Actually there have been a number
8 of people that have been involved. My union
9 has been involved with this, the Firefighter's
10 Union. So I am here but I represent a large
11 group of people, that's all I want to say, and
12 I've had a lot of help on this.

13 And I've had a lot of help from
14 SC&A and NIOSH on this as well. So thank you,
15 everybody, for all the work that you've done
16 on my behalf and the people that I represent.

17 CHAIRMAN MELIUS: Okay, thank you.

18 Okay. Back to the issue at hand. Additional
19 comments or questions? Yes, Bill.

20 MEMBER FIELD: If you don't mind,
21 given Wanda's comment just for the record
22 could you speak to her concern as far as the

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1 Class itself?

2 DR. NETON: This puts me in kind
3 of a funny position, but. I believe that this
4 Class is merited under the provisions of
5 EEOICPA. The law is written in such a way
6 that if you can't reconstruct a dose to one
7 member of a Class of workers then that Class
8 should be added. We have workers who we truly
9 believe have exposures that can't be
10 reconstructed.

11 The unfortunate thing is like at
12 most of these large sites you can't limit it
13 to just laboratory workers or people that are
14 handling the highly radioactive materials
15 because it's just not possible. And so in the
16 -- for fairness purposes we end up saying all
17 workers.

18 I do agree that there is evidence
19 that Los Alamos had a fairly robust monitoring
20 program through those years. If you look
21 through the Evaluation Report it talks about
22 RWPs and monitoring statutes and such. But

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1 the fact is we just have no monitoring data
2 with which to determine the exposure for the
3 workers who handled a laundry list of
4 different radionuclides. There's no
5 monitoring data at all that we can hang our
6 hat on to put some bounding value on it. And
7 at the end of the day we believe that using
8 plutonium and uranium as surrogates did not
9 plausibly bound their exposures.

10 CHAIRMAN MELIUS: Thank you, Jim.

11 Yes, Josie?

12 MEMBER BEACH: I'd like to make a
13 recommendation that we accept NIOSH's proposal
14 to add a Class for Los Alamos for the dates
15 indicated.

16 CHAIRMAN MELIUS: Okay. The Work
17 Group has already made the motion so it's --
18 doesn't require a second according to our
19 parliamentarian. And grammarian. Any further
20 comments or discussion on this?

21 Can we just get the slide up that
22 actually has the Class so we're clear on what

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1 we're -- okay, thank you, Jim. Okay. So if
2 there's no further comments or questions I'll
3 ask Ted to do the roll call.

4 MR. KATZ: Thank you, Jim. Okay,
5 Dr. Anderson.

6 MEMBER ANDERSON: Yes.

7 MR. KATZ: Ms. Beach?

8 MEMBER BEACH: Yes.

9 MR. KATZ: Mr. Clawson?

10 MEMBER CLAWSON: Yes.

11 MR. KATZ: Dr. Field?

12 MEMBER FIELD: Yes.

13 MR. KATZ: Mike Gibson, are you on
14 the line? Okay, I register him as absent.
15 Mr. Griffon?

16 MEMBER GRIFFON: Yes.

17 MR. KATZ: Dr. Kotelchuck?

18 MEMBER KOTELCHUCK: Yes.

19 MR. KATZ: Dr. Lemen?

20 MEMBER LEMEN: Yes.

21 MR. KATZ: Dr. Lockey?

22 MEMBER LOCKEY: Yes.

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1 MR. KATZ: Dr. Melius?

2 CHAIRMAN MELIUS: Yes.

3 MR. KATZ: Ms. Munn?

4 MEMBER MUNN: No.

5 MR. KATZ: Dr. Poston is absent
6 but is also recused from this so no vote
7 needed. Dr. Richardson?

8 MEMBER RICHARDSON: Yes.

9 MR. KATZ: Dr. Roessler?

10 MEMBER ROESSLER: Yes.

11 MR. KATZ: And then we have
12 recusals for Schofield and Valerio. Dr.
13 Ziemer?

14 MEMBER ZIEMER: Yes.

15 MR. KATZ: So there's 12 in favor,
16 it's unanimous. No, there's one -- I'm sorry,
17 12 in favor, 1 opposed and 1 absent vote but
18 the motion passes. Thank you.

19 CHAIRMAN MELIUS: We weren't going
20 to let you get away with that one. Anyway,
21 thank you. So we'll move on.

22 I think the Work Group still has

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1 some follow-up to do with NIOSH on the later
2 time period. Yes. And I think it might be
3 helpful, it may be because I don't completely
4 understand it but the issue that was brought
5 up and Bill asked some questions about which
6 was the short-term exposure incidents and so
7 forth. I think if those might be clarified
8 because that's still an issue we need to deal
9 with as a Board. Okay, thank you.

10 We now have a Board work session.

11 We are running ahead of schedule. And what I
12 would propose doing is we go through the Board
13 work session. We will then do a break after
14 the Board work session but before the Rocky
15 Flats petition. We'll see, we may want to
16 just continue from the Rocky Flats right into
17 the public comment period there if we have a
18 significant number of people already in the
19 audience wishing to do public comment. I
20 think that might be a better way of handling
21 the break for this afternoon if no one objects
22 and so forth.

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1 The first issue for the work
2 session that I would like to bring up is just
3 a request. I think we have one Work Group
4 that we need to form that is ORNL and that we
5 talked about this morning. And so I would be
6 looking for volunteers for that Work Group.
7 And let me know.

8 And then the other one that not
9 all of us may have noticed because it wasn't
10 on the agenda this time but Ted brought it to
11 my attention was SC&A recently completed a
12 Site Profile review of the Kansas City site
13 which is something that we've not dealt with.

14 There's not been an SEC there. But certainly
15 the SC&A report raises a number of issues. So
16 it's probably I think appropriate that we set
17 up a Work Group for that also. So I would be
18 looking for volunteers for that also. I'd
19 like to try to do those appointments before
20 everybody leaves either late tomorrow or on
21 Thursday. So again, I'd be looking for people
22 willing to volunteer on that side also. And

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1 again, there may be others that will come up
2 but at least think about those two.

3 Ted has some scheduling issues and
4 we should try to get them going.

5 MR. KATZ: Okay, so we are
6 scheduled through -- just to remind everyone
7 the last meetings we have scheduled are a
8 February 7th teleconference and a March 12th
9 through 14th Board Meeting and that is planned
10 for Augusta.

11 So we need to plan out another
12 teleconference and another meeting beyond
13 that. And the approximate date frame for the
14 teleconference is the week of May 1st or 8th.

15 I think those are -- I'm not sure. Let me
16 check my calendar. I think those are
17 Wednesdays but I'm not sure. Are those?

18 CHAIRMAN MELIUS: Yes.

19 MR. KATZ: Right because we often
20 try to do this on a Wednesday but it doesn't
21 really matter. It could be any day of the
22 week. The week of May 1st or May 8th, those

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1 are Wednesdays.

2 CHAIRMAN MELIUS: The 1st isn't
3 good for me.

4 MR. KATZ: But any days that week
5 or are you saying the whole week?

6 CHAIRMAN MELIUS: Which week?

7 MR. KATZ: The week of May 8th.

8 CHAIRMAN MELIUS: Okay, no.

9 MR. KATZ: How about during the
10 week of May 1st, is that whole week?

11 CHAIRMAN MELIUS: I can do the 2nd
12 or 3rd.

13 MR. KATZ: Yes, any day.

14 CHAIRMAN MELIUS: The only day
15 that's bad for me is the 1st.

16 MR. KATZ: Right. So, how about
17 May 2nd? Is that good for everyone? Very
18 good. That was quick. That's a Thursday,
19 right

20 CHAIRMAN MELIUS: 11 a.m.

21 MR. KATZ: 11 a.m. Eastern time.

22 CHAIRMAN MELIUS: May 2nd.

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1 MR. KATZ: Second. Very good.
2 And then for the actual in-person Board
3 Meeting we have either -- a number of dates
4 I've given because we have a period in between
5 where I'm without Zaida and I'm lost without
6 her so we have to work around that.

7 So slightly on the early side
8 would be the week of June 3rd or June 10th.
9 And what I mean "early" it's just a little bit
10 closer than we often do Board meetings.
11 Excuse me? Eleven a.m.

12 So the week of June 3rd to 10th
13 and I've already heard June 10th week is out.

14 And on the late side, the week of July 8th or
15 15th.

16 CHAIRMAN MELIUS: I can't do the
17 3rd.

18 MR. KATZ: Okay. So let's look at
19 the July dates then. July 8th or 15th, those
20 weeks. So does anyone have a problem with the
21 week of July 8th? I mean, we'll wait on the
22 Health Physics but other than that does anyone

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1 have a calendar problem with that week?

2 MEMBER ROESSLER: The annual
3 meeting of the Health Physics Society, you're
4 talking about 2013, right?

5 MR. KATZ: Yes.

6 MEMBER ROESSLER: Is July 7th
7 through 11th.

8 MR. KATZ: Figures.

9 MEMBER ROESSLER: And I think we
10 have a number of people who are --

11 MR. KATZ: Yes, no, that's a
12 problem.

13 CHAIRMAN MELIUS: Where is it
14 being held?

15 MEMBER ROESSLER: Madison,
16 Wisconsin. Henry could make it but --

17 MR. KATZ: How about July 15th
18 week then? Anyone have trouble with July 15th
19 week?

20 MEMBER LEMEN: Starting which day?

21 MR. KATZ: We're flexible. So we
22 like to try to start on Tuesday so people

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1 don't have to travel on their weekend but.
2 That's good with everyone? Okay. So that's
3 the week of July 15th and we'll -- 16, 17, 18.
4 That's -- we don't have to settle that now I
5 think. It's pretty far out.

6 CHAIRMAN MELIUS: What about
7 Kansas City? Since we've never been there
8 though I'm not sure July in Kansas City is --

9 MR. KATZ: Is it beastly hot
10 there? Yes?

11 MEMBER SCHOFIELD: Fairbanks.

12 CHAIRMAN MELIUS: We've been to
13 St. Louis.

14 MR. KATZ: Okay, so to be serious
15 Kansas City is one possibility at least even
16 though we don't like the weather. We'll
17 ponder that. We've got some time.

18 CHAIRMAN MELIUS: We'll take
19 reasonable suggestions.

20 MR. KATZ: From reasonable people.

21 CHAIRMAN MELIUS: Well, no, I
22 wouldn't go that far. Brad would like to make

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1 the outlandish claim that the snow will be
2 melted in Idaho.

3 MR. KATZ: That's actually a real
4 possibility I think, INL.

5 CHAIRMAN MELIUS: And we have,
6 what, 3 years ago?

7 MR. KATZ: It's 2 years ago but
8 that's a good idea.

9 MEMBER KOTELCHUCK: Are the
10 previous Board Meeting locations online? If
11 not I'd love to see like the last 10 meetings.

12 CHAIRMAN MELIUS: They're all
13 online. It's a little bit of a chore to find
14 them because you have to go back through the
15 years.

16 MEMBER KOTELCHUCK: You've got to
17 go through all 85 meetings.

18 CHAIRMAN MELIUS: And so forth.

19 MEMBER KOTELCHUCK: Okay. Take a
20 look.

21 CHAIRMAN MELIUS: We use our bad
22 memories.

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1 (Laughter.)

2 CHAIRMAN MELIUS: What we usually
3 try to do is we try to schedule for the week
4 hoping we have an active site review of some
5 sort going on. And since we've really been
6 through almost all of the major sites visit at
7 least once and then what's important. We do
8 our best to guess what would be good timing in
9 terms of an SEC evaluation or something. We
10 don't always do that as well as we should.

11 We try to get input on what's
12 active and so forth. So it's -- we try and
13 take into account the weather so we don't get
14 snowed in in certain places.

15 Okay. The DRs. I don't know --
16 Mark has to leave tomorrow morning, right? So
17 if possible I think we'd like to try to do
18 this now. I think everybody should have
19 received it I'm hoping. I don't know when it
20 was.

21 MR. KATZ: Just a reminder, I mean
22 Mark, you probably said this yourself but we

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1 try not to reveal too much information when we
2 discuss these cases.

3 MEMBER GRIFFON: This is something
4 I'd rather discuss in a sidebar but can you
5 tell us all, this list was from our
6 Subcommittee? Because I don't remember it
7 being this big.

8 MR. KATZ: Yes, it's -- so it's
9 the full list but the ones that you're
10 proposing to select have their own column
11 showing that those were ones you're
12 recommending.

13 MEMBER GRIFFON: Okay. So as
14 you're looking at this in the second column it
15 says selected by Subcommittee and the yeses
16 are the only ones that we've selected off
17 this. Ted, do you remember the total that we
18 came up with? It was -- without sorting by
19 yeses.

20 MR. KATZ: I believe we ended up
21 with 20.

22 MEMBER GRIFFON: Yes, I think it

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1 was around 20. Yes. I knew we didn't come up
2 with 70.

3 MR. KATZ: We started with 70.

4 MEMBER GRIFFON: Yes. So we did
5 our first normal process of the DR
6 Subcommittee and we took this full listing and
7 we triaged and came up with this sub-listing
8 of the yeses and that's what we're bringing,
9 we're recommending as a Subcommittee to the
10 Board to task SC&A with reviewing these cases,
11 the yeses.

12 CHAIRMAN MELIUS: So do you want
13 to start going through them then?

14 MEMBER GRIFFON: You want to go
15 through them one by one?

16 CHAIRMAN MELIUS: How do you want
17 to?

18 MEMBER GRIFFON: I mean, I would
19 say --

20 CHAIRMAN MELIUS: You can sort of
21 give us some background.

22 MEMBER GRIFFON: Right, okay.

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1 CHAIRMAN MELIUS: I think that's
2 the key, what are the criteria.

3 MEMBER GRIFFON: Yes, okay.

4 CHAIRMAN MELIUS: And then if
5 there are questions and if we have to have
6 questions on specific.

7 MEMBER GRIFFON: I mean, I think
8 our criteria was consistent with what we've
9 done for the past several sets of cases in
10 that we looked at a PoC that was near the 50
11 percentile mark looking for more best estimate
12 type cases although not always. Also looking
13 at the site. And in this listing you'll see
14 several sites that we still have not done any
15 dose reconstructions for, or reviews for. So
16 there's a few of the small AWE sites that came
17 up.

18 And then we, in the final columns
19 at the end we certainly looked at the
20 external/internal dose methods, again normally
21 looking for best estimate cases although
22 sometimes it's, as we found out, when we dig

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1 down sometimes it's a partial best estimate.
2 They might use a coworker model for the
3 internal but a full estimate for the external,
4 something like that. So those are the general
5 criteria.

6 And when we looked at our overall
7 tracking of the cases that we've reviewed to
8 this point we had the notion in the beginning
9 of the program that we'd do 2.5 percent of all
10 cases. And then we looked at a distribution
11 by site to sort of determine how many cases on
12 each site that we'd like to see. And we were
13 nowhere near approaching the 2.5 percent for
14 any of the sites, even the ones that we
15 thought we had a lot of cases on like Savannah
16 River and Hanford. So we were still well
17 short of that percentage mark. So that was
18 the general criteria.

19 I mean I guess I would say if you
20 looked at the yeses and had your doubts on any
21 of those maybe we can discuss them.

22 CHAIRMAN MELIUS: Any questions on

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1 the general approach? I'll give you a few
2 minutes to look through it.

3 MEMBER ZIEMER: Ted, did you say -
4 - this is Ziemer. Did you say there were 20?
5 I'm only seeing 19 yeses. Am I missing one?

6 MEMBER GRIFFON: I don't recall
7 the final numbers.

8 MR. KATZ: Dave, did you also come
9 up with 19?

10 MEMBER KOTELCHUCK: But I don't
11 remember. I mean, I have to check my notes.

12 MEMBER BEACH: Mark, just a quick
13 question. There's a couple on there that are
14 for Oak Ridge that we just passed the SEC on.
15 Some of them are in that year and some of
16 them aren't. Twenty-two is one.

17 MEMBER GRIFFON: I think we said
18 that we would try to drop cases.

19 MEMBER BEACH: Oh, so you would.
20 Okay.

21 MEMBER GRIFFON: Yes. Sometimes
22 we've missed that but we would try to -- we'll

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1 work with Stu on that to, you know, if we
2 identify cases that were just added to an SEC
3 we'll try to not put them through the cycle so
4 that would be dropped off the list.

5 MR. KATZ: Generally speaking but
6 keep in mind also that cases may deal with
7 elements of dose reconstruction that are not
8 precluded by the SEC Class.

9 MEMBER GRIFFON: Right. Well, I
10 mean the case has to be --

11 MR. KATZ: Right. You need to
12 look at the case specifically. Right.

13 MEMBER GRIFFON: Yes.

14 MEMBER ANDERSON: Just, do we go
15 over the past ones? How many were in the
16 overestimate? Because 12 of these are
17 overestimate groups. I'm just wondering. Has
18 it generally been that high a percentage?

19 MEMBER GRIFFON: I don't know the
20 answer to that. I'm not sure. I mean it is
21 difficult to --

22 MEMBER ANDERSON: Because it's a

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1 different methodology.

2 MEMBER MUNN: And it changes
3 depending on which group --

4 MEMBER ANDERSON: Yes.

5 MR. KATZ: Excuse me, can you make
6 that mike live?

7 MR. HINNEFELD: Okay, I guess I am
8 live. I believe for the last several
9 selections we looked at things that were
10 categorized here as best internal and
11 external. This time our instructions didn't
12 include that. They included recent ones no
13 matter which category was sorted there.

14 That data field, best or
15 overestimate is a data field that's completed
16 by our reviewing health physicists. And our
17 reviewing health physicists might make
18 different judgments in a particular case.
19 Now, some of these their overestimates may be
20 clear overestimates. We haven't looked at
21 them to see. So while we have shot for best
22 internal and external best estimates in the

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1 last few selections even in those cases I
2 think that may have been not necessarily a
3 best.

4 CHAIRMAN MELIUS: Yes, Paul.

5 MEMBER ZIEMER: This is sort of a
6 philosophical question on how we select. But
7 we pretty well have been trying to stay below
8 50 percent here, isn't that correct? There's
9 a lot of interesting cases that are just
10 barely over and I'm just wondering just
11 because they're over does not necessarily mean
12 there might not have been some procedural
13 errors. Because there's a number of these
14 that are full internal and external that seems
15 to me could be informative and they I think
16 have been eliminated simply because they're
17 just over. So you say well it doesn't matter
18 if we find something, they've been
19 compensated.

20 But the issue is not so much that,
21 it has to do with whether procedures are
22 properly carried out. I'm just wondering if

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1 rather than all these overestimates if it
2 might be more informative to pick a few more
3 full internal/externals. Just sort of a
4 philosophic --

5 MEMBER GRIFFON: The first two.

6 MEMBER ZIEMER: Right, yes, the
7 first two are the ones I was looking at.
8 There's a Los Alamos one there and there's a
9 Portsmouth one there that both look kind of
10 interesting.

11 MEMBER GRIFFON: No, I agree with
12 that. In the past, I don't know the breakdown
13 but we've certainly selected some over 50 for
14 sure. But those two in particular look very
15 interesting. So I would -- this is the
16 Board's call so if we want to add some.

17 CHAIRMAN MELIUS: Can we do a
18 specific proposal?

19 MEMBER GRIFFON: A specific
20 proposal? Paul, do you want to propose to add
21 those two?

22 MEMBER ZIEMER: Well, I don't know

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1 if those are the right two even. I just
2 looked at those because they're at the front
3 end of the list. Maybe there's some other
4 interesting ones. I was just asking it sort
5 of philosophically and I haven't had a chance
6 to digest all these. I certainly would
7 suggest at least one of those be looked at. I
8 don't know that they both need to be.

9 MEMBER GRIFFON: I think also an
10 interesting thing happened in the course of
11 making this set, didn't it Ted? That we
12 skipped a step. In other words I don't think
13 the Subcommittee had the information on full
14 internal/external this time. Stu, am I wrong
15 on that or did we have all this, the whole
16 spreadsheet?

17 MR. HINNEFELD: Yes, this was the
18 spreadsheet presented to the Subcommittee.
19 You have just the one column added.

20 MEMBER GRIFFON: I was trying to
21 make an excuse for missing those two that Paul
22 pointed out.

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1 (Laughter.)

2 MEMBER ANDERSON: Well, number 31
3 and number 33 are also over.

4 CHAIRMAN MELIUS: Try again, Mark.

5 MEMBER RICHARDSON: I think what
6 we did do was pay less attention to that
7 column because as Stu pointed out having just
8 gone through the previous set it was clear
9 that those terms are loose.

10 CHAIRMAN MELIUS: Can I try and
11 move this along? I mean I think we have a
12 proposal, a motion from the Subcommittee. I
13 think we have what I'll say is an amendment,
14 proposed amendment from Paul to add the first
15 two cases.

16 MEMBER ZIEMER: Or at least one of
17 them.

18 MEMBER RICHARDSON: One of the
19 first two and one from the second batch.

20 MEMBER ZIEMER: I thought the Los
21 Alamos one looked interesting which is the
22 second one on the list.

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1 CHAIRMAN MELIUS: Right.

2 MEMBER GRIFFON: Ted, you're
3 capturing these right?

4 MR. KATZ: I am as soon as you
5 guys decide.

6 MEMBER GRIFFON: So far we have
7 the Los Alamos one.

8 CHAIRMAN MELIUS: We have the Los
9 Alamos one.

10 MEMBER GRIFFON: And then David
11 did you have another one?

12 MEMBER KOTELCHUCK: I was looking
13 at the Dow Chemical but I don't -- just
14 between that and the Ames Lab.

15 MEMBER GRIFFON: And where is the
16 Dow Chemical?

17 MEMBER ANDERSON: Thirty-one and
18 thirty-three.

19 MEMBER KOTELCHUCK: Thirty-three,
20 number thirty-three, Dow Chemical.

21 MEMBER GRIFFON: Thirty-three on
22 the spreadsheet which is number 624.

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1 MEMBER RICHARDSON: To step back
2 from the specifics to Dr. Ziemer's general
3 philosophical question about why we would look
4 at those that are near the boundary but have
5 either exceeded the threshold or not exceeded
6 the threshold for compensation from kind of a
7 high-altitude perspective one of the things
8 that's been interesting in the recent batches
9 of reviews has been types of problems which
10 have been found that in some cases involve
11 omission of information as opposed to
12 inclusion of information.

13 So, I mean if -- and again, we've
14 had a series of discussions about QA/QC issues
15 or quality assurance/quality control issues
16 with the dose reconstructions. And so I was
17 thinking about why are we interested in these
18 cases that are near the boundary. I mean in a
19 general sense I at first thought the best way
20 to sample cases was just random sampling of a
21 2.5 percent sample. And I still think there's
22 merit to that proposal because you can't -- I

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1 mean if you could implement that in some sort
2 of systematic way you've got an audit of the
3 information collection process. But
4 the types of errors that I think have been
5 coming out so far through this, and in part it
6 could be a consequence of how we're sampling
7 the data right now have been situations where
8 there have been what appear to be omissions.
9 And so that, I would expect those sorts of
10 problems to be flagged out more on the lower
11 side than on the upper side of the Probability
12 of Causation distribution because it's causing
13 loss of dose and therefore lower Probabilities
14 of Causation than had those errors not
15 occurred.

16 CHAIRMAN MELIUS: At the same time
17 I think you're trying to get people with --
18 excuse me, Wanda -- a robust dose
19 reconstruction in the sense that they've had
20 enough years of work and enough exposure that,
21 you know, as opposed to someone who's been
22 there for a short time period, had a very low

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1 Probability of Causation because, just because
2 of that essentially and so there's relatively
3 little to review. So you're trying to move it
4 up the scale that way also. So, I mean I
5 think that was essentially behind --

6 MEMBER RICHARDSON: So auditing
7 the kind of cases that are compensated very
8 quickly through some underestimating approach
9 and then it comes back, those -- there's not a
10 lot of to work with there.

11 CHAIRMAN MELIUS: Right.

12 MEMBER RICHARDSON: And it's these
13 that are near the boundary that seem to be.

14 CHAIRMAN MELIUS: Yes.

15 MEMBER ZIEMER: And if I might
16 add, my point is those that are just under I
17 don't think are any more likely to have seen
18 those errors than those that are barely over.
19 They're sort of in the same group.

20 MEMBER RICHARDSON: That's true.

21 MEMBER GRIFFON: Well, just to get
22 back to the specific the Dow case, the only

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1 question I usually -- well, it doesn't
2 eliminate that whole QA discussion though.
3 But oftentimes another factor that we consider
4 is it does say full internal/external model.
5 These kind of tend to be, you know, one size
6 fits all reconstruction. So I don't know if
7 anyone can speak to Dow Chemical of Madison,
8 whether it's a, you know, did they have
9 individual data or is it actually just a model
10 for internal and external.

11 MR. HINNEFELD: My recollection
12 from Dow Chemical is we don't have individual
13 dosimetry data and it's a dose model from the
14 Site Profile.

15 MEMBER GRIFFON: But Paul's point
16 still stands. But I just thought yes, that's
17 another factor we consider.

18 CHAIRMAN MELIUS: So we have a
19 partial amendment --

20 (Laughter.)

21 CHAIRMAN MELIUS: -- and I'm
22 waiting for the rest of the amendment which

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1 was down to those, the Dow.

2 MEMBER GRIFFON: I wouldn't have a
3 problem adding the Dow.

4 CHAIRMAN MELIUS: So has the
5 Subcommittee modified its proposal to the
6 Board to include?

7 MEMBER GRIFFON: To include. I'm
8 trying to understand.

9 CHAIRMAN MELIUS: LANL and Dow?

10 MEMBER GRIFFON: Six twenty-four
11 and, what is LANL? Six thirty-six? Oh, 655.

12 MEMBER KOTELCHUCK: But LANL we
13 just acted on today.

14 MEMBER GRIFFON: Yes, but --

15 MEMBER KOTELCHUCK: Okay.

16 MEMBER GRIFFON: Is that all
17 right?

18 CHAIRMAN MELIUS: Yes.

19 MEMBER GRIFFON: Yes.

20 CHAIRMAN MELIUS: Okay.

21 MEMBER ANDERSON: I vote yes.

22 CHAIRMAN MELIUS: If there's no

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1 other suggestions can we -- all in favor of
2 that proposal say aye.

3 (Chorus of ayes.)

4 CHAIRMAN MELIUS: Opposed?

5 (No response.)

6 CHAIRMAN MELIUS: Abstain?

7 (No response.)

8 CHAIRMAN MELIUS: Are we okay,
9 Mark?

10 MEMBER GRIFFON: Yes.

11 CHAIRMAN MELIUS: Okay. Thanks.

12 MEMBER GRIFFON: So that gives a
13 set of 22 now, right?

14 CHAIRMAN MELIUS: Yes.

15 MEMBER GRIFFON: My math is
16 correct. Except on Paul's list it's 21.

17 CHAIRMAN MELIUS: We'll give you
18 the extra. We'll fool you. Okay, again
19 because Mark has to leave I'd like to do a few
20 of the Subcommittee Work Group reports.

21 MEMBER GRIFFON: Blame it all on
22 me.

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1 CHAIRMAN MELIUS: We're blaming
2 this all on you. We're going to -- let the
3 record show. So, Subcommittee?

4 MEMBER GRIFFON: Sure.

5 CHAIRMAN MELIUS: You've just
6 given part of your report.

7 MEMBER GRIFFON: Yes. Okay, we
8 had a meeting on August 6th of the Dose
9 Reconstruction Subcommittee Group. And I'll
10 just go over, some of the bigger issues we've
11 been discussing lately have been the QA/QC
12 questions. Some actions that we've been
13 dealing with on the Subcommittee are a result
14 of the NIOSH 10-year review so we've got a few
15 of those to give some updates on. And also we
16 had just a question from the full Board to
17 sort of reflect on our original protocol for
18 doing the dose reconstruction reviews.

19 Those of you that have been around
20 the Board for awhile remember the original
21 protocol had a basic, advanced and blind
22 review. Actually I don't know if I emailed

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1 that to the full Board but I did find a draft
2 of the original protocol that was actually
3 included in the proposal package I believe
4 that SC&A did. So anyway, we just wanted to
5 reflect back on where are we now and do we
6 need to modify in any way sort of our approach
7 to reviewing these cases.

8 And so the first item from the
9 last meeting, we had a presentation from ORAU
10 on their QA/QC program, ORAU's QA/QC program.

11 And out of that we got sort of -- I mean I
12 think we went a step further than we did the
13 first time when we discussed this with them
14 but we had some remaining questions. It was
15 an overarching presentation of what they're
16 doing. And out of that the Subcommittee asked
17 for a little more information.

18 For instance, they're using a peer
19 review checklist and now they have a new --
20 hope I get this correct -- a peer review
21 feedback form I believe is what they're
22 calling it. So they have these two separate

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1 things. And we got sort of some overarching
2 information but it -- several things were not
3 apparent in the presentation that we had.

4 Number one, what exactly were --
5 what were on these checklists or these
6 feedback forms. So sort of what categories
7 were involved in the forms.

8 The second question we asked them
9 to come back to the committee with was were
10 they tracking these and if so when did they
11 start tracking. I think based on what we
12 heard at least the feedback forms are a fairly
13 new thing. I think they started implementing
14 these within the last 2 years but they have
15 had the checklist for a longer time so we
16 wondered if they were tracking this
17 information.

18 And then the final question was if
19 you were tracking it can you sort of give us
20 an aggregate report. Do you see any trends or
21 see any -- what are you finding out of your
22 internal tracking of this data. So, after the

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1 presentation by ORAU we asked them for
2 feedback on those -- I guess a little more
3 specificity to exactly what they were tracking
4 internally.

5 The second item we looked at was
6 in response to -- I believe in response to the
7 10-year review NIOSH has implemented an
8 internal QA/QC process where they're actually
9 doing blind reviews from a certain percentage
10 of cases that come through the door. So, I
11 don't want to misstate the mechanics of how
12 this happens but basically NIOSH is doing a
13 separate dose reconstruction from ORAU, from
14 the contractor on the same case. So it's
15 another way to -- another quality control
16 assurance.

17 And we got an update that to this
18 -- to the day when we met they had selected 57
19 cases. I believe you take two cases a week,
20 Stu, is that accurate? Maybe I'm getting too
21 much in the weeds here.

22 MR. HINNEFELD: It's gone back and

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1 forth between two and one. It was two a week
2 and then maybe it was one a week. So I'm not
3 exactly sure what we're selecting now.

4 MEMBER GRIFFON: Okay. So it's
5 somewhere --

6 MR. HINNEFELD: It's been a
7 relatively low number. It's one or two a
8 week.

9 MEMBER GRIFFON: Okay. Anyway, a
10 small number per week. And what we've asked
11 is that once they get, you know, a fair number
12 of cases together where they've done their
13 review and they have something to compare it
14 to then they report back on the aggregate,
15 what they found in aggregate. We're not going
16 to re-review each case obviously but we sort
17 of want to see what they're finding.

18 And then also, you know, how we
19 can use this going forward -- how we can work
20 that process with our review process on the
21 Subcommittee. So we really don't have any
22 aggregate results yet but it is ongoing.

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1 The third item that we discussed
2 was the 10-year review actions, the follow-up.

3 The first one was the -- I guess there was a
4 question in the 10-year review of what was the
5 cost of -- looking at the cost-effectiveness
6 of doing best estimate versus overestimating.

7 And you know, because of the
8 concerns of doing overestimating dose
9 reconstructions and then having to come back
10 if a person got another cancer, having to come
11 back and actually lower the Probability of
12 Causation, it looks very strange to the
13 outside world. So, this sort of arose as what
14 were you gaining.

15 And last meeting they came to us
16 with a pretty detailed report of what they've
17 looked at. And even looking at possible
18 subcategories of where they could do best
19 estimate for certain groupings of cases like
20 skin cancer cases that they thought were
21 likely to have secondary cancers.

22 And basically, you know, the basic

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1 conclusion is that they are still gaining
2 quite a bit with the overestimating approach.

3 They don't want to drop the approach because
4 it would be too costly to do best estimate on
5 all cases. I think they've left an opening
6 for some possible subcategories but the basic
7 notion is that they're not going to drop the
8 overestimating approach.

9 And I should say that I think the
10 Subcommittee overall was supportive of that.
11 I mean, I think we agree with that.

12 Let me just see here. Another 10-
13 year review question was the question of
14 claimant favorability with regard to the dose
15 reconstruction. We had a discussion about
16 this. Evaluation of claimant favorability
17 must sort of have some knowledge of what the
18 correct answer is. So you know, if you're
19 trying to judge how favorable or not favorable
20 NIOSH is being you have to know the truth.

21 And we didn't get -- basically
22 this is a placeholder. NIOSH indicates that

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1 they are going to come back to us with a
2 report on this issue. I think this is in Jim
3 Neton's hands. Yes, he's nodding. Looks like
4 we're waiting for this report. It should be
5 interesting. But it's definitely a tough
6 issue to crack. And I think those are the
7 primary things on the 10-year review.

8 Then we had a longer discussion.
9 We had some invited guests for a discussion on
10 sort of re-looking at our dose reconstruction
11 process. And Jim joined us on the phone and I
12 think Paul never was able to join us that day.

13 But anyway, this had come up on the Board and
14 we thought it was worth examining.

15 And you know, the fundamental
16 reason we want to do this is we wanted to
17 reflect back on the main mission of the Board
18 with respect to dose reconstructions. In
19 other words, are they scientifically
20 defensible, you know, and the validity of the
21 dose reconstructions, and are we on the
22 Subcommittee getting to that question.

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1 And out of this we ended up with
2 two actions. One was to sort of bring back
3 the blind reviews. We've had SC&A do a couple
4 of blind reviews. They brought them back to
5 the Subcommittee at one point but we really
6 haven't deliberated on them as a Subcommittee
7 so we need to do that further, and with a lens
8 sort of focused on the idea of what can we
9 gain out of these. What's the efficacy of
10 having more blind reviews. Is it worthwhile?

11 What are we gaining that's different than the
12 regular reviews? So that's sort of what we're
13 proposing for next meeting actually, for SC&A
14 to bring those cases back and decide whether
15 we want to select some more blind reviews.

16 The second action was to ask SC&A
17 to do what I'm calling a look-back. And this
18 is the idea of looking back in aggregate. And
19 we think the best way to break it out is by
20 site. So to look at all the cases out of the
21 ones we've reviewed already from a certain
22 site -- and I think we did assign, we selected

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1 Rocky Flats actually and SC&A is already quite
2 far along in that process -- to look at the
3 past case reviews that we've done and then to
4 compare that with the final disposition of
5 those cases or with what's happened subsequent
6 to those cases being reviewed with regard to
7 Site Profile changes or procedural changes.

8 So the idea is that if we checked
9 off on something as basically being
10 scientifically valid or adequate in terms of
11 that particular -- or looking at it in
12 aggregate and then later on many of those
13 cases end up adding into, getting added into
14 an SEC Class it sort of sends a mixed message.

15 So we wanted to be able to sort that out as
16 to what happened to the cases after we did the
17 initial review and were procedures quite
18 drastically modified after we got through the
19 review and we never picked up on that in our
20 reviews. So that's sort of a question that
21 we're looking at by doing that.

22 And then again, we're doing this -

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1 - we picked Rocky Flats. We don't expect that
2 we can extrapolate the results that we find
3 from Rocky Flats to the whole complex, but we
4 think we might shed some light on the idea of
5 what is the best thing going forward.

6 And one thing we've already
7 discussed is that clearly we think that a lot
8 of what we're doing currently on the
9 Subcommittee is what I would call more basic
10 reviews, and we're looking more -- and we're
11 ending up finding more of a quality
12 assurance/quality control type of findings
13 which is not -- which certainly adds value.
14 The question is do we get at the science
15 questions. Do we get at the adequacy of the
16 underlying science questions.

17 And we think we do in the Site
18 Profile reviews but we're also concerned that
19 are things falling through the cracks or are
20 we, you know, as a full Board are we capturing
21 all these things. And then who is sort of
22 pulling all those things together. That's

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1 another discussion we had.

2 So the first step we thought was
3 to take a look at Rocky, see what we find out
4 with one example and maybe make -- clarify our
5 proposal going forward.

6 And I think that's it, Jim.

7 CHAIRMAN MELIUS: Okay. Comments
8 or questions from Board Members? So, just --
9 I have a sort of procedural question. So,
10 you'll have the Rocky Flats report and the
11 blind reviews done at your next meeting which
12 is again? No, I know you have it scheduled.
13 So we should have a report at our next Board
14 Meeting which is December.

15 And I'd like to put aside some
16 significant time at that meeting for a full
17 Board discussion on where do we go with dose
18 reconstruction reviews. It's a primary task
19 that Congress gave us and I think we -- which
20 is NIOSH's 10-Year Review. We ought to do our
21 own sort of 10-Year Review and discussion on
22 that. And I think the work that your

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1 Subcommittee is doing will lay the basis for
2 that. So appreciate that.

3 Any other Board Members with
4 questions or comments for Mark?

5 MEMBER ZIEMER: Just one comment
6 on the issue of whether or not you're
7 addressing the science issues. I think
8 there's a lot of times where you can't really
9 address them in terms of the individual cases.

10 I do notice that SC&A helpfully points out,
11 for example, in each case that it may be
12 dependent upon a particular science issue
13 which has not been resolved. Let's say it's
14 the resuspension factors, for example, that
15 yes, in this case they've used the
16 resuspension factors that are in the Site
17 Profile or something, or that may be an open
18 issue, but it's not one that you can solve
19 with the individual case because there may be
20 many cases that use that.

21 So I think there's a sense in
22 which certain science issues have to be looked

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1 at in the broader scale of the Site Profiles
2 as opposed to the individual cases because
3 these individual cases indeed are often
4 reliant on the bigger science picture issues.

5 So I hope we don't get to the point where
6 we're trying to solve those through individual
7 cases. I think they're normally pointed out
8 in the SC&A reviews wherever they do occur, at
9 least they recite for that site what the
10 issues were.

11 CHAIRMAN MELIUS: Yes, but they
12 tend to do it in a very perfunctory way.

13 MEMBER ZIEMER: Yes, it's
14 boilerplate right now.

15 CHAIRMAN MELIUS: Yes, and I think
16 it's misleading about sort of what work goes
17 on within other Work Groups and what goes on
18 in terms of the scientific review for the
19 overall dose reconstruction part of the
20 program.

21 We tend to think of the site
22 reviews, Site Profile reviews, we tend to

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1 focus more on the SEC aspects of those and I
2 think we need to think back how are we
3 approaching our review of dose reconstruction.

4 How are we capturing all the other work we do
5 in the Procedures Subcommittee, all the work
6 we do in the Site Profile Work Groups which --
7 and sometimes as part of the SEC evaluation
8 reviews where we actually lead to what we
9 refer to as Site Profile issues which then
10 lead to changes in the NIOSH procedures for
11 doing dose reconstruction, which you know, my
12 guess is that those have had much more impact
13 than on the NIOSH, on the overall dose
14 reconstruction program than have the
15 individual dose reconstruction reviews to
16 date. Not that those -- they've had no
17 impact, but that picture has.

18 And one is sort of how do we
19 capture that in terms of what we report back
20 to the Secretary. And secondly, it's I think
21 how are we going about doing these in a way
22 that gets those all to work together better

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1 and coordinate them.

2 MEMBER ZIEMER: I agree with that.

3 I think it is true though that the audits
4 tend to look more like quality control types
5 of things than they do addressing those
6 issues.

7 CHAIRMAN MELIUS: That should be
8 one element of them but there are other
9 elements also that I think looked at. And for
10 various reasons we've never really pursued the
11 blind reviews and so we've been so busy.
12 Meanwhile NIOSH has made lots of very positive
13 changes in both dose reconstructions and their
14 procedures and so forth and how they approach
15 different sites and there's new information so
16 it's a complicated picture.

17 But I think we just need to re-
18 look. Maybe we'll continue to do what we're
19 doing but I think we need to at least evaluate
20 that.

21 Okay, Mark, I believe you have at
22 least one other Work Group report. Savannah.

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1 I'm just trying to cross you off the list.

2 MEMBER GRIFFON: Oh, okay. Very
3 short on Savannah. We did get a report very
4 recently, an update with a lot of new
5 information. And I think Tim and the group at
6 NIOSH have advanced their research quite a
7 bit. And I think at this point -- well
8 actually I know we're trying to coordinate and
9 schedule for a possible Work Group meeting
10 sometime in October because I think we've got
11 enough on the deck. But I don't know if Tim
12 had heard that before but sometime in the very
13 near future we expect to have a Work Group
14 meeting, but there hasn't been any Work Group
15 meeting between the last meeting and now. So
16 there's not much to report now, but we are
17 scheduling a future meeting.

18 CHAIRMAN MELIUS: Okay. Thank
19 you. Okay. Unless someone's absolutely
20 really anxious to give their report I think
21 we'll sort of go through in alphabetical
22 order. So Brookhaven. And I don't mind

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1 people, if you want to -- we do have an
2 updated -- amongst the stuff, the material
3 that Ted has sent out was an update on when
4 the -- where NIOSH is with various reports to
5 various Work Groups as part of SEC evaluations
6 and Site Profile reviews. So now is the time
7 to sort of, you know, if everyone can look at
8 those. And we also have an SC&A update also
9 but are there surprises there or are you
10 expecting something sooner. Is there
11 something missing there that you're expecting
12 to be receiving a report from, haven't heard
13 about in awhile.

14 Now is the time. Jim and Stu and
15 LaVon are all here and John and the SC&A group
16 so now is the time to pin them down and find
17 out what's going on.

18 MEMBER BEACH: Good lead-in, Jim.

19 For Brookhaven, our last Work Group meeting
20 was in February and we had a list of action
21 items for both SC&A and NIOSH. SC&A completed
22 theirs and we are waiting on NIOSH.

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1 I heard from Grady a couple of
2 days ago. He apparently hasn't started
3 working on them at this time, so I actually
4 sent out an email asking him to get started.
5 So I guess I'm looking for something from Jim
6 or Stu on possible dates for that, if you
7 know.

8 DR. NETON: Well, since Stu's out
9 of the room I guess I'll field that question.
10 I honestly can't give you any more update than
11 what you already know. I will certainly take
12 that back, talk to Grady and see if we can get
13 something out to you shortly. But I have no
14 additional information to offer at this time.

15 MEMBER BEACH: Okay, thank you.
16 And then looking at the report, Brookhaven
17 doesn't have a date listed. I don't remember
18 exactly what the wording is, but "to be
19 determined" comes to mind.

20 CHAIRMAN MELIUS: It says "not yet
21 scheduled."

22 MEMBER BEACH: There you go, "not

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1 yet scheduled." And it should have been,
2 actually.

3 CHAIRMAN MELIUS: Not helpful.
4 Jim. Okay. Any questions for Josie?

5 Okay. Fernald.

6 MEMBER CLAWSON: We haven't got a
7 Work Group scheduled this last week. SC&A had
8 two action items that they needed to get back
9 to us which they have got in their process.
10 NIOSH has one and I just got a note from Stu
11 this week that it would be possibly pushed out
12 a little bit further, and that's the
13 construction workers data for Fernald.

14 CHAIRMAN MELIUS: So which is
15 that? I'm looking at their report. It says
16 OTIB-78. Is that the construction workers
17 one?

18 MR. KATZ: They traded emails, I
19 think.

20 CHAIRMAN MELIUS: Oh, okay.

21 MR. KATZ: Brad traded emails with
22 Stu and I think his date was pushed out. Is

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1 this correct? Until something like December.

2 MEMBER CLAWSON: Yes, he was
3 looking at sometime in December.

4 CHAIRMAN MELIUS: And SC&A -- I
5 don't have SC&A's report in front of me, but
6 John, could you update us on what you all --

7 MR. STIVER: Yes, we had -- this
8 is John Stiver, SC&A. We had two taskings,
9 really. One was to look at the in vivo
10 thorium data for the post-1978 period in terms
11 of adequacy and completeness. And we have a
12 final report on that in the works going
13 through internal review at SC&A. It should be
14 delivered to the Work Group within a week or
15 two.

16 Also, we were tasked to follow up
17 on looking at the granularity in the DWE data
18 that were used for the model from 1953 to
19 1967. As you recall the NIOSH coworker model
20 assumes that workers can be allocated or
21 assigned by year and building. And so we were
22 looking at that particular issue as well.

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1 CHAIRMAN MELIUS: Okay. And
2 schedule on that?

3 MR. STIVER: That one, too, is in
4 internal review. I would expect within a
5 couple of weeks.

6 CHAIRMAN MELIUS: Okay. Thank
7 you, John. So Brad, there you've got some
8 dates.

9 MEMBER CLAWSON: Yes, thank you.

10 CHAIRMAN MELIUS: Any questions or
11 comments to Brad on Fernald? Good.

12 I'm up next. Hanford, I think
13 you've heard an update on the 155. We're
14 going to schedule another Work Group meeting
15 shortly to follow up on that. And then
16 otherwise we're really sort of waiting for
17 some further data work and so forth that's
18 going on, data capture at Fernald which is
19 going on actually this month and into the
20 next, into October also, I believe, if I
21 remember the schedule right. So I think we're
22 caught up and I don't think we have anything

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1 outstanding in terms of reports or anything on
2 that.

3 Any questions for me?

4 Okay. Phil, Idaho.

5 MEMBER SCHOFIELD: They've been
6 doing a rather large data capture. Last I
7 understand is there were about 4,000 documents
8 so that's been pushed back till after the
9 first of the year since we don't have a
10 current SEC for them. I understand there is
11 one in the works but there is not an SEC for
12 Idaho that's qualified yet.

13 CHAIRMAN MELIUS: So Stu, can
14 someone update us? Because all it has in our
15 report here is that data capture documents
16 coming in the new year, early in the new year.

17 And I'm trying to understand what's
18 happening. This is something that's been
19 dragging along for quite some time. We've
20 never -- we've had an SC&A review and
21 nothing's ever been resolved.

22 MR. HINNEFELD: Yes. Quite

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1 frankly, since there is not an active SEC from
2 the site, it's had somewhat of a lower
3 priority than some of the other sites we've
4 worked on. We have been there to do what we
5 call a data recon, see what's there and what
6 do we want to see, what do we want to capture.

7 So we've done that. And that resulted in a
8 lot of capture requests, as Phil indicated.

9 We have a handful of what we think
10 are the issues. Some may be more immediate
11 than others, but it's not clear to me at this
12 time that we can go back, look back through
13 our data request and essentially put this
14 document with that issue. So it's not real
15 clear to me that we can say, hey, can you
16 hurry up with these documents because they
17 relate to this subset of the issues and give
18 us a subset of the documents. I've not given
19 up on that yet, but I'm not 100 percent sure
20 we can do that.

21 It would be our preference to sort
22 of prioritize. You know, rather than wait and

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1 give us all these documents at one time, send
2 us these first because we want to deal with
3 those issues more rapidly. I'm not 100
4 percent sure we can do that, but I haven't
5 given up on it yet.

6 CHAIRMAN MELIUS: Okay. Well, if
7 we can continue to look at that because we are
8 now planning to go there in July. Again,
9 we're going to check the weather this winter,
10 make sure we can get there. But we'll put
11 some pressure on. I'd like to have some
12 progress to report.

13 Lawrence Berkeley. Paul.

14 MEMBER ZIEMER: The only thing to
15 report on Lawrence Berkeley, and it's on your
16 NIOSH sheet, there's a revised TBD and a
17 number of new documents being generated by
18 Lara Hughes. They were to come out this
19 month, although I wasn't aware of the
20 [identifying information redacted] part of
21 this so maybe they have been delayed. But the
22 Work Group has not yet met but once these

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1 documents are out we'll have a chance to look
2 at them together with SC&A's previous reviews
3 and schedule a Work Group meeting.

4 CHAIRMAN MELIUS: Jim or Stu, can
5 you update us? LaVon, somebody?

6 MR. RUTHERFORD: Update us on
7 exactly the status of the Site Profiles coming
8 out?

9 MEMBER ZIEMER: Lara had a number
10 of documents that were on the schedule sheet
11 identified as coming out August 1st. I don't
12 know if those already came out or not.

13 MR. RUTHERFORD: I will have to
14 look at that. I will get back with you either
15 later this afternoon or first thing in the
16 morning on that.

17 MEMBER ZIEMER: Okay.

18 CHAIRMAN MELIUS: Yes. I think
19 from reading it it looks like this was the
20 August 1st report and it looks like some of
21 these may still be in the works and weren't
22 exactly scheduled for August 1st. I don't

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1 know when she left on leave but it might have
2 been around that time.

3 Linde, I think? Do we have
4 anything left on Linde? I thought we
5 completed. So we should retire the Work
6 Group. Can we retire your Work Group, Linde?

7 MEMBER ROESSLER: I assume we're
8 done, that's why I wasn't paying attention.

9 (Laughter.)

10 CHAIRMAN MELIUS: The answer is
11 yes, okay. Very good. I think Jim retired
12 it, it says retired too. He holds the record.
13 The hospital and the petition review. When
14 you hold the record, we remember.

15 LANL. I think we got a good
16 update from this morning.

17 Mound, I believe we will get an
18 update from tomorrow so no need to talk about
19 that.

20 Nevada Test Site?

21 MEMBER CLAWSON: Actually, right
22 now SC&A is recompiling. As you know we had

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1 an SEC for Nevada Test Site, but we had
2 numerous Site Profile issues that have not
3 been put through there. So SC&A has been
4 tasked to go through the matrix and
5 reconstruct so we can finish out the Site
6 Profile issues that were lingering with Nevada
7 Test Site.

8 CHAIRMAN MELIUS: And then can I
9 ask John Stiver where SC&A stands with that?

10 MR. STIVER: Arjun has been
11 working on that, I'll let him go ahead.

12 DR. MAKHIJANI: Yes, I'm
13 responsible for that, Dr. Melius. It's a long
14 record but I hope that we'll have an internal
15 draft for review by November and then the Work
16 Group will have something by late November,
17 early December.

18 CHAIRMAN MELIUS: Good. Pantex we
19 will be talking about tomorrow. I'd just
20 indicate through I think some efforts from Stu
21 we were able to get that moved along and be
22 able to get that back on the agenda. And I

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1 think some progress after waiting, so that was
2 good.

3 And why don't we finish up with
4 Pinellas.

5 MEMBER SCHOFIELD: We're
6 scheduling a Work Group Meeting for sometime
7 in November. I don't think we have an exact
8 set date yet. Try and get everybody on the
9 same page. There are the interviews, the were
10 classified interviews as indicated I guess.
11 They're now on the O: drive for people to look
12 at. So that way we kind of see what we can
13 whittle down to finish this up.

14 CHAIRMAN MELIUS: Okay. I think
15 we can do a few more before we take a break.

16 Portsmouth, Paducah, K-25?

17 MEMBER SCHOFIELD: Okay. On
18 those, right now we are going to propose a
19 short telephone work meeting on December 3rd.

20 There's been a number of issues closed, a
21 number of issues that SC&A has now agreed with
22 NIOSH on. So we're trying to get it narrowed

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1 down to what still -- reaction remains, the
2 highly enriched uranium is one the big things
3 still outstanding.

4 CHAIRMAN MELIUS: Okay. Questions
5 on those three? And if not, then LaVon I
6 think has an update.

7 MR. RUTHERFORD: Yes, I wanted to
8 get back to you. I went back and looked at
9 the Work Coordination Document. Those 8/1
10 dates were actually dates that were left in
11 there from the previous Work Coordination
12 Document.

13 The actual -- the notes that
14 follow, and you'll notice the estimated
15 completion date, end of October. That is
16 actually the driver for all the items, because
17 we're waiting on that. So that's really the
18 update.

19 CHAIRMAN MELIUS: Thank you,
20 LaVon.

21 Okay, Rocky we will be dealing
22 with in a little bit.

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1 Sandia?

2 MEMBER LEMEN: Sam Glover and I
3 talked about this and he's going to be sending
4 out an email. Sam, correct me if I'm wrong,
5 but they have discovered some more boxes and
6 they're going through those. His email will
7 update us on that.

8 CHAIRMAN MELIUS: Okay.

9 MEMBER LEMEN: Do you want to say
10 anything?

11 DR. GLOVER: So we'll make sure we
12 give Dr. Lemen an update on the activities in
13 the early years for Sandia as well as the
14 activities of Sandia-Livermore and Sandia as
15 we close up.

16 CHAIRMAN MELIUS: Okay, great.
17 Thank you, Sam.

18 Santa Susana?

19 MEMBER SCHOFIELD: Okay. Stu
20 already touched on some of it but there's also
21 a -- received quite extensive radiation
22 exposure database. And that could be used for

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1 coworker models that have to be still coded.

2 And that right now, because of the
3 Fernald Savannah River Site, will probably be
4 January before that's completed. Hopefully we
5 can have a Work Group Meeting right around the
6 time of the March Board Meeting. Probably
7 more than likely it will be just a little bit
8 after that.

9 CHAIRMAN MELIUS: Questions for
10 Phil on that?

11 Savannah River we've done.

12 Science Issues.

13 MEMBER RICHARDSON: The Work Group
14 on Science Issues met in April. At the time,
15 the topic of discussion was dose and dose rate
16 effectiveness factors, what's called a DDREF
17 that's used in the IREP program. The DDREF,
18 it's an adjustment factor that you would
19 typically use to reduce the level of risk that
20 would be associated with a given radiation
21 exposure in situations where it's hypothesized
22 that there would be less risk at low doses or

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1 low dose rates. It's not used for leukemia
2 but it's used for the rest of the solid
3 cancers.

4 So the Work Group has reviewed the
5 current use of the DDREF in the IREP model and
6 we've had presentations from SENES, which is a
7 consulting group that NIOSH has asked to
8 prepare a report on the topic. The Working
9 Group kind of appreciates that there's a lot
10 of new information that's out there that SENES
11 is helping to evaluate.

12 And SENES is preparing a report.
13 We've seen parts of that report but NIOSH
14 hasn't yet released the full report and so
15 we're sort of in a holding pattern on this.
16 The projection was that in 3 to 6 months from
17 when we had met there would be a finalized
18 report that would be put out.

19 NIOSH is, as I understand,
20 soliciting subject matter experts, and once
21 they get that input they can open the report
22 and the recommendations that are made within

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1 it for public comment.

2 So I think, in general, the Work
3 Group agreed that the direction being taken by
4 NIOSH was appropriate, that there's a lot of
5 new information out there that should be
6 reviewed, and once we have the full report and
7 the recommendations that are outlined in that
8 report we'll be able to come back and discuss,
9 provide comments on it. And I don't know if
10 there's an update on when we would be able to
11 see the report.

12 DR. NETON: Yes, this is Jim
13 Neton. If you recall, SENES had indicated at
14 the last meeting that they had a few minor
15 changes that they're going to make to the
16 report before the final was released, that we
17 could release it for peer review.

18 It's imminent. The report is
19 still being tweaked. Unfortunately,
20 scientists like to have the latest and
21 greatest information in there. So I've been
22 told that it's within a matter of weeks, next

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1 week or two, that I'll have the report in my
2 hand.

3 In the meantime, I've gone and
4 solicited subject matter experts that I have
5 available now that have agreed to do reviews.

6 And I think I have six or seven that have
7 agreed to do this, a fairly wide distribution
8 of, I think, opinions. So we'll wait to see
9 how that comes out.

10 CHAIRMAN MELIUS: So I guess the
11 check's in the slow mail.

12 DR. NETON: Yes.

13 CHAIRMAN MELIUS: Gen, you had a
14 question?

15 MEMBER ROESSLER: He probably
16 answered it. I was going to ask if it's too
17 late to suggest a name for a subject matter
18 review person.

19 DR. NETON: Never too late until
20 it goes out, and even when it goes out we are
21 always willing to add new names if they make
22 sense and complement the distribution.

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1 CHAIRMAN MELIUS: Good.

2 SEC Issues? I think the main
3 thing with that Work Group is we're actually
4 waiting on a -- it's a 10-Year Review issue
5 and it was the -- NIOSH was doing a report on
6 sufficient accuracy. I'm not sure where that
7 is.

8 MR. RUTHERFORD: Yes, we had
9 actually hoped to have that a little while
10 back, actually after the last Board Meeting.

11 CHAIRMAN MELIUS: I wasn't going
12 to say that.

13 MR. RUTHERFORD: I know.
14 Unfortunately, we were overcome by all the
15 other items, SEC items we've been working on.

16 But we did get a draft internal
17 report. We had some comments on it and we
18 went back and kind of sent the people working
19 on that report back to the drawing board to
20 add some additional information. I should
21 have a new report to provide to the Work Group
22 sometime in early October.

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1 CHAIRMAN MELIUS: Okay. Make sure
2 that's in the transcript, early October. Now,
3 September 18th. Early is early in October.
4 Thank you.

5 I think the last one that we'll do
6 today before we take a break, last but not
7 least. Wanda?

8 MEMBER MUNN: We really have
9 nothing new to report from Procedures. We
10 gave you a report during our teleconference.
11 We last met in July, the last day of July, and
12 we will meet next again the first of November.

13 What I had hoped to be able to do
14 for you today is give you a little bit of an
15 overview by way of taking a minute to show you
16 how to get to our continually updated and
17 always appropriate summaries so that you can
18 take a look at where Procedures is.

19 I don't know if this is going to
20 work. I'm going to try to throw it up on the
21 screen so that you can see what we do when we
22 go in to get our reports, because you too can

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1 have access to this information without any
2 problem at all. I'll ask Stu to give me a
3 little help.

4 MEMBER BEACH: Well, Wanda, while
5 you're making your way up there, it's also a
6 tool that other Work Groups could use, is that
7 correct?

8 MEMBER MUNN: Yes, it is.

9 MEMBER BEACH: So just something
10 to think about.

11 CHAIRMAN MELIUS: We will give it
12 one more try. I don't want to hold everybody
13 up here. It looks like we're not connecting.

14 MEMBER MUNN: If you'd like, we
15 can do this tomorrow. It's not going to take
16 very long once we get it up. Sorry, I didn't
17 realize we wouldn't have a connection. I sort
18 of sprang this on Stu.

19 CHAIRMAN MELIUS: I think we'll --
20 why don't we break. We'll do it tomorrow.

21 MEMBER MUNN: I'll do it tomorrow.
22 I'll be ready for it.

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1 CHAIRMAN MELIUS: Okay. Nobody's
2 fault. Okay, we will take a break. We will
3 reconvene at 4:15. We'll start with the Rocky
4 Flats petition, 4:15.

5 (Whereupon, the above-entitled
6 matter went off the record at 3:41 p.m. and
7 went back on the record at 4:16 p.m.)

8 CHAIRMAN MELIUS: Okay, if I could
9 have your attention we'll get started now.
10 Again, a reminder, if anybody wishes to give
11 any public comment period -- comments a little
12 bit later we would prefer, it helps if you can
13 sign up because we go in the order that people
14 sign up generally.

15 The plan is, and we've changed
16 this a little bit which I think will be
17 helpful actually, is that we will first have
18 some presentations and so forth and then we'll
19 go directly into the public comment period,
20 rather than taking a break. So the public
21 comment period could very well start before 6
22 o'clock. I'm not sure of the exact time but

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1 as soon as we're done with the presentations
2 and so forth.

3 First, we'll hear from NIOSH who
4 will review their -- present their SEC
5 Evaluation Report on Rocky Flats on the new
6 petition, and then we'll hear from the --
7 there will be maybe some questions and so
8 forth from the Board Members. Then we'll hear
9 from the petitioners. And again there may be
10 some questions for them from the Board. And
11 then we would go into a public comment period.

12 And we'll explain more on sort of
13 the rules and so forth in the public comment
14 at the time. They're pretty straightforward
15 and so forth.

16 And so we'll start and Stu
17 Hinnefeld will make the presentation on the
18 Rocky Flats.

19 MR. HINNEFELD: Thank you, Dr.
20 Melius. I'm here to present the findings of
21 our Evaluation Report on this SEC I think it's
22 192, our latest petition from the Rocky Flats

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1 Plant.

2 An overview of the history here of
3 the petition. We received the petition a
4 little over a year ago. And the petition was
5 for the period of April 1952 through December
6 21st, 2005. It wasn't a petition strictly for
7 tritium exposures but the Evaluation Report
8 went that way and I'll get to that in a little
9 bit.

10 You can see from the dates on here
11 that this had been a bit of a difficult
12 process for us. It took almost 6 months just
13 to qualify the petition. It took some
14 additional information-gathering and some
15 internal discussions.

16 And part of the issue here was
17 that the previous petition and SEC Classes
18 that resulted from, I believe that was SEC
19 number 30, involved a pretty extensive
20 discussion of quite a large number of
21 technical issues.

22 Of course, those of you who have

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1 been on the Board for a while certainly recall
2 that. I'm sure many in the audience recall
3 kind of a long discussion of a lot of
4 difficult technical issues.

5 And so we were looking for a basis
6 to qualify that had not been pretty thoroughly
7 discussed already by the Board. And we felt
8 like the potential for tritium exposures fell
9 in that category so we did in fact qualify the
10 petition in February.

11 And then the completion of the
12 Evaluation Report was relatively shortly
13 before this meeting, much closer to the
14 meeting than we would prefer to do. There
15 were some, shall we say, difficulties in
16 arriving at a position to put in the
17 Evaluation Report that we would talk about.

18 One of the difficulties in the
19 course of events was the loss of a key staff
20 member. Dr. Brant Ulsh, who had been our lead
21 spokesman in the previous Rocky Flats Petition
22 Evaluation Report and who was involved in the

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1 qualification process for this found a
2 different place to work during this period and
3 so we had some switches internally. And let's
4 just say we had a variety of opinions on how
5 this was going to go and how it should
6 proceed.

7 We arrived at the conclusion that
8 we -- at this time it looks, we believe we
9 have sufficient information to reconstruct
10 doses with a bounding dose with sufficient
11 accuracy for the Class. Now, there will be
12 I'm sure quite a lot of discussion about that
13 as we go along.

14 A little background about Rocky
15 Flats. I don't know that anyone needs to hear
16 this since we've been through all this before.

17 It was of course primarily a plutonium plant.

18 But when we looked back at the transcript
19 from the discussions of SEC 30 we found that
20 while the potential of tritium exposures did
21 come up at some of the Work Group meetings
22 there wasn't really a resolution of the issue

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1 in terms of what did it mean. I think, at
2 least not that we could find in the
3 transcripts of the meeting. It seemed that
4 there wasn't a resolution.

5 And it was clear to us that there
6 were some special return materials and maybe
7 some pits that involved some potential
8 exposure to tritium. The petitioner-proposed
9 Class was all workers employed at Rocky Flats
10 from April 1st, 1952 through December 31st,
11 2005. Our evaluated Class was that same time
12 period but looking at the tritium exposures
13 because that was the issue we had identified
14 that we felt had some investigation yet to be
15 done.

16 So rather than -- and that was the
17 proposed basis that -- the petitioner proposed
18 some other bases as well. This was the one we
19 felt probably we could make the best case that
20 it hadn't been thoroughly explored and so that
21 we should go ahead and qualify the petition
22 based on that basis. And so then our

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1 Evaluation Report speaks to tritium exposures.

2 I don't think that the Board, if
3 the Board deliberates this further I don't
4 know that there is any particular constraint
5 on the Board to remain only with tritium
6 exposures, for instance, if it goes further
7 through this further evaluation.

8 Now, the petition basis was the
9 petitioner provided information, affidavits,
10 statements in support of petitioner's position
11 that there were times when petitioner was not
12 monitored specifically as it related to
13 tritium.

14 And we do have some tritium
15 monitoring data particularly as it relates to
16 a 1973 incident which I'll speak about here in
17 a little bit. And so we looked back at the
18 records. We think that maybe we can bound
19 tritium doses based on the information we
20 have.

21 The whole -- this is rather a
22 difficult issue, a difficult one to deal with

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1 for a number of issues. One is that Rocky
2 Flats really wasn't a tritium plant per se. I
3 mean, there was tritium there at times, but it
4 was mainly a plutonium plant.

5 The 1973 tritium incident which
6 really forms the bulk of our investigation,
7 the tritium event and then the investigations
8 that were done associated with that, following
9 up from that event involved the receipt at
10 Rocky Flats of some pieces, I think they were
11 called returns or special items, that were
12 contaminated with tritium.

13 And they were not identified to
14 Rocky Flats when they came here. They came
15 here from Lawrence Livermore. Lawrence
16 Livermore didn't say hey, these are
17 contaminated with tritium because Lawrence
18 Livermore didn't think they were contaminated
19 with tritium.

20 So, as they were being reclaimed
21 at Rocky Flats the state of Colorado was
22 monitoring the environs around the plant and

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1 had been for awhile. And in 1973 they started
2 noticing tritium far in excess of background
3 levels. They had been monitoring background
4 levels of tritium for a while and then all of
5 a sudden they were getting what you would
6 consider in the environment pretty significant
7 levels of tritium.

8 And Rocky Flats said well, we
9 don't have any tritium. It's not us. Or we
10 don't have tritium that -- we couldn't be the
11 source. So that discussion went on for
12 several months. It was probably between April
13 -- well, I think the state identified it in
14 the environment in June and it wasn't really
15 until September that Rocky Flats started
16 looking internally and found that they did in
17 fact have tritium in the plant in a number of
18 places where they didn't think they were going
19 to have it.

20 So what set this event off was
21 these special pieces were being -- the
22 plutonium was being reclaimed by a process

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1 called a hydriding process where they're
2 reacted with hydrogen. And then following the
3 hydration process, or the hydriding process
4 they were then oxidized.

5 Now, in both instances, both in
6 the hydriding reaction where you're using the
7 hydrogen to react with the plutonium and in
8 the oxidation process later on where the
9 hydrogen is essentially driven off as you
10 switch it to oxide, the exhaust stack had a
11 hydrogen burner on it so that you wouldn't be
12 putting hydrogen out the stack. It was a
13 burner essentially. It would oxidize the
14 hydrogen so you'd make tritiated -- you make
15 water.

16 And so in those steps as you
17 hydrated -- now it's tritium -- tritium-
18 contaminated plutonium. Of course tritium's
19 hydrogen behave chemically like hydrogen so
20 there's probably some exchange during the
21 hydriding process and some of it went out and
22 got turned into tritiated water at that

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1 process.

2 And then in the oxidation process
3 which the plant concluded was probably the
4 main source of the tritium where most of the
5 rest of the hydrogen and therefore most of the
6 rest of the tritium came off the product. It
7 was burned also and so -- the remainder of the
8 tritiated water. So once you make it into
9 tritiated water it reacts much more quickly
10 with the environment than elemental hydrogen
11 or elemental tritium if it were a hydrogen
12 gas.

13 And so it got to several places in
14 the plant kind of throughout the wastewater
15 treatment processes of the plant and into the
16 environment as well. So that's the short
17 version of the event.

18 So it's a little, it complicates
19 the fact that you have this event at a
20 plutonium facility. Another complication here
21 is, I have to be a little careful about what I
22 say because you can get into national security

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1 information at this site relatively easily.
2 And so I want to be a little careful about how
3 I proceed.

4 A number of the documents we've
5 looked at are classified. There are documents
6 that have unclassified versions and classified
7 versions. In other words, there will be an
8 investigation report that is unclassified that
9 is generally available and then there's an
10 investigation report that is not generally
11 available. So we've been looking into those.

12 And those kinds of investigations
13 oftentimes will take longer than other data
14 investigations because we don't go get
15 classified documents. We go review them at a
16 place that's okay to hold classified
17 documents.

18 Sources of information that we
19 used in evaluating the petition were of course
20 the existing Rocky Flats Plant Site Profile,
21 TBDs, the Site Profile document.

22 Those as a result of the last SEC

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1 there have been a number of revisions to those
2 documents that came about as part of that
3 discussion from the last SEC. We also looked
4 at our NIOSH Site Research Database documents.

5 We have pretty extensive holdings on Rocky
6 Flats.

7 Other technical documents we've
8 written looked in our own claim files for
9 claimants. We've interviewed former workers
10 including a couple of specific outreach
11 meetings we held for the purposes of this
12 Evaluation Report. We gathered workers with
13 the assistance of our outreach contractor and
14 had short group meetings to discuss, try to
15 get information to help with this.

16 And we have done records reviews
17 including classified records reviews. There
18 are classified records holdings here in
19 Denver, and there were also some classified
20 records holdings at the Office of Scientific
21 and Technical Information in Oak Ridge. So
22 we've been looking at those kinds of

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1 documents.

2 Just a little bit about this dose
3 reconstruction claims statistics from Rocky
4 Flats. This is the total. These totals
5 include cases that are now in at the SEC due
6 to SEC 30. So some of these dose
7 reconstructions would have been completed
8 before SEC 30 was granted. And so there were
9 some dose reconstructions I'm sure that were
10 done that were not compensable that when the
11 SEC Class came out those cases then became
12 compensable.

13 So these are the numbers we have.

14 Most of the cases, most of the claims we have
15 from Rocky Flats have internal dosimetry data
16 but only 122 contain tritium bioassay data.

17 Now, there are some other
18 potential -- there are several potential
19 tritium exposure sources -- plutonium at Rocky
20 Flats. In the one case they do periodically
21 get containers of tritium. I'll just say it
22 that way. And they don't do anything with

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1 those. They come in, they go back out. And
2 so that's not the subject of the main event in
3 '73 although I will describe one event with
4 that in a little bit.

5 The particular pieces that the
6 containers, well, the particular pieces that
7 were contaminated when they came into Rocky
8 Flats were not tritium containers, they were
9 contaminated pieces of plutonium. There was
10 some special work done on those that resulted
11 in that contamination that's not done to all
12 pieces that are returned.

13 But it's a little difficult to
14 conclude that there wasn't some potential to
15 introduce tritium into plutonium at other
16 times as well prior to this, and perhaps have
17 had some contaminated plutonium, I mean
18 contaminated with tritium come back to the
19 plant earlier than this, even back to the very
20 early days, even before thermonuclear designs
21 were common. So there is a possibility that
22 some of the materials might have been

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1 contaminated to some extent. We certainly
2 don't believe to the same extent as this batch
3 of material, but to some extent.

4 There are a series of neutron
5 generators at Rocky Flats. I think maybe, I
6 forget, five different locations, I think it
7 might be five tritium generators but I won't
8 swear on that -- or neutron generators. A
9 neutron generator frequently has a tritiated
10 target and you shoot a deuteron from -- with
11 an accelerator, hit a tritium target and you
12 get a neutron and I think, I guess you get
13 helium then if I'm doing the arithmetic right.

14 And there's the potential for some
15 radiation interactions with light elements
16 that can in fact cause tritium. There's --
17 with beryllium there's both an N reaction
18 meaning a neutron capture reaction and an
19 alpha reaction with beryllium that can create
20 tritium.

21 These are pretty uncommon, low
22 cross-section interactions. For those of you

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1 who don't know what a cross-section is it's
2 the probability of the neutron or alpha
3 particle interacting with that nucleus and
4 causing that reaction. Those are pretty low
5 cross-sections, not very probable. And so it
6 doesn't seem to be a particularly credible
7 source of significant tritium exposure.

8 Similarly, the neutron generators,
9 some of the targets -- some of the tritiated
10 targets were essentially available for
11 handling. Some of the tritiated targets were
12 sealed in a tube along with apparently the
13 source that boiled off the deuterons or
14 whatever. And so they really didn't represent
15 an exposure potential at all. The other type
16 where they were not sealed up, there was some
17 potential tritium exposure there. Again, it
18 seems like that would be pretty modest though.

19 And so it seems like from the
20 investigation the site did and we don't have
21 any reason to conclude differently, it seems
22 like their logic was relatively sound that the

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1 potential sources for tritium of significant
2 exposure would be contaminated returns such as
3 these that were identified on the chance that
4 there may have been others contaminated
5 similarly or to a certain degree but not to
6 this degree it doesn't seem.

7 The contaminated returns like I
8 said, this is the final type of potential
9 neutron exposure, probably a significant one.

10 It's not entirely clear when they could have
11 started coming back. It's possible they
12 weren't there until the sixties but it's a
13 little hard to conclude that definitively
14 because there's not any particular data that
15 would tell you that had there been tritium
16 there we would have found it. And there
17 wasn't any so there's no data like that.
18 There's no data that says there's tritium
19 there. There's none of the other excluding
20 kind of data either.

21 We've got some statistics here
22 about total amount of tritium in these

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1 targets, and again that's the total amount of
2 tritium that was ever purchased. This amount
3 of tritium wasn't necessarily in the neutron
4 generators at any particular time.

5 There's some estimates about what
6 the tritium generated might have been. 3.2
7 curies has been described as unrealistic, you
8 know, a maximum but unrealistic case. I
9 haven't really seen the details of the
10 estimates so I'm not really prepared to say.
11 The contaminated returns seem to be the
12 significant exposure risk.

13 So, like I said, the '73 incident
14 involved contaminated returns and they
15 produced certainly the highest recorded
16 tritium levels on the site. But like I said,
17 Rocky Flats didn't record the tritium when
18 they came in, they didn't find out about the
19 tritium until the state of Colorado told them
20 about the tritium. So they had -- up until
21 September Rocky Flats still didn't have any
22 recorded -- any records of this tritium

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1 contamination even though the items arrived
2 and were starting to be processed I believe in
3 April.

4 Now, in the investigation of this
5 Rocky started asking places that sent them
6 returns, hey, what could you have done that
7 was similar to this. And Lawrence Livermore
8 who had sent the one that caused the issue,
9 the shipment that caused the issue said well,
10 you know, we've got these three other
11 shipments that we sent in the last few years
12 that maybe they could have been contaminated
13 too.

14 See, when Lawrence Livermore
15 shipped the one in March of 1973 they didn't
16 think it was contaminated. And so they -- so
17 they don't know if these other shipments were
18 contaminated or not, but based apparently upon
19 the treatment of these pieces at Lawrence
20 Livermore before they returned was perhaps
21 analogous enough to March -- their treatment
22 in March. I mean, talking about their

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1 treatment at Lawrence Livermore before they
2 were returned to Rocky. Apparently they were
3 analogous enough that they said well maybe
4 those were contaminated too, but there would
5 have been quite less activity.

6 Estimates of the activity are on
7 the screen. They range from 50 or 60 curies
8 or less for the earlier ones, and between 500
9 and 2,000 curies for the 1973 event.

10 Now, we did continue and look at
11 later on because after 1973 with this
12 discovery that these items could come in Rocky
13 Flats then took a series of steps essentially
14 to protect itself from having this happen to
15 them again, having stuff delivered to them
16 that was contaminated and the shipper not
17 knowing or not telling them that it was
18 contaminated.

19 And so we did -- they did a number
20 of things. These are just some excerpts, this
21 is not an entire list, excerpts of the kinds
22 of things that were done later on that makes

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1 it seem like after the recovery --
2 investigation of the '73 event that they
3 probably had some things in place that helped
4 them out.

5 One has to do with the evaluation
6 of a lot of returns, site return pits from
7 LANL, Los Alamos. And those showed very
8 little contamination.

9 Now, you'll notice that these
10 tritium numbers are concentration numbers
11 where the last numbers were total curie
12 numbers. These were measurements taken with
13 an air monitoring device, probably a tritium
14 sniffer or a Triton, something like that,
15 radon gas monitoring device.

16 And we also know that they were
17 doing radiography pits to look at problems,
18 things that might be problems when they
19 started to reprocess these elements and they
20 found a suspected structural integrity issue
21 with let's call it the tritium container. And
22 so they didn't bother to process that. Their

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1 radiographical examination was good enough
2 that they didn't process that and send it
3 back.

4 Now, that's really different from
5 receiving contaminated plutonium. You know,
6 radiography won't show you contaminated
7 plutonium but it may show you a structural
8 integrity issue with a container. So, those
9 are just examples of the kinds of things that
10 they were doing in later years.

11 The particular incident here, like
12 I said, the special returns, these were called
13 special returns. Those were hydrided. Any
14 off-gas was burned so that you made the
15 tritiated water.

16 The normal site returns apparently
17 were processed by acid dissolution. Now,
18 there may not be this pure dichotomy, and I'm
19 not sure what's normal and what's special,
20 what puts them in the hydrided line and what
21 puts them in the nitric acid line.

22 But there's some thought that if

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1 you dissolve it in acid you won't necessarily
2 generate the same amount of tritiated water.
3 You might generate more tritiated gas. I'm
4 not so sure I subscribe to that since you've
5 got all this hydrogen in the acid. You know,
6 why is the tritium going to stick together as
7 gas and go along leaving the rest of the
8 tritium alone? That just doesn't seem right
9 to me. But I am not a chemist, I will tell
10 you that up front. I am certainly not a
11 chemist.

12 In 1968 there was another thing
13 identified as a special project. This one I
14 have not seen much about. I have not been
15 involved in the classified research, and I
16 have not seen a lot about this event.

17 In this particular event there was
18 a release of about 600 curies of tritium to
19 the environment out the stack. Now, as I
20 understand it they knew about this because I
21 believe they were monitoring the stack. So
22 they knew that there might be something going

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1 on with this particular piece.

2 This was elemental tritium so it
3 doesn't react well with the environment and
4 this didn't really -- I don't think they found
5 this in the environment following that.

6 The `73 incident of course was the
7 one I just described. And then in `74 there
8 was a much smaller incident where a
9 contaminated shipping container I guess upon
10 being cracked or opened or left someplace gave
11 off some tritium, they estimated about 1.5
12 curies. Again, this was after the `73 event.

13 If I'm not mistaken that was found with the
14 stack monitor as well.

15 So, monitoring. Prior to 1973
16 Rocky Flats didn't collect bioassay sample for
17 tritium. There are a handful of tritium
18 samples in the SRDB. We found records of them
19 prior to 1973. These are, I believe they were
20 found in what's called a special bioassay
21 logbook where they would show non-plutonium
22 type bioassays. And they're in there, but in

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1 that particular logbook there's no particular
2 reason why they were collected.

3 So, since we needed to get this
4 together and presented here we haven't quite
5 run to ground whether or not we can determine
6 why those samples were taken.

7 And they were not taken uniformly
8 in the years before '73. There was a cluster
9 of them in one year and a cluster of them in
10 another year and that was about it.

11 Following the 1973 incident once
12 they identified they had tritium in the plant
13 there was quite a large number of workers were
14 monitored, the people they thought were likely
15 to be exposed. And there were five of those
16 who were deemed to have potentially
17 significant exposures. Remember these samples
18 were taken in September and exposures could
19 have been in April, they could have been
20 throughout the period from April through
21 September. They didn't really know the
22 exposure scenario once they got these bioassay

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1 data.

2 And then after 1973 they put in a
3 sampling program that for a couple of years
4 was a random analysis of people who were on
5 the plutonium bioassay monitoring program
6 because you figure it's going to be
7 contaminated plutonium that is likely going to
8 be the pathway so we'll take a certain
9 percentage of our plutonium bioassays and
10 we'll run those for uranium as well.

11 They did that for a couple of
12 years. They didn't have any positive results
13 on that. And then about '75 they felt like
14 they had a handle on -- had sorted out things
15 well enough that they knew what might have
16 tritium potential and they based their
17 sampling based on who was potentially exposed
18 rather than just randomly from the plutonium
19 monitored people.

20 So, you can see that there were
21 very limited tritium results that we've been
22 able to find. We do find descriptions of

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1 instruments called tritium sniffers which I
2 believe are ionization chambers, flow-through
3 ionization chambers of one sort or another.

4 The Triton portable monitors or
5 fixed monitors are in fact flow-through
6 ionization chambers. And there is some swipe-
7 and-smear survey data, but most of that is `73
8 and later. There wasn't a lot of that being
9 done before `73.

10 So, here, post-`73 there were some
11 criteria for putting people in the bioassay
12 program. And we have lists of people
13 identified as these people should be
14 bioassayed.

15 There's also a report that we have
16 that says that when they did this sampling
17 post-1973 they would decide what groups needed
18 to be sampled but they wouldn't sample 100
19 percent. They would sample a proportion of
20 the group each month. So there's not an
21 overwhelming number of bioassay samples even
22 after 1973.

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1 Now, our approach to dose
2 reconstruction, what we feel might bound the
3 doses for tritium at Rocky Flats, is that
4 there was the one event that we know about and
5 there seems to be some reason to believe it
6 was the most significant. Certainly it was
7 found in the environment.

8 You'll notice those other Lawrence
9 Livermore receipts were from like '69 through
10 '71, the ones Lawrence Livermore talked about.

11 During certainly the major portion -- during
12 a portion of that time, I'm pretty sure no
13 later than 1970 was when Colorado started
14 monitoring the environment. And Colorado
15 didn't find anything in the environment until
16 the '73 event.

17 So, arguably that would indicate
18 that there wasn't -- well, there wasn't
19 anything similar, certainly nothing of similar
20 magnitude. Whether there was anything to the
21 contamination -- earlier Lawrence Livermore,
22 whether they were really contaminated or nor,

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1 doesn't really say they weren't but it
2 certainly doesn't seem to have been at the
3 magnitude or anywhere close to the magnitude
4 of the '73 event.

5 And because of the size and the
6 magnitude tritiated water versus elemental
7 tritium which is the other release I talked
8 about, '68, the 600 curies of elemental
9 tritium, tritiated water is a much more
10 significant dosimetric exposure. And so we
11 believe this to be the bounding scenario.

12 Now, so here's a little more of
13 the history of how we got to this point. I
14 think I've covered this already. Rocky Flats
15 started processing the contaminated returns in
16 April. They didn't know they were
17 contaminated. In June Colorado found tritium
18 in the environment. In September Rocky Flats
19 then started investigating and found tritium
20 in their own workplace.

21 And there were a lot of bioassay
22 samples taken. I mentioned the five people

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1 earlier on who seemed to be significantly --
2 potential significant exposures. They had
3 bioassay results over some action level. They
4 were collected in September.

5 I think they chose an action level
6 of 10,000 picocuries per liter. That's pretty
7 low for an action level for tritium if you
8 were doing routine tritium monitoring, but if
9 you were sampling months after the potential
10 exposure it might be meaningful. So that's
11 the number they chose as their follow-up,
12 essentially their action level and their
13 follow-up case.

14 And they did dose assessments for
15 those five cases with a number of possible
16 exposure scenarios. What if they were exposed
17 then, what if they were exposed here.

18 And they took a lot of bioassay
19 sample from these people. They collected the
20 bioassay samples so they have measures of the
21 excretion rate of the tritium for some weeks
22 in the September/October time frame. And that

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1 tells you something. The pattern at which the
2 tritium is being excreted those months gives
3 you some idea about potential exposure times
4 and exposure avenues. It doesn't tell you
5 exactly -- you can't pin it down exactly, but
6 it puts some parameters on it.

7 And in many cases it sort of rules
8 out a huge exposure on the first day of
9 processing and then no more exposure until the
10 sampling date because the bioassay data, since
11 you have a sequence of bioassay data the
12 bioassay data would be behaving differently at
13 that time had that been the exposure scenario.

14 So it seems to be some other kind
15 of exposure scenario, meaning exposures later
16 in the period. Maybe there were some
17 exposures in April, but also some exposures
18 later in the exposure period in order for the
19 bioassay to behave the way it did in
20 September.

21 So, and the other thing that is
22 considered, another conclusion that we reached

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1 for this exposure situation is that while we
2 call it an incident or event, it really went
3 on from April to September. So, let's see,
4 that's what, 5 months' worth or so. And there
5 were some kinds of exposures, likely recurring
6 exposures to these people during that 5-month
7 period, something like a chronic or an
8 episodic which is often, you know, you can
9 often approximate by a chronic exposure. So
10 this is something of a chronic sort of
11 situation as opposed to your typical classical
12 incident where there's 1 day of the incident
13 and people are exposed 1 day.

14 So, based on that -- let me go
15 back one more. Based on this we feel then
16 that an acute exposure -- or this situation,
17 this chronic exposure is -- the situation we
18 have here is essentially a chronic exposure.

19 We're not -- you know, we don't
20 really know for sure if there were other
21 tritium exposures earlier than this. The
22 indication is that there was likely some

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1 contaminated plutonium that came back before
2 this. We don't really know when. But we
3 believe that to be bounding by assigning this
4 the maximizing dose which is in here, the
5 worst case interpretation. This is in our
6 Evaluation Report, worst case interpretation,
7 about 753 millirem a year as the bounding
8 internal dose for this chronic exposure from
9 April through September of 1973. We feel like
10 that would be bounding for these earlier sort
11 of presumed tritium exposures that occurred on
12 other plutonium receipts.

13 And since we can't rule out
14 entirely that some of the earliest returns
15 during the earliest operation may have been
16 contaminated in some fashion we're proposing
17 to reconstruct doses back to the earliest days
18 with that 753 millirem per year for each
19 person.

20 So, that is our proposed method
21 for the tritium exposures for the years up
22 through '73. After 1973 we would propose to

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1 use the tritium data that's available for
2 people who have tritium data. And probably
3 build a coworker model for people who don't
4 have tritium data. Because again this was in
5 the plant, it was pretty widespread in the
6 plant so we don't know that we would exclude
7 people from having a dose assessment following
8 '73 just because they weren't one of the
9 people sampled.

10 Okay, our two-prong test, is it
11 feasible to estimate the radiation dose with
12 sufficient accuracy or -- which includes a
13 bounding estimate, and is there a reasonable
14 likelihood that such radiation doses may have
15 caused harm. Well, in this case we've
16 concluded that it's feasible to provide a
17 bounding dose estimate for the exposures to
18 tritium at Rocky Flats, and that therefore it
19 doesn't take you to that second part. The
20 potential harm question doesn't come up.

21 And so this is our abbreviated
22 feasibility since we only assessed the tritium

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1 exposure potential. There's -- we feel like
2 it is, reconstruction is feasible by using a
3 bounding approach back to the start. And it's
4 proposed actually from January '55 which we
5 believe is a credible first date for a
6 contaminated return to come in.

7 Those dates are wrong, I'm sorry.

8 It's 1953 through 1973. Those are the wrong
9 dates, '53 through '73. Okay, sorry about
10 that. Comic relief at the end.

11 CHAIRMAN MELIUS: Keep us on our
12 toes. Okay. Questions for Stu from Board
13 Members? Jim Lockey, you were first.

14 MEMBER LOCKEY: Stu, when did
15 Colorado start monitoring?

16 MR. HINNEFELD: I believe it was
17 1970, but I'll have to go back and verify
18 that. I believe Colorado started monitoring
19 in 1970.

20 MEMBER LOCKEY: And they continued
21 until when?

22 MR. HINNEFELD: I don't know when

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1 they stopped. They were monitoring in '73, I
2 don't know when they stopped.

3 CHAIRMAN MELIUS: Phil?

4 MEMBER SCHOFIELD: Were you able
5 to identify the personnel who were involved in
6 handling these special pieces coming in?

7 MR. HINNEFELD: Yes. Certainly
8 some. One of them was one of the -- some of
9 the people were on that five list, the five
10 highest exposed people. At least I believe
11 two of them were. I don't know that we
12 identified everybody who was involved in it.
13 Or I don't know that we did. That information
14 may be available, I just don't know if it is
15 or not.

16 I think it quite likely is. Rocky
17 Flats did a pretty thorough investigation of
18 the event at the time. I suspect that they
19 did collect that; I just haven't seen it.

20 CHAIRMAN MELIUS: I have a
21 question, and that's how confident are you
22 that the '73 incident was the one that would

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1 have caused the highest exposure for any
2 particular group of individuals? Sort of
3 following up on Phil's question.

4 We know that it caused the most
5 widespread contamination and certainly was a
6 significant source of exposure, but are we as
7 confident that the earlier ones might not have
8 exposed certain people higher and particularly
9 given the uncertainty about which, you know,
10 where was that contamination. Was it just,
11 you know, which batches and so forth coming in
12 would have had that contamination? Who would
13 have been exposed in terms of handling it?
14 Sort of the questions that would go in terms
15 of trying to identify those that had the
16 highest exposures or the worst case.

17 MR. HINNEFELD: Well, I think to
18 have much confidence in a conclusion would
19 require additional research that we did not
20 get to in order to be able to present here
21 today.

22 For instance, I was not part of

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1 the classified document capture, classified
2 document research. It's not clear to me right
3 now 100 percent what the treatment was to
4 these contaminated pieces. How were they
5 treated that got them plutonium-contaminated
6 in the first place?

7 The second piece of that is once
8 you know what that is, I'm sure there are
9 people who do know what that is, how much
10 investigation, you know, how much was that
11 process or a process like that done by the
12 weapons labs or other sites that would have
13 resulted in similar kinds of items before
14 1973. So there would be -- there's
15 investigation yet to do, I think, to have much
16 confidence in that.

17 Given the amount of tritium here
18 and the amount that was seen in the
19 environment I would think this would be a
20 pretty -- this is a big event. I don't know
21 that I have 100 percent confidence it is the
22 biggest event though.

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1 CHAIRMAN MELIUS: Or the biggest
2 event for -- it may be the biggest event in
3 terms of widespread contamination but not
4 necessarily the most significant event in
5 terms of individual exposures given how it
6 might have occurred and so forth.

7 MR. HINNEFELD: That's a good
8 point. And I think the one thing that speaks
9 in the favor of the exposure significance of
10 this one is the tritiated water nature of the
11 event. So you would be looking for some other
12 exposure event that would lead to probably a
13 tritiated water kind of event.

14 CHAIRMAN MELIUS: But it would
15 have had to occur after `70 and lead to --

16 MR. HINNEFELD: Well, I don't know
17 when it would have occurred --

18 CHAIRMAN MELIUS: In order to be
19 detected in the way, I guess.

20 MR. HINNEFELD: In order to be
21 detected it would have had to have really
22 occurred after 1970 when Colorado was

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1 monitoring the environment.

2 CHAIRMAN MELIUS: Right, yes.

3 MR. HINNEFELD: So, before 1970
4 there wasn't any -- they weren't looking for
5 much. They weren't really looking for it that
6 much in plutonium returns.

7 They did have ways, you know, like
8 they had sniffers and things before 1970. I
9 think those were largely used to monitor
10 tritium containers, let's say, to make sure
11 that their integrity was okay. That's the
12 flavor I got. As I said I'm not the most
13 knowledgeable person about this.

14 CHAIRMAN MELIUS: Phil, you had
15 another? And then Henry.

16 MEMBER SCHOFIELD: Were the
17 personnel involved in the receiving and
18 handling of these shipments, were they -- was
19 this a large group, a small select group?

20 MR. HINNEFELD: The only numbers
21 I've seen were of the people who did the first
22 processing, the hydriding facility, and that

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1 seems to have been a pretty small group. I
2 don't know the total numbers but that seems to
3 have been a pretty small group. And I don't
4 really know if there was exposure potential
5 before it got hydrided or not. It doesn't
6 seem like there would have been the same
7 potential beforehand as to when they started
8 turning it into tritiated water.

9 CHAIRMAN MELIUS: Henry?

10 MEMBER ANDERSON: Do you know why
11 Colorado started testing? Was that available
12 technology or did they have some sense that
13 there would have been leakage to the
14 environment? I mean, what triggered their --
15 I mean, it's not inexpensive to do.

16 MR. HINNEFELD: I don't know why
17 the state decided to. There may be some
18 people here who do. Tim, do you know?

19 DR. TAULBEE: Based on what I've
20 been able to see from the environmental
21 monitoring --

22 CHAIRMAN MELIUS: Can you identify

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1 yourself?

2 DR. TAULBEE: I'm sorry. I'm Tim
3 Taulbee with NIOSH. In 1970 Colorado
4 Department of Health started monitoring the
5 environment to compare their results to Rocky
6 Flats's environmental monitoring.

7 And in addition to the standard
8 alpha and beta analysis and plutonium that
9 Rocky Flats was doing Colorado Department of
10 Health added tritium. And there's no
11 explanation in the records why they added it
12 but they did.

13 CHAIRMAN MELIUS: Thank you, Tim.

14 DR. TAULBEE: That would be
15 February 1970 is the earliest date I've seen
16 from Colorado Department of Health. It
17 continues on past the 1973 event. The latest
18 data that I've seen personally is November of
19 '74, but there's likely data beyond that. I
20 just haven't seen that data.

21 CHAIRMAN MELIUS: Okay, thank you.

22 Loretta?

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1 MEMBER VALERIO: You mentioned
2 here that multiple unexpected locations
3 tritium was found. Can you elaborate on the
4 locations? Were they offices? Were they all
5 production areas?

6 MR. HINNEFELD: No, they were
7 production areas that followed the material.
8 You know, the material that came in once it
9 was turned into plutonium oxide, it kind of
10 followed that material through the plant, and
11 it also followed the wastewater treatment
12 systems.

13 You know, whatever water -- at
14 every plant there's wastewater generation.
15 It's collected and it goes various places.
16 Some of this goes -- there's an evaporation
17 pond that some of it went to. Some of it went
18 to the sewer. So there were various -- and
19 then there were some apparently went to --
20 some went to tanks in various buildings
21 presumably for holdup or for reclaiming
22 something in it. So, there were various

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1 places where the wastewater went.

2 So it kind of followed the
3 wastewater streams, and it also followed this
4 plutonium material as it moved through the
5 plant, as near as I can tell.

6 CHAIRMAN MELIUS: Okay. Paul?

7 MEMBER ZIEMER: So, Stu, is it
8 your understanding that the tritium was a
9 surface contaminant? Tritium absorbed or
10 occluded on the surface of the pits?

11 MR. HINNEFELD: That's as nearly
12 as I can understand it, yes.

13 MEMBER ZIEMER: Because if that's
14 the case I'm trying to understand in slide 13
15 what radiography would tell you relative to
16 the idea that a pit with some sort of defect
17 would inherently have tritium.

18 MR. HINNEFELD: Radiography
19 wouldn't help with that at all. Radiography,
20 that was added as an example of some of the
21 steps that were taken after the '73 event to
22 look not only at potentially contaminated

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1 returns but also at other potential tritium
2 issues that might arise like a container that
3 might have suspect integrity. So that would -
4 - the actual radiography of units coming in
5 wouldn't tell you anything about the
6 contaminated state of the plutonium.

7 MEMBER ZIEMER: What I'm reading
8 is the radiography of pits was a routine
9 aspect and was sufficient to determine likely
10 tritium contamination. Am I reading that
11 wrong?

12 MR. HINNEFELD: Well, not tritium
13 contamination. It's sufficient to determine -
14 - in that particular instance, in one
15 particular instance it was sufficient to
16 identify that there is an integrity issue with
17 this tritium container which could, if it went
18 on through the process, have resulted in
19 tritium contamination of the plant.

20 MEMBER ZIEMER: As opposed to a
21 pit.

22 MR. HINNEFELD: Yes.

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1 MEMBER ZIEMER: Okay. This says
2 it was radiography of a pit.

3 MR. HINNEFELD: Well --

4 MEMBER ZIEMER: Okay. Maybe I
5 won't ask any further questions.

6 MR. HINNEFELD: Yes.

7 CHAIRMAN MELIUS: Yes. Dick?

8 MEMBER LEMEN: Out of the total
9 potential exposed group, how many bioassay
10 samples do you have of tritium?

11 MR. HINNEFELD: I thought I had
12 that number in here. For the -- I've really
13 only seen, in my memory I can remember the
14 five cases that were above the action level.
15 And in each of those cases -- well, some of
16 those cases I'm going to say there were
17 between maybe 20, 10 to 20 in some of them.
18 Some of them had fewer.

19 MEMBER LEMEN: Well, on the
20 monitoring slide you have out of the '73
21 incident five that had significant exposure.
22 Is that what you're talking about?

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1 MR. HINNEFELD: Yes.

2 MEMBER LEMEN: But I'm asking out
3 of the total Rocky Flats population. How many
4 bioassay samples do you have of those out of
5 that whole population to represent the
6 population?

7 MR. HINNEFELD: Well, there were -
8 -

9 MEMBER LEMEN: You know what I'm
10 saying?

11 MR. HINNEFELD: I think so. There
12 were 145 employees sampled following the
13 event, and I guess right now I don't know the
14 total number of samples.

15 MEMBER LEMEN: So you could really
16 have out of the total population very few
17 samples.

18 MR. HINNEFELD: There are
19 relatively few samples for tritium compared to
20 the Rocky Flats population. That's apparent
21 in the slide I presented that showed internal
22 monitoring data for the claims we have and

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1 that only 122 of them have bioassay data.

2 MEMBER LEMEN: Okay.

3 CHAIRMAN MELIUS: Okay. Thank
4 you. Yes, David.

5 MEMBER RICHARDSON: Could we see
6 the next slide for the approach to dose
7 reconstruction? This is one I was puzzling
8 over for a bit. Because I'm used to thinking
9 about monitoring for tritium, the necessity of
10 collecting samples relatively close in time to
11 the intake. And if you collect a sample
12 months after an intake it may be very
13 difficult to detect or understand the
14 magnitude of the intake.

15 And if I was understanding the
16 time line here there was material received in
17 March, processed in April. In June it was
18 detected environmentally, and in September
19 they began a monitoring program, and they
20 report that by October they had monitored 250
21 workers.

22 And that would be the sort of

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1 scenario where if you're finding tritium then
2 you might ask a question about whether the
3 tritium that you found then has any
4 relationship at all to the exposures that
5 happened in March and April.

6 And so how -- so you have
7 described that, yes, there was tritium
8 detected, and it seems like the tritium that
9 you detected is perhaps evidence of some sort
10 of repeated or chronic exposure which is
11 happening on the site. And you described
12 other sources of tritium potentially at the
13 site other than this one bad batch.

14 But how is using the findings from
15 the monitoring that happened in September and
16 October bounding that potential peak exposure
17 which happened at the end of March and the
18 start of April? That's what, you know, I can
19 picture the excretion sort of function, but
20 once you're down at that tail of that
21 excretion function it's not the way that
22 usually I think tritium bioassay programs are

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1 conducted in order to understand the magnitude
2 of exposure, to look 6 months afterwards and
3 hope to detect it. So how is that happening?

4 MR. HINNEFELD: What was done was
5 to take the current models for tritium
6 excretion, you know, the current ICRP models
7 for how is tritium excreted. And there is a
8 long-term component in there. It's small, but
9 there is a long-term component. And saying
10 based on the behavior of the bioassay that we
11 see from the repetitive sampling from
12 September into October from these most highly
13 exposed people, based on how the bioassay is
14 behaving at that point what kind of an intake
15 scenario earlier on is consistent with
16 bioassay behaving at that point.

17 So certainly if you knew you had
18 tritium and you were having tritium monitoring
19 program you'd probably monitor it weekly or
20 more often. But in this instance it doesn't
21 preclude -- when you have detectable tritium
22 some period of time afterwards it doesn't

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1 preclude making some judgments about potential
2 exposures and exposure avenues during the
3 exposure period.

4 MEMBER RICHARDSON: I guess this
5 is -- are there other examples of this going -
6 - it's like 18 half lives afterwards
7 projecting and hoping that you've got --

8 MR. HINNEFELD: Well, it's --
9 first of all there is the long-term component.
10 It's 18 half lives is the short-term
11 component. And because of the way it was
12 behaving it appeared that there was some
13 short-term component still disappearing. And
14 so that was what the argument was for saying
15 there is some exposure later on in this
16 period. It wasn't an exposure in April.

17 MEMBER RICHARDSON: Yes, so that's
18 a whole other layer of complexity, that
19 there's something else being added in as a
20 chronic component --

21 MR. HINNEFELD: Well, this
22 material --

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1 MEMBER RICHARDSON: -- trying to
2 separate out --

3 MR. HINNEFELD: This material is
4 in several places. It was found in several
5 places in the workplace. And these people
6 were working in this workplace all this time
7 from April to September without knowing it.
8 And so it's pretty reasonable to assume that
9 they weren't exposed on one day, they were
10 exposed throughout that period.

11 MEMBER RICHARDSON: But the noise,
12 the kind of, the estimation problem I guess is
13 trying to take a two-parameter model,
14 extrapolate back 180 days recognizing there's
15 also some other background component that's
16 causing disturbances in those kinetics and
17 think that you could get back to -- I mean --

18 MR. HINNEFELD: There are a
19 variety of different fits you can use, I mean
20 a variety of different scenarios. And then
21 there's also what you call the quality of the
22 fit. How well does the bioassay data fit this

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1 scenario. How high a quality fit do you need
2 to say that's okay. So there are a number of
3 questions.

4 MEMBER RICHARDSON: So it would be
5 like -- I'm trying to imagine something else.
6 Trying to look for doing drug testing using
7 urine and taking a urine sample 6 months later
8 and making a judgment or something like that.

9 MR. HINNEFELD: Well, if you
10 smoked a joint 6 months ago that's one thing,
11 but if you've been smoking joints for 4 months
12 that's something else.

13 MEMBER RICHARDSON: And one and
14 both, and saying how much did you smoke 6
15 months ago. That seems fantastic.

16 MR. HINNEFELD: Well --

17 MEMBER RICHARDSON: Just, I mean,
18 you know, and this is again completely naive
19 but I'm imagining, you know, the short
20 retention time in the body and that there's
21 some very simple model about the complexity of
22 the human body and how it excretes things.

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1 And that's what we're --

2 MR. HINNEFELD: Well, I'll just go
3 back to the point I made earlier. Because of
4 the way the bioassay was behaving when they
5 had repeated bioassay samples from September
6 through October, and it was declining, would
7 indicate that there was some of the short-term
8 component still being excreted and so there
9 was an exposure that didn't occur only in
10 April. It occurred over a period of time.
11 And there was still some short-term.

12 MEMBER RICHARDSON: Right, and I
13 agree with that totally, but we're trying to
14 bound what happened in April.

15 MR. HINNEFELD: Right. Well,
16 we're trying to bound what happened from April
17 through September.

18 MEMBER RICHARDSON: But it's the
19 worst case scenario, so we're talking about
20 what's the worst case exposure from what we're
21 positing as the worst incident.

22 CHAIRMAN MELIUS: Correct, but

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1 then the question is how does that compare
2 with other incidents. That was my question
3 sort of following up on Phil's. And so those
4 two tie together, and I think all that needs
5 to be looked at and so forth. Phil, you had a
6 question? I'd like to hear from the
7 petitioners.

8 MEMBER SCHOFIELD: Yes, just a
9 quick one.

10 So it's obviously they have found
11 this contamination where it shouldn't have
12 been. Is this well documented as to whether
13 this is in like the breathing zones of those
14 workers, or is this like on top of the
15 equipment?

16 MR. HINNEFELD: Well, it was in
17 the wastewater. They found it in some of the
18 equipment like certain -- like glove boxes.
19 They'd put a tritium monitor in there and it
20 was elevated in certain glove boxes.

21 I don't remember room measurements
22 right now. I'm not exactly sure what all the

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1 measurements were and what places they found
2 it, but I believe they may have found it with
3 some contamination surveys as well.

4 So I don't really have a thorough
5 grasp on -- when they say they found it in
6 several buildings, I don't really have a
7 thorough grasp about the measurements that
8 were done.

9 CHAIRMAN MELIUS: Okay, thanks.
10 Thank you, Stu, and we'll probably may have a
11 few more questions. But first I'd like to
12 hear from the petitioners.

13 Terrie? You can either use it
14 there or however you would like to do it.

15 MS. BARRIE: I think I'm going to
16 do it right here.

17 CHAIRMAN MELIUS: Okay, that's
18 fine. However you would like is fine.

19 MR. SAUNDERS: Good afternoon. My
20 name is Charles Saunders. I worked at Rocky
21 Flats. I am the Rocky Flats SEC petitioner.

22 Thank you for scheduling this

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1 meeting to be held in Denver. Before Terrie
2 and I begin our presentation we want to turn
3 the floor over to Michelle and her address the
4 Board.

5 MS. DOBROVOLNY: Good evening,
6 everyone. Thank you for your attention.

7 I am Michelle Dobrovolny, and I
8 worked at the Rocky Flats Nuclear Weapons
9 Plant Site from July of 1985 through February
10 of 2001.

11 I had many titles during my
12 employment including engineering specialist,
13 secretary, administrative assistant, et
14 cetera. On many of my duties I was to run
15 engineering packages in and out of every
16 production building on plant site. I also
17 worked for safeguards and security in which I
18 was in charge of all Top Secret documents,
19 films, prints, et cetera, that were scheduled
20 for destruction due to the decommissioning.

21 On one specific duty I was to
22 cover for secretaries in Building 111 when

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1 they were away on vacation, appointments or
2 leave. This included working directly for Bob
3 Card, general manager of the entire plant site
4 during decommissioning.

5 During that time I was asked to
6 destroy records, and what I mean by destroy,
7 I mean shredding, such as IH processing
8 reports, external dose evaluation data,
9 radiation dose assessment reports, dosimetry
10 results of bioassay, medical history
11 questionnaires, TLD detailed reports, bioassay
12 and analytical reports, as well as many other
13 documents. This included employees from the
14 Dow Chemical time all the way through Kaiser-
15 Hill.

16 I apologize, I've known this
17 information, and I'm a little nervous doing
18 this. I have not wanted to come forward. I
19 have been at these SEC petitions and the
20 meetings prior, but I feel it's time that this
21 information comes out because I do not believe
22 that dose reconstruction can be done with

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1 records I know that I destroyed, so what
2 records are they using and where did they come
3 up with them.

4 My statement today in no way will
5 benefit in the designation of the site as an
6 SEC petitioner. I am not going to get -- I
7 have no claim against the SEC if this passes,
8 so this doesn't really benefit me. It
9 benefits employees.

10 Attached is a copy which I am
11 going to hand to Dr. Melius from my Franklin
12 planner as I was very faithful at note-taking
13 while working in Building 130. I had become
14 ill and filed many safety concerns only to
15 have that building labeled as a sick building.

16 Therefore I was very meticulous in my note-
17 taking.

18 Building 111 was also labeled a
19 sick building and yet I was directed to work
20 in that without restriction. I feared that
21 sometime down the road I might end up sick and
22 I might need to file for assistance because of

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1 the buildings that I worked on on plant site.

2 In February of 2001 I ended up
3 being permanently disabled due to my work. I
4 filed a claim and had been subsequently
5 denied. You tell me how my claim can be
6 legitimately denied since I've been medically
7 established through the plant site that I've
8 become permanently disabled.

9 I will not go on to tell you about
10 how my life has been changed because of my
11 working at Rocky Flats. My story has been
12 told through the "Deadly Denial" series
13 published in the Rocky Mountain News as well
14 as many other media outlets. If you want to
15 learn more all you have to do is Google my
16 name, you'll find a bunch.

17 In conclusion, I know that the
18 facts are you need to make your decision
19 regarding the designation of the Rocky Flats
20 Plant site as an SEC, and I'm willing to tell
21 you including medical reports, vital
22 established legitimate workplace injuries were

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1 knowing and purposely destroyed by the order
2 of Bob Card on plant site. And I know that
3 I'm not the only one who was administered to
4 do the same. Thank you.

5 CHAIRMAN MELIUS: Thank you.

6 MR. SAUNDERS: Thank you,
7 Michelle, for your bravery in coming forward
8 with your testimony. Members of the Board,
9 Michelle's testimony should relieve any doubt
10 that records were destroyed at Rocky Flats.

11 I worked at Rocky Flats from
12 September of '78 to October of '93. See the
13 guy in the middle up there? That's me. This
14 was in Building 707, and the other two workers
15 and I were in repairing this equipment, a
16 bridge crane and a telescoping arm.

17 I want to start with this because
18 all of my work in supplied air, my dosimeter
19 hardly ever had any readings to show that I
20 had been in the middle of all that plutonium.

21 Very little radiation showed up on my
22 dosimeter. I spent hours on end working in

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1 this environment. And again I say no TLD
2 badge increase. I got the report. Those
3 records, were they destroyed?

4 My original petition asked that
5 the employees be selected -- be included in
6 the SEC worked between 1952 to 2005.

7 I filed this petition on August
8 the 23rd, 2011. We had two meetings with
9 NIOSH to clarify some of the things that
10 provided NIOSH with additional information and
11 affidavits they needed. They were submitted
12 on October the 25th, 2011.

13 It was until March the 1st, 2012,
14 more than 5 months later, 7 months after the
15 petition was submitted that NIOSH officially
16 qualified the petition.

17 But what am I really upset about
18 is the late delivery of the Evaluation Report
19 to the petitioners and you, the Board. I
20 think we deserve an explanation.

21 In February of 2012 NIOSH narrowed
22 the Class because they determined that they

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1 did not fully address tritium exposure to the
2 workers during the first SEC petition. This
3 petition was filed by the United Steelworkers
4 Local 8031 at Rocky Flats.

5 Let me tell you firsthand my
6 experience with tritium when I worked at Rocky
7 Flats. My job took me all over the plant, in
8 every building. While doing this, one of the
9 rooms that I had to go in on a monthly basis
10 was Building 779 and also 777 and 776.

11 First time I was in that lab while
12 looking for my equipment this alarm went off.

13 I had never heard it before. So not knowing
14 what it was I left the building. Later I
15 found an RCT and asked what kind of alarm that
16 was. He told me it was a tritium alarm and
17 that I had done the proper thing by leaving.
18 With not needing to know, I did not ask too
19 many questions while I worked at Rocky Flats.

20 I did the proper procedure, and
21 many other times while I was in that room that
22 alarm would go off. I don't recall training

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1 for this alarm nor do the records show any
2 tritium bioassay.

3 In these last few years I have
4 learned a lot more than I knew when I worked
5 there. I thought it was something that made
6 the bomb more dirty. Now that is not the
7 case.

8 I have learned that the tritium
9 pumps were down in February the 5th, 1988,
10 March the 14th, 1988, April the 27th, 1988.
11 Once four men were in gloves in the white
12 boxes making a cut and there was an air
13 reversal which pushed all the lead-lined
14 gloves to the glove box -- out of the glove
15 box. And four men were to wait until an RCT
16 could come and get them out. Two have passed
17 away. Only two are left. Now I know that
18 they were dealing with tritium in their work.

19 MS. BARRIE: Good evening,
20 everyone, I guess it's close to evening
21 anyway, and thank you again. Charles and I
22 worked very closely on this petition together,

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1 and we decided that each of us would present
2 the different aspects to you separately that
3 we were most familiar with.

4 After reading the Evaluation
5 Report I sensed a real reluctance by NIOSH to
6 take another look at their conclusions and
7 dose reconstruction models for Rocky Flats.
8 Although NIOSH has historically asserted that
9 their Site Profiles and methodologies are
10 living documents and that they will be willing
11 to update them if new evidence and science
12 arose, it doesn't appear they are really,
13 truly willing to do so.

14 They have had over 7 years to
15 revise their Site Profile, and they have not.

16 NIOSH has failed to adequately address all
17 the issues raised in this petition.

18 As you know, the Board approved a
19 small Class, a Special Exposure Cohort for
20 Rocky Flats in 2007. However, the evaluation
21 for that Class was incomplete. NIOSH failed
22 to provide all the information you needed to

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1 make an informed decision.

2 Today we will provide evidence
3 that pertinent information was withheld from
4 the Board during the first SEC debates as well
5 as from this Evaluation Report. There is new
6 information concerning tritium production and
7 processes that NIOSH has not considered.

8 NIOSH failed to inform the Board
9 of all the thorium processes at Rocky Flats.
10 Rocky Flats also had neptunium and other
11 exotic radionuclides, yet NIOSH as far as my
12 opinion lacks sufficient information to
13 reconstruct dose for these exotics. We will
14 also provide examples of how workers' comments
15 and affidavits are still ignored.

16 A few years ago I filed a Freedom
17 of Information Act request for all emails from
18 NIOSH that discussed the Rocky Flats first SEC
19 petition. I found some interesting and
20 concerning discussions. Those are posted to
21 the EECAP website and I have the link in the
22 presentation there. I urge all of you to read

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1 them, it's very informative.

2 But what I found -- okay. NIOSH
3 has stated that they can bound dose for
4 tritium exposure because they have bioassay
5 for the 1973 tritium release. But take a look
6 at slide number 3. It's dated -- and it's not
7 very clear, that's why we have given you a
8 hard copy -- dated March 21st, 2006.

9 It says, "Notes to Jim," and I
10 quote. "They did not have information of
11 tritium stripping on Building 444 except that
12 it began in 1987."

13 The Evaluation Report does not
14 mention this process at all. From what I
15 gathered in the little bit of time that I've
16 had to research tritium stripping is
17 separating tritium from other sources. Why
18 this happened in or on Building 444 is
19 unknown. Perhaps it was a classified process.

20 When NIOSH was preparing for the
21 focus group meeting in May one former worker
22 who wanted to participate was concerned that

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1 the information he wanted to relate to NIOSH
2 was classified. The ER does mention this
3 interview but not the non-classified substance
4 of the testimony.

5 The interviewee asked that I read
6 this into the record on his behalf, and I
7 quote. "We were exposed to site returns still
8 loaded with tritium that completely vented
9 into the workplace in May of 1992 and went
10 completely unmonitored. This was an
11 embarrassment and extreme financial disaster
12 if the public was ever to become aware of it
13 so the contractor destroyed the records to the
14 point this never occurred," end quote.

15 One of NIOSH's citations refers to
16 the Colorado Department of Health report.
17 This report was written based on the
18 assumption that there was no tritium
19 production at Rocky Flats.

20 However, according to the
21 bibliography in the book "The Ambush Grand
22 Jury" in slide 4 this assumption, and I quote

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1 from the bibliography, "was contradicted in a
2 7 June 1991 interview by Special Agent John
3 Lipsky with a retired Rocky Flats chemical
4 engineer. The engineer stated, quote, "Due to
5 the ongoing practice of conducting classified
6 projects at Rocky Flats tritium was produced
7 and disposed of at the plant in the area of
8 the 207 ponds," end quote.

9 While NIOSH admits to reviewing
10 classified documents on page 25 of their ER,
11 the documents appear only to be related to the
12 1973 incident and nothing else.

13 MR. SAUNDERS: The Evaluation
14 Report raises more questions than it answers
15 on tritium exposures. NIOSH says their model
16 is based on tritiated water, yet the report
17 mentions that there was tritium gas and some
18 tritiated plutonium at the site.

19 During the focus group meeting in
20 May a document was delivered showing that a
21 piece of equipment was found that was
22 contaminated with tritium. Does their method

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1 of HTO bound for the other types of tritium
2 exposures? I didn't see anything in the
3 report about the former workers' account of
4 the tritium alarms going off. Did NIOSH
5 investigate the accounts? Did they look for
6 incident reports?

7 NIOSH says that after 1973 Rocky
8 Flats took a more serious approach, monitoring
9 the tritium releases and exposure. Did NIOSH
10 locate where the alarms, bubblers, sniffers
11 were located in various buildings?

12 NIOSH mentioned that they reviewed
13 shipments that arrived from Rocky Flats from
14 Lawrence Livermore and Los Alamos. Did they
15 review the shipments from other such sites as
16 Pantex?

17 The report states that the Tiger
18 Team report on Building 123 only addressed
19 environmental issues. Building 123 was the
20 health physics lab. Did NIOSH determine if
21 there was a scintillation machine that was
22 dedicated solely to worker bioassay? Slide 5

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1 shows a Tiger Team observation which found the
2 environmental testing deficient.

3 Has NIOSH determined if the
4 personnel tritium bioassay program had a
5 different procedure than the deficient one or
6 for the environmental monitoring?

7 NIOSH mentions they've reviewed
8 smears. How many? What were the dates?
9 Which buildings? What were the readings? Did
10 NIOSH review classified documents that went
11 beyond 1974?

12 It appears that they have, because
13 on the bottom of page 35 NIOSH says they
14 intend to evaluate available monitoring data
15 and establish a method to assign an
16 appropriate bounding dose for workers from
17 1974 to 1989. They intend to develop a model.

18 They haven't done so yet and this is 13
19 months after the petition was filed, 7 years
20 after the first SEC petition was voted on.

21 What have they been doing? NIOSH
22 says they do address information supplied to

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1 them in affidavits. They forgot one: mine. I
2 supplied it with the SEC petition. Slide 6
3 shows one of the emails that Terrie's Freedom
4 of Information Act -- that there is a
5 discussion on the stacker/retriever.

6 The email starts in part, "Dose
7 rates right up against the bird cages could
8 have been as high as a couple of hundred
9 millirems an hour." I was that worker. Those
10 bird cages backboned to the conveyor line, and
11 had to do this many times till we replaced the
12 chain.

13 During these times my dosimeter
14 said I received very low readings. I was told
15 that they used coworker readings. I worked on
16 the bird cages for at least 8 hours every day
17 during the shutdown with minimal breaks --
18 time for breaks. This means I could have
19 easily received 6 rems in one week. Had a
20 note -- I had just a little over 6 rems in 16
21 years.

22 My records show that I did not

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1 receive dose close to that amount yet NIOSH
2 says it was quite possible. This poses --
3 this proves in my mind that my records do not
4 reflect the actual dose I received. Were the
5 readings lost, misplaced or falsified? I
6 don't know, but they definitely weren't
7 reflective of what I got.

8 And why did NIOSH didn't discuss
9 this in the ER? They have put me through dose
10 reconstructions more times than I can
11 remember. The first time they came up with a
12 22-and-a-half percent possibility of
13 causation. Second, 12 and a half percent.
14 Third, 37 percent with more I know not about
15 because of the things changing, new evidence
16 and so on.

17 For this, my thyroid, I have none.

18 After two surgeries I have no thyroid. In
19 one discussion with Josh Brant -- Brant Ulsh
20 said it didn't matter what was in a specific
21 building as long as it included -- NIOSH had
22 the stacker and the XY in the same building

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1 which was 707.

2 I said if you can't get that right
3 how can you do an accurate dose
4 reconstruction? More than likely, the ones
5 that are doing these evaluations have never
6 set foot on any part of Rocky Flats.

7 They also ignored part of another
8 affidavit where the former worker supplied
9 documents which showed crossed out and
10 whiteout on two of his dosimetry records.

11 MS. BARRIE: The next few slides
12 will show the Board what the Board wasn't
13 aware of during the first SEC petition.

14 I alerted the Board and NIOSH to
15 some of these issues beginning in 2009. Slide
16 7 shows the glove box located in Building 440.

17 NIOSH's Site Profile does not reflect this
18 operation. The description in the Site
19 Profile is, and I quote, "Building 440 was a
20 fabrication facility in which rebuild and
21 rework operations to modify and maintain DOE
22 vehicles and railcars were performed. No

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1 radioactive material is known to have been
2 present." End quote.

3 Yet it's obvious from this photo
4 that Building 440 did indeed have radioactive
5 materials in the latter years. NIOSH does not
6 address this in the Evaluation Report.

7 Slide 8 shows a printout of the
8 Department of Labor Site Exposure Matrix which
9 shows that plutonium was present in Building
10 460. 460 is supposedly a cold building but
11 Department of Labor had that on their SEM.

12 NIOSH admits that a former worker
13 from Rocky Flats submitted an affidavit
14 attesting that when Idaho closed its borders
15 to Rocky Flats waste, drums containing
16 contaminated waste were temporarily stored in
17 Building 460. NIOSH admits that it found
18 records for the RCT that shows monitoring for
19 plutonium. Since the RCT's normal assignment
20 was in the uranium areas, NIOSH asserts that
21 because there was monitoring for plutonium for
22 her this shows how good the health physics

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1 program was at Rocky Flats.

2 However, once again NIOSH's Site
3 Profile states that there was no radioactive
4 materials in this building. Nor has NIOSH
5 posted a new methodology for assigning dose
6 for workers in that building during that time
7 period.

8 And now onto my favorite topic,
9 thorium use at Rocky Flats Plant. NIOSH has
10 accepted an unsworn statement from a
11 supervisor for the thorium strikes as the
12 basis for their methodology for reconstructing
13 dose for thorium exposure.

14 This unsworn statement -- next
15 slide, please -- this unsworn statement
16 contradicts a DOE document RFP5331 which
17 states that thorium was present in Buildings
18 559, 771, 774, 777, 777A, 779A and 883. This
19 document was reviewed by NIOSH and rejected.

20 Additionally, a former
21 representative from SC&A uncovered two NIOSH
22 interviews with the same individual. These

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1 interviews are also contradictory about where
2 the thorium strikes were performed at Rocky
3 Flats.

4 Additionally, I found in the FOIA
5 documents emails that I found very concerning.

6 A former NIOSH employee, Brant Ulsh, in an
7 email dated May 15th, 2007 -- this is shown on
8 slide 9 -- stated five thorium strikes were
9 performed at Rocky Flats, two in 1965,
10 possibly one in 1966, one in 1967 and one in
11 1976/77. I could not find mention of the
12 1976/77 strike in DCAS's technical documents,
13 but I may have missed them.

14 However, what I'm truly concerned
15 about is the email dated May 25th, 2007. And
16 this is shown on slide 10. Dr. Ulsh
17 summarizes a teleconference he had with a
18 Board Member and SC&A.

19 Dr. Ulsh was asked if there were
20 other thorium strikes besides the one other in
21 January 13th, 1967. Dr. Ulsh replied, and I
22 quote, "I told them there was one other in

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1 January 13th, 1967," yet 10 days earlier he
2 identified a total of five thorium strikes. I
3 am concerned that he did not advise the Board
4 thoroughly and completely of what went on with
5 thorium at Rocky Flats.

6 There are other issues in the ER
7 that time will not allow us to address, but I
8 want to bring one to the Board's attention.
9 Rocky Flats work included neptunium tracer
10 recovery. The ER says that the exotics were
11 discussed during the first SEC debate. I
12 could not find any discussions of neptunium in
13 the Work Group meetings that were referenced
14 in the Evaluation Report. All I found was one
15 word, "neptunium." No discussion by the
16 Board. Next slide.

17 SC&A did address it to a degree.
18 But neptunium was handled and processed in
19 Buildings 559, 371, 707, 771 and 776. The
20 last four slides shows a little bit of the
21 research that I was able to do with some help
22 from other advocates that shows kilogram

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1 quantities of neptunium were present at Rocky
2 Flats.

3 Did Rocky Flats have a bioassay
4 program for neptunium or other exotics?
5 Didn't the Board just approve LANL for the SEC
6 because NIOSH cannot reconstruct dose for
7 neptunium and the exotics?

8 MR. SAUNDERS: Before I sign off I
9 want to raise one more issue and that is the
10 Class definitions for the SEC for neutron
11 radiation exposure. Department of Labor made
12 a mess of the SEC. A claimant needs to prove
13 that he was monitored for at least 100
14 millirem of neutrons. But the Board decided
15 that in monitoring records were not adequate
16 so how can DOL say that a claimant needs to
17 prove the amount of monitoring?

18 I asked at this meeting that you
19 discuss and possibly rewrite the
20 classification definition to make it easier
21 for DOL to administer the Class. Perhaps
22 something as simple as employee of DOE, its

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1 predecessor agencies, DOE contractors or
2 subcontractors who were monitored or should
3 have been monitored while working at the Rocky
4 Flats Plant in Golden, Colorado.

5 In conclusion, Terrie and I have
6 presented ample evidence of the type of
7 information that the Board did not have during
8 the first SEC debate and what is missing from
9 NIOSH's evaluation of the current petition.

10 Because of the time limitations
11 and the late arrival of the ER we did not
12 address each and every issue, but we have
13 shown that NIOSH was aware of information but
14 never presented it to the Board. We have
15 shown also certain affidavits of workers'
16 comments were ignored.

17 We thank you for coming to Denver
18 and hearing this petition. I was hoping that
19 NIOSH had submitted the ER in June or July
20 like promised. That would have given all you
21 Board Members ample time to digest the
22 information. With only being delivered to you

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1 10 days before this meeting you're not able to
2 make an informed vote today.

3 But I asked you to press NIOSH for
4 a prompt response. They had over 7 years to
5 figure this out and they still haven't. I do
6 ask that you seriously consider our evidence
7 in the affidavits that we presented today. I
8 ask you to consider what NIOSH failed to
9 supply to the Board in 2006 and 2007. I ask
10 that you consider what NIOSH left out of the
11 ER report. I ask that you pay close attention
12 to the people making public comments. Thank
13 you again. We'd be happy to answer any
14 questions.

15 CHAIRMAN MELIUS: Okay, thank you
16 very much and thank you for making the effort
17 to come here also. Appreciate that. Any
18 Board Members have questions for the
19 petitioners at this point? It's a lot of
20 information and a lot of useful information.

21 Okay. If not, we have one --
22 somebody from Representative Polis's -- I'm

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1 not sure how to pronounce that. Is that --
2 okay. Stuart Feinhor wanted to make a comment
3 also.

4 MR. FEINHOR: I'll keep this
5 brief.

6 CHAIRMAN MELIUS: Okay.

7 MR. FEINHOR: Thank you. It's
8 Polis, Congressman Polis.

9 CHAIRMAN MELIUS: Polis, okay. I
10 apologize.

11 MR. FEINHOR: I wanted to thank
12 you all for coming and listening to these
13 people. I always get personally a little
14 overwhelmed when I see the people who worked
15 at Rocky Flats, which is currently in our
16 district -- I know there are other plants in
17 the country but to have to listen to this
18 sometimes it's overwhelming to see that people
19 are still fighting for this so many years
20 later.

21 We would like to support any
22 effort that would streamline the process,

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1 provide compensation where it's possible. If
2 that means reducing costs by eliminating
3 programs or agencies, NIOSH for example, we
4 would certainly -- we are looking into
5 considering that as a possibility. I mean,
6 we're looking at everything that's a
7 possibility because the suffering that is
8 going on, it's hard to deal with.

9 I personally work with a lot of
10 veterans in my case work and you know, it took
11 a long time to get boots on the ground for
12 Agent Orange and maybe that's something that
13 we can consider regarding the nuclear workers
14 as well.

15 I just really want to say that we
16 support the efforts, Terrie, of you and
17 everybody, Charles, who's here, everybody.
18 You know, we know we have to work with
19 statutes as well, and rules and following
20 regulations and stuff like that. It makes
21 things very difficult.

22 But I just -- I don't need to say

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1 this really but I am going to anyway. These
2 are real people here dealing with real
3 problems and anything we can do, anything we
4 can do to support efforts to streamline the
5 process and support the people and the
6 survivors and their families who gave so much
7 to our country, that's what we're here to say
8 today. And thank you all for everything
9 you've done.

10 We're all so used to thanking the
11 vets when we see them coming back or any vet
12 that we meet, but these are veterans as well.

13 And I just want to say on behalf of my boss,
14 Congressman Polis, thank you for your service
15 as well to our country and good luck with the
16 rest of your meeting.

17 CHAIRMAN MELIUS: Thank you.

18 MR. SAUNDERS: I brought an
19 affidavit with me, but I didn't want to take
20 up any time from these other people back here.

21 It's a stand-alone document, very easy to
22 understand and I'll leave it with you.

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1 CHAIRMAN MELIUS: Okay.

2 MR. SAUNDERS: Thank you very
3 much.

4 CHAIRMAN MELIUS: Thank you. Okay.

5 Before we open for other public comments I
6 think the Board needs to take some actions
7 here -- any reactions to the Board?
8 Questions, comments at this point?

9 I think, as you pointed out, we
10 received the report the same time you did.
11 And so we're still in the process of digesting
12 it also. And as I think you can see we have
13 lots of questions about it also and about
14 parts, some of which were addressed to Stu
15 Hinnefeld's presentation, but I think there
16 are other issues including many of the issues
17 that you raised, petitioners raised in your
18 presentation that we continue to have
19 questions on.

20 And we certainly think it needs to
21 be addressed and I think -- at least I
22 personally think it needs further evaluation

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1 but we also recognize we want to expedite this
2 also and not have this go on any longer than
3 is needed to reach some closure on this.

4 So do I hear a suggestion,
5 proposal from the Board? Mark, from -- you
6 had the Work Group.

7 MEMBER GRIFFON: Yes, I mean, I
8 think it's pretty clear we have to task this
9 back to the Work Group to have the Work Group
10 consider the petition and the NIOSH evaluation
11 of that petition, I think.

12 CHAIRMAN MELIUS: As our
13 contractor I think --

14 MEMBER GRIFFON: Yes, and then to
15 task SC&A to review it as well in preparation
16 for the Work Group.

17 CHAIRMAN MELIUS: So what I would
18 like to do is, I think, appropriate if we can
19 -- general agreement on that from the Board is
20 to, one, we will obviously get the Work Group
21 following up on it. Number two, get SC&A
22 involved in a review of the Petition

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1 Evaluation Report and see if we can get that
2 expedited as much as possible.

3 Also, I think we need to
4 coordinate with NIOSH on further data
5 retrieval. Stu, I sort of lost you in the
6 crowd here. There you are, okay. But are you
7 planning additional interviews and follow-up?

8 I'm trying to understand your timetable also,
9 because I gather from your presentation that
10 you're still essentially gathering -- still
11 gathering information on this.

12 MR. HINNEFELD: We are, on our
13 side. The first step we need to do is to sit
14 with our contractor personnel, who have been
15 doing classified research, in a place where we
16 can talk and decide essentially what is
17 fruitful to pursue among the various possible
18 issues here to sort of form the strategy.

19 I don't envision anyone having the
20 stomach for this going years and years,
21 believe it or not, least of all me. We need
22 to decide pretty quickly what we can decide,

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1 what is fruitful to pursue.

2 I think we need to carefully look
3 at additional issues. I mean, we addressed
4 the one issue in the Evaluation Report. There
5 were others raised tonight. I think we need
6 to decide what can be done about those, if
7 anything, if anything needs to be done about
8 those, in our view.

9 So our first action will be
10 essentially look at what's going to be
11 fruitful, based on discussions with the people
12 who have looked at the classified records, and
13 have some serious internal discussions about
14 that in terms of is there something to go look
15 at and something else that will help us
16 understand this better.

17 So, I would say to the Board that
18 before very long we should be able to say, you
19 know, I'd be able to give you a better answer.

20 And if SC&A is going to be reviewing the
21 Evaluation Report there would be some amount
22 of time for us to get that together and to

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1 make some judgments about whether there are
2 other things to pursue or not in terms of our
3 research.

4 CHAIRMAN MELIUS: One thought I
5 would have is that after you've had this
6 meeting with your contractor is maybe you
7 could set up a coordination call with the Work
8 Group to sort of plan out a schedule and so
9 forth.

10 I'll just let -- for people here,
11 we recognize there are classified information
12 involved. We have Members on our Work Group
13 on the Board that are cleared for reviewing
14 that information and we believe -- it
15 obviously comes up at many sites and I think
16 we can do this in a way that's as fair and as
17 transparent as possible, and good cooperation
18 from the Department of Energy on that issue
19 also. So, at times makes it a little awkward
20 to talk about things, especially when they're
21 in process, but I think we can -- we have
22 procedures in place to handle that.

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1 So does that make sense to you,
2 Mark?

3 MEMBER GRIFFON: Yes. I was just
4 going to offer that I'd like to coordinate
5 with Stu also. I do have clearance and I
6 think the Work Group should probably be
7 represented if you're going to have --
8 possibly after your initial conversations with
9 your contractor.

10 MR. HINNEFELD: Okay. I mean,
11 it'll have to be in-person at a federal
12 building.

13 MEMBER GRIFFON: Right.

14 CHAIRMAN MELIUS: Yes. Okay.
15 Very good. So next steps will be, I think you
16 heard, coordination and so forth. Yes, Josie,
17 I'm sorry. Josie and Brad.

18 MEMBER BEACH: Can you just remind
19 us who's on the Work Group? I looked on the
20 website and it's not updated. And I know you
21 appointed new people.

22 CHAIRMAN MELIUS: Let's talk about

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1 that tomorrow because I want to talk to a few
2 people and figure out some of the clearance
3 information myself. I'm not sure who is and
4 who isn't. I am not up to date on that. To
5 make sure we have a balance there.

6 Yes, Brad.

7 MEMBER CLAWSON: I just want to
8 make sure that, if they go after any more
9 classified documentation, that our contractor
10 be involved in that to make it a little bit
11 more expedient so that we're all looking at
12 the same information.

13 CHAIRMAN MELIUS: That's one of
14 the purposes of getting some coordination
15 early on and doing this. Okay. So I think
16 that will be the plan. Obviously, we'll keep
17 the petitioners fully informed on what's going
18 on and updated and move forward.

19 Now I'd like to move into public
20 comment. I know we have a number of people
21 here who want to speak about Rocky Flats.
22 Ted, do you want to do the background?

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1 MR. KATZ: Sure. Just to be
2 brief, before you get started with your
3 comments, understand that we have a transcript
4 that's made of each of these Board meetings.
5 It's a full verbatim transcript. Everything
6 you say will be captured and will be posted in
7 that transcript for public consumption. So
8 anything you say about your private life,
9 that'll all be public.

10 The only thing that we do protect,
11 which won't be public, in other words if you
12 say it we'll redact, it is information about
13 other individuals, other than yourself in
14 other words. And that information, because
15 the other person has a right to privacy, will
16 be redacted. But everything you say about
17 yourself will be in the record.

18 And if you want the full-blown,
19 what's called Redaction Policy so you can know
20 more about this, although I've basically told
21 you everything I think you'd be interested in,
22 it's on the NIOSH website under the Board

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1 section. And it may be also on the back table
2 there. So there's a lot more words to it but
3 I've pretty much told you what it all means.
4 Thanks.

5 CHAIRMAN MELIUS: Okay. So I'm
6 going to go through the list of people signed
7 up for public comment. I'm going to do that
8 in the order that they signed up. And so the
9 first person I have on the list is Carla
10 McCabe. And when I call you, if you still
11 wish to speak, please come up to the
12 microphone.

13 MS. MCCABE: Hi. I'm here to talk
14 about how faulty my dose reconstruction was.

15 Basically, in September of 2004 I
16 was driving my car and I had a seizure. It
17 was the first time I knew I had a problem. My
18 husband was in the car with me and took me
19 over to Lutheran Hospital. Through a series
20 of testings, my doctors found that I had a
21 brain tumor.

22 Based on the size of the tumor, my

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1 neurologist told me that I'd had the tumor
2 from 12 to 15 years. That would mean I was
3 working in Building 776-777 at that time.

4 During this time I also had a head
5 injury where I ran into a steel pipe. Later
6 my primary care physician told me the accident
7 caused a buildup of fluid on my brain. That
8 general spot was where the doctors later found
9 the tumor and where I had it removed.

10 My office area in Building 776-777
11 at that time had a common wall with Pyro Chem.

12 Placed on that common wall, which was a
13 cinder block wall with nothing else to stop
14 radiation, was storage racks for nuclear
15 material such as plutonium, uranium and
16 americium.

17 Our first hint that there was a
18 radiation problem was that all of our walls,
19 all along our walls in our office were lined
20 with dosimeters.

21 Our second hint there was a
22 radiation problem was that one of the

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1 coworkers mistakenly left his badge in his
2 desk drawer. Now, keep in mind, I don't know
3 if you all know this, but when EG&G took over
4 the plant, instead of having your badge and
5 your dosimeter together we separated them and
6 we put our dosimeters on a rack in the
7 courtyard before you went into any of the
8 processing buildings.

9 So when this coworker's dosimeter
10 reading came back, management asked the
11 employee why his reading was so high and he
12 told the manager that he had left his badge in
13 his metal desk. The manager told him to be
14 sure and leave his badge in the courtyard on
15 the rack and never bring it back into the
16 office and leave it in his desk.

17 In my job as a trainer/procedure
18 writer I also worked in the area with the
19 chemical operators, training them to operate a
20 new piece of equipment called the
21 supercompactor.

22 So I received exposure while in

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1 the process area where there was special
2 nuclear material, while working in my office
3 and while entering the building and walking
4 through other process areas to get way back in
5 the back where my office was.

6 This makes my dose reconstruction
7 performed by NIOSH inaccurate and unacceptable
8 because -- also I should bring up I was
9 missing the 3 years that I was in this area
10 when they did my dose reconstruction. So
11 basically I had missing records and
12 undocumented exposure.

13 I also want to point out that the
14 lady that sat behind me in this office died of
15 cancer and later -- I mean, she died of
16 cancer.

17 The 3 years where my records are
18 missing cannot be duplicated by dose
19 reconstruction based on a 40-hour work week.
20 During this time the Department of Energy
21 managers were under a tight schedule to get
22 the supercompactor installed and running. We

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1 worked many hours of overtime to train the
2 chemical operators and write procedures which
3 meant we were out in the area with the
4 operators.

5 Also, my job description cannot be
6 used to recreate an exposure rate since I was
7 really working with chemical operators. Each
8 employee has a different reading even though
9 they had the same job title. If DOE knew
10 exactly what each job category would receive
11 and they could recreate that throughout the
12 DOE complex then there would be no need for a
13 dosimeter program. The fact is we all got
14 different readings even though we had the same
15 job title.

16 I was not always made aware of the
17 hazardous nature of toxins, including ionizing
18 radiation, that I was routinely exposed
19 to/encountered in the course of my duties.
20 These facts to a reasonable degree support my
21 repeated occupational exposure to toxins that
22 can cause, contribute to, or aggravate my

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1 diagnosis of brain cancer.

2 After working in Building 776 for
3 two years our department was moved to Building
4 778. In January of 2011, I found out that the
5 office I worked in for two years, according to
6 our building engineer [identifying information
7 redacted], was roped off as a radiation area
8 and remained that way until all the material
9 was removed from Pyro Chem.

10 In my opinion, the decision
11 rendering my claim was erroneous. The SEC is
12 the only fair way for me and others to be
13 compensated for our suffering and pain.

14 The dose reconstruction isn't
15 adequate and contained many errors. The
16 denial showed a lack of fundamental
17 understanding of the routine and non-routine
18 operations at the Rocky Flats Plant and a lack
19 of fundamental scientific understanding of how
20 ionizing radiation can cause brain cancer.

21 And thank you very much for
22 listening.

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1 CHAIRMAN MELIUS: Thank you for
2 your comments. The next person I have on the
3 list, and I apologize, I'm having a little
4 trouble with the name, Mike Dobrovolny?
5 Dobrovolny, okay.

6 MR. DOBROVOLNY: It's Dobrovolny,
7 and this is my wife.

8 CHAIRMAN MELIUS: Okay.

9 MR. DOBROVOLNY: We both worked
10 out at Rocky Flats and we were out there quite
11 awhile. I started in 1984 through 1995. I
12 was a production painter out there, so we did
13 a lot of maintenance and things like that.

14 So this is just a typical day,
15 when I read you this affidavit that I will
16 drop off to you that you can keep. So a
17 typical day for us was we were sitting in our
18 back area and when production had a problem
19 that there was a contamination anywhere on
20 plant site, because I was in all of the
21 production buildings, they would call the
22 painters out and say we've got an area that's

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1 too hot and because it's too hot we need to
2 paint over it with a magenta or purple paint.

3 So our job was to determine how much we were
4 going to need, go back there and actually
5 paint over that.

6 So what the RCTs or radiation
7 monitors or whatever you want to call them
8 would do, is they would put the yellow tape
9 around the area and typically turn off the SAM
10 alarm in that area or the closest one to it so
11 it wouldn't continue to go off while we were
12 in there painting the floor, the glove box or
13 things like that. It was a joke out there
14 that radiation can't cross a yellow tape line.

15 That is not true.

16 Most of the time -- and once we
17 painted that particular area it would take 8
18 to 24 hours to dry, depending on how much air
19 was in the area, if it was a confined space or
20 something like that. So that SAM alarm would
21 be turned off up until -- usually the next
22 shift would come in there and then they would

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1 check it to make sure that it was dry, there
2 was no contamination coming up through there.

3 Then all the yellow tape would come down and
4 I'm assuming that they would turn on the SAM
5 alarm at that time.

6 Most of the time when we were in
7 there we were in half-face. So we always had
8 our personal protective gear. We were in
9 half-face respirator. Mostly, not so much for
10 the radiation because once again they had
11 everything turned off. You didn't know if you
12 were getting exposed, but because we used
13 epoxy paint when we painted these particular
14 areas. So that's why we had the half-face
15 respirators.

16 This is probably -- what would
17 happen is -- I don't know if you've ever
18 painted against stuff like that and you've got
19 something attached to your pocket and then you
20 start putting on your protective clothing and
21 things like that. There's no place to hook
22 that. So a lot of times that was in your

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1 pocket so that you'd didn't lose it, it didn't
2 fall in paint or anything like that. So it's
3 hard to get a true accurate dose reading when
4 it's in your pocket maybe 6 or 8 hours out of
5 a 12-hour day.

6 I know there was procedures out
7 there but we didn't always follow procedure
8 because production was running and we had to
9 support production. So when production needed
10 something, we dropped what we were doing, we
11 went in there, we did the job and then we
12 would get out. If we were exposed when we
13 were coming out of there, when we were
14 painting on the floor, doing a glove box,
15 whatever we were doing and we were exposed,
16 number one, if it got any reading at all or it
17 wouldn't probably hit our dosimetry badge if
18 it was alpha or beta. The gamma and stuff
19 like that, I'm sure it was nailing all of us.

20 But more importantly we wouldn't
21 report it if we came out and we were found to
22 be hot if they could wipe us clean. And if

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1 you got wiped clean one time, or it didn't
2 work then the next time the guy might wash you
3 and then you'd be clean and then you'd walk
4 out of there and it was never reported that
5 you had any exposure at that time.

6 And remember, this was on a day-in
7 and day-out basis because we were there all
8 the time. We had day shifts and night shifts.

9 Now, knowing some of the
10 procedures, as you get a little bit older and
11 you don't bypass a lot of that stuff, we
12 should have probably reported it every single
13 time to our manager. But we were there, we
14 were trying to do our part to keep this nation
15 safe. So we would just -- if they needed
16 something we'd get in there and do it, we'd
17 clean ourselves and we'd go on about our
18 business. And we might be in that area two or
19 three times in a day.

20 Then we would do our urine test.
21 And my urine test, you know, I was out there,
22 I was in every production building, I was

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1 crawling all over this stuff all the time. I
2 never had a problem. Never had a single
3 problem where my urine or my dosimetry came up
4 high. Why is that? You can't crawl around on
5 this stuff and not have some type of exposure.

6 And then to find out my wife is destroying
7 medical documents. That's not always nice to
8 hear because it could have been mine. I don't
9 know.

10 The lung counter. Well, you know,
11 once you had an exposure or something like
12 that or an incident then you were supposed to
13 go up to medical and do your urinalysis and
14 you were supposed to have a lung count. I
15 don't know how you can do a legitimate lung
16 count with the door ajar on a system that is
17 set up to be closed. But the walls were so
18 thick that some people were claustrophobic.

19 So it got to the point after
20 several years that they would just leave the
21 door ajar. And not ajar, I mean enough that
22 somebody could walk in and out of it. You

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1 can't get a reconstructive dose or a
2 legitimate dose with the door open on a closed
3 system. It doesn't work.

4 And that happened to me every time
5 that I was in there for 11 years. Every year
6 I got a lung count and every time the door was
7 open.

8 I witnessed a lot of
9 inconsistencies. I witnessed a lot of
10 bypassing procedures so that we could support
11 production. We are all Cold War vets. Every
12 one of these people back here is a hero
13 because peace through strength is how we kept
14 this nation safe.

15 And I encourage all of you guys to
16 hear these administrations saying, oh, you
17 know, we're going to do everything we can for
18 the vets, for all of our Cold War vets and
19 things like that. It's all over the news.
20 They're going to support us, they're going to
21 help us. Here's your chance.

22 These people deserve compensation,

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1 we all do. We're not asking for anything that
2 we didn't give our lives for this nation that
3 we can be here today in a safe, somewhat safe
4 world. But if they throw a bomb at us, by
5 golly, they're coming back.

6 I'd like to give this affidavit to
7 whoever would like to have it.

8 CHAIRMAN MELIUS: You can give it
9 to me. Actually, Ted will take it and make
10 copies for everybody. If that's okay with
11 you? Thank you very much. Appreciate it.

12 Okay. The next person I have
13 listed is Stephanie Carroll.

14 MS. CARROLL: Hello, I'm Stephanie
15 Carroll and I actually give up my time to Jack
16 Weaver, please.

17 CHAIRMAN MELIUS: Okay. Mr.
18 Weaver, you look familiar.

19 MR. WEAVER: Thank you. Yes, I
20 think I've been up here before.

21 CHAIRMAN MELIUS: Yes.

22 MR. WEAVER: I'm going to address

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1 three things tonight and try to keep it as
2 brief as possible so everybody else will have
3 a chance.

4 First of all, I wanted to
5 introduce myself as Jack Weaver, Rocky Flats
6 worker. But I also want to introduce myself
7 as to what I did at Rocky Flats because of
8 some things that I've heard after these
9 meetings.

10 I started at Rocky Flats September
11 the 5th, 1961 and concluded my work at Rocky
12 Flats June the 5th of 2002. During that time
13 I was a laborer, a chemical operator, a
14 foreman, a shift supervisor, a building
15 supervisor, a production supervisor for
16 plutonium operations and ultimately the deputy
17 AGM, assistant general manager, of plutonium
18 operations with only the general manager of
19 the plant and the assistant general manager of
20 plutonium operations above me.

21 So, the reason I bring this up is
22 because I've heard many times that people say

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1 upper management never participates in these
2 things. Well, I'm upper management, if you
3 want to call it that, and I'm participating in
4 this because I believe in what these people
5 are doing.

6 I'm not a complainant. I have no
7 diseases. I have not had any illnesses, I
8 have not filed for anything. I'm here to
9 represent Rocky Flats and the people.

10 Secondly, I want to talk about
11 tritium for just a minute. The introduction
12 on tritium over here awhile ago was great but
13 it didn't cover -- didn't cover an iota of
14 what went on.

15 In 1963, working in 771 building
16 we did a revamp of the building. In 1965 we
17 started up the revamp of the equipment, the
18 modernization, if you will, to meet the
19 government needs and specs.

20 One of those operations was called
21 Part 5 Line 5. What this was was when units
22 were retired out of the military system they

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1 came back to Pantex, they were supposed to be
2 disassembled, pumped down. They were sent by
3 transport to Rocky Flats. Ultimately they
4 went to 777 building to the getting box,
5 were cut apart and hydrided and then sent to
6 771 building for leaching. We used a heated
7 acid leach to leach these hemi-shells before
8 they were further processed.

9 Well, when they were sent from 777
10 to 771 they were sent in containers. Those
11 containers had to be opened by the operators
12 in the process area. And the way they did
13 that was they had an RCT and a couple of
14 operators and they set the drum or the
15 container in front of an air duct and opened
16 it up. Attached to this air duct was a
17 bubbler sampler, a water bubbler sampler.
18 That water bubbler sampler was changed every
19 morning by the RCT plant person and taken to
20 123 to be analyzed.

21 The only information, as an hourly
22 individual or a management individual, that I

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1 ever received was they had a high count up in
2 123 on tritium, You guys need to inform your
3 crew. And what I was told to inform the crew
4 was go home and drink a lot and pee a lot. We
5 were never sampled, we never got any results
6 from any samples.

7 I never saw any results on tritium
8 until these people showed up with this
9 presentation, you know, and I worked there for
10 41 years. So I never saw anything that said
11 tritium was a problem or it was abundant or
12 whatever. The only things that we heard about
13 was, oh, they had a tritium alarm go off in
14 77. Well, that probably meant that the next
15 day or two we were probably going to have an
16 announcement to go home and drink a lot.

17 Anyway, tritium was around the
18 plant site in a lot of places and it came
19 from, in our case, mostly from Pantex rather
20 than from LANL or one of the other facilities.

21 Those other places, like was quoted here
22 earlier, that was more of an experimental-type

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1 situation. The day-to-day processing that
2 came to us came from Pantex. Okay, enough on
3 tritium.

4 I am going to read into -- a
5 couple of questions into this for the record.

6 And I will give you a copy here. Stephanie
7 and I have gotten together and talked about
8 these things on different occasions. She gave
9 me 11 questions. I'm only going to address
10 two of them for time constraints.

11 But the first question that she
12 asked me was, was documentation ever changed
13 because of cost? I can only speak for myself
14 and say, yes, it was.

15 In 1973, shortly after becoming a
16 shift foreman on the midnight shift, there was
17 a contamination leak at Line 3, Room 114 of
18 Building 771. I was responsible for that area
19 so I had my crew repair the leak and
20 decontaminate the area. I wrote a detailed
21 report on the incident and turned it in the
22 next day to the day shift supervisor.

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1 The next night when I got to work
2 my report was in the mail slot with a note
3 attached to it. I had estimated the cost of
4 the incident to be around \$1,000. The note
5 said, quote, "Don't you know that any incident
6 over \$500 is reportable to ERDA" -- at that
7 time, that was ERDA at that time rather than
8 DOE -- "and requires a headquarters
9 Washington, D.C. investigation." I rewrote
10 the report leaving out the manpower cost,
11 turned in the report, and never heard another
12 word about it.

13 Okay, the second question was from
14 Stephanie, was there ever plutonium in
15 Building 886? First of all, I'll tell you
16 that 886 was the crit mass lab. It was not
17 designed to handle plutonium because of the
18 filtration system that it had. It was only
19 designed to handle uranium and primarily
20 uranyl nitrate, although they did do some
21 metal experiments in there.

22 The answer to this. Yes, in 1983

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1 I was called by a radiological engineer to
2 come to Building 886 and bring my full-face
3 respirator. When I questioned what this was
4 about he told me he couldn't talk about it
5 over the phone.

6 I arrived in 886 building dressed
7 out and accompanied by the rad engineer,
8 entered into the lab area where the
9 criticality experiments were conducted. There
10 on a split table was an open-top container
11 that was about 3 foot by 3 foot with an open
12 top, kind of similar to a fish tank. Besides
13 the open top there were hoses connected to the
14 sides where liquid could be pumped in and out.

15 Inside the container were six
16 stainless steel containers about 3 inches in
17 diameter and 3 inches tall. They were
18 machined and press-fit and sealed with an
19 epoxy. One of them had ruptured and plutonium
20 oxide had spilled out into the floor of the
21 plexiglass container.

22 I knew immediately there was a

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1 problem because Building 886 was not supposed
2 to have plutonium in it due only to the
3 single-stage HEPA filtration.

4 I took measurements for a window
5 for the glove box ports unit so that I could
6 install a window with gloves and a bag-out
7 port. I spent the rest of the afternoon
8 rounding up supplies and trying to explain to
9 the plant directors about how the plutonium
10 got to 886 building.

11 I discovered that one of the
12 criticality engineers had requested this
13 material from Los Alamos to run some
14 experiments. There were 76 of these small
15 stainless steel containers containing
16 plutonium metal in them. They had arrived
17 from Los Alamos and went directly to Building
18 886 without anyone but the criticality
19 engineer knowing anything about it.

20 I, along with one of my shift
21 foremen, fitted the window to the plexiglass
22 box, bagged the containers of metal out of the

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1 box and cleaned up the plutonium oxide and
2 packaged it, bagged it out, and put everything
3 in shipping containers. We had the plant
4 guard truck and escort take the material to
5 Building 371. We introduced all 76 containers
6 into the stacker/retriever for storage.

7 There was quite an uproar over
8 this because the normal channels for shipping
9 of plutonium were not followed. When I called
10 the director, my director at that time, and
11 the director of plant protection you could
12 have scraped him off the ceiling because of
13 what was going on. They had no idea that
14 anybody could ship plutonium without going
15 through the regular channels. But in this
16 case this individual had just picked up the
17 phone, called Los Alamos and said, hey, I want
18 to run some experiments, send me some
19 plutonium. They put it on a truck, drove it
20 up to Rocky Flats, backed up to 886 building
21 and unloaded it. There it was. And he
22 started to do his experiments, only one went

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1 awry because somewhere along the line he
2 dropped this or hit it or something and it
3 became unhinged or came apart. And the
4 plutonium turned to an oxide, burnt to an
5 oxide.

6 It's a surprise to me that we
7 didn't have a bigger incident problem out of
8 this, but we managed to control it and keep
9 everything within bounds. Nothing ever got
10 out of 886 building. There was a little bit
11 of plutonium contamination found when they did
12 the decommissioning of the building, but other
13 than that it was kind of a frightful day for
14 me.

15 Anyway, I have the other nine
16 questions here which I will give to you. If
17 you have any questions of me I'd be glad to
18 answer them.

19 CHAIRMAN MELIUS: Okay. Anybody
20 have any questions? If not we -- I don't
21 think so right now but thank you. We may have
22 some follow-up because it would be helpful.

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1 MR. WEAVER: I just want to say
2 one more thing. Thanks for coming out and
3 listening to everybody. And thanks to the
4 Rocky Flats folks. They've been great. I
5 hope everything that we do makes you feel like
6 you can pass this SEC. Thank you.

7 CHAIRMAN MELIUS: Thank you.
8 Okay, Danny Beavers.

9 MR. BEAVERS: Good evening, Dr.
10 Melius, Board. When I stand up to speak
11 today, I was here, I came up from Albuquerque
12 for the petition for Los Alamos. I have a
13 letter from [identifying information redacted]
14 that I'll give and you guys can submit in the
15 record.

16 And I just wanted to get on the
17 record to the Board and to Andrew, thanks from
18 Plumbers and Pipefitters Local Union 412, New
19 Mexico Building Trades and all of the workers
20 affected for their diligence in working on
21 this petition and getting it passed today. We
22 really appreciate it.

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1 And something in what I've been
2 hearing here tonight, talking from the
3 individuals from Rocky Flats, it was said by
4 one of the Board Members today kind of struck
5 me a little bit. It says, I believe it was
6 stated earlier today, that the most important
7 issue at hand is that all the employees who
8 sacrificed, became ill, or may become ill due
9 to any type of exposure while working in the
10 service of their country at any number of DoD
11 or DOE facilities should be acknowledged and
12 taken care of throughout their illness. And I
13 just think it's something that kind of plays
14 in with what these guys are talking about.
15 And I wish them luck.

16 CHAIRMAN MELIUS: Okay, thank you.

17 Tell Harriet, we will -- Danny, in the
18 interest of time we will put this into the
19 record tomorrow when we have a little
20 opportunity. I don't want -- a lot of people
21 want to speak tonight. But thank her for her
22 effort also.

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1 Anna Fendley from the
2 Steelworkers.

3 MS. FENDLEY: Hi, good evening to
4 the Board. My name is Anna Fendley. I'm from
5 the United Steelworkers International Union's
6 Health Safety and Environment Department. And
7 I'm here today representing our former members
8 who worked at Rocky Flats.

9 And I'm here because the
10 Steelworkers are incredibly concerned that
11 these issues about the Rocky Flats site have
12 not been resolved. Our former members, the
13 workers from the site, are incredibly sick,
14 they're dying and they've had to deal with
15 years' worth of bureaucratic red tape. Like
16 what we've heard about some of the other
17 sites, to us this is another case of NIOSH
18 having to sift through vast amounts of
19 information, some of which is conflicting or
20 misleading documents and statements.

21 I don't want to take a lot of
22 time. There are a lot of former workers here

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1 to speak about their experience here at Rocky
2 Flats. But I do just want to say that the
3 Steelworkers are concerned and we intend to
4 continue to closely monitor the situation.
5 And we stand ready to help in any way that we
6 can to expedite the process. So, thank you.

7 CHAIRMAN MELIUS: Thank you. The
8 next person I have listed is Don Sabec I
9 believe. Don? Okay.

10 MR. SABEC: I'm not a very good
11 public speaker so you'll just have to bear
12 with me.

13 CHAIRMAN MELIUS: That's fine.

14 MR. SABEC: My name is Don Sabec
15 and I worked at Rocky Flats from 1961 to 2004.
16 My last job title was RCT. I was also a chem
17 op for about 7 years. I am not an SEC
18 claimant.

19 Around the 1974, which I found out
20 maybe it was probably '73, but I experienced -
21 - this is all just tritium. I experienced
22 alarms going off where teams were called in,

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1 including at Building 777 where tritium was,
2 and I was never called to medical for tests
3 including urine analysis or receiving any
4 monitoring reports.

5 I want to tell you that during
6 some of my job requirements where I was to
7 respond to tritium alarms in 777, which I did
8 three or four times. But the one I really
9 remember is we had the gathering system for
10 the tritium. If you had a release inside of
11 the dry box it would start the gathering
12 system up and it would suck down into a tank.
13 And if it breached through the dry box you had
14 a room alarm and then I would go in there and
15 verify we had a tritium release, which we did.

16 And so I called up the SOEs, told
17 them that we had a tritium release and they
18 were required to bring up the exhaust to help
19 blow the tritium out of the building. It was
20 a recirc system which it took quite awhile for
21 that to get blown out of the building. And it
22 took about a half an hour for that to happen.

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1 We made an announcement, cleared the area.

2 The thing that really got me was I
3 was informed by my supervision that I did not
4 have to make an incident report for these
5 types of incidents.

6 When the tritium was released into
7 the room there was no ability to filter the
8 exhaust air out to the outside atmosphere.
9 Even though it was in a recirc system, it
10 eventually was exhausted out through the
11 building to the atmosphere.

12 So that's all I've got to say
13 about that particular incident but I'm sure
14 there were many more incidents that happened
15 that I wasn't aware of. Thank you.

16 CHAIRMAN MELIUS: The next person
17 I have listed is Judy Padilla. Judy?

18 MS. PADILLA: Thank you.

19 CHAIRMAN MELIUS: Hello again.

20 MS. PADILLA: Welcome, Advisory
21 Board and Dr. Melius. Welcome to Colorado,
22 home of the famous Sand Creek Massacre, the

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1 Ludlow Miners Union disaster, Columbine High
2 School, the Aurora Theatre Dark Knight Rises
3 tragedy and the greatest massacre of all,
4 Rocky Flats Nuclear Weapons Facility, where
5 the most people have been killed or mortally
6 injured with job-induced cancers. Colorado's
7 most shameful and most covered up crime. I
8 applaud your courage to attend.

9 I am a former Rocky Flats nuclear
10 worker who worked at the now-defunct nuclear
11 weapons plant for 22 years. I was hired in
12 1983 as a metallurgical operator in the
13 foundry in Building 707 and my job consisted
14 of hands-on work with weapons-grade plutonium
15 and toxic carcinogenic chemicals.

16 The fabrication of nuclear bomb
17 triggers was the primary production activity
18 at Rocky Flats and required both metallurgical
19 and chemical processing that included
20 recycling plutonium metal oxides into
21 plutonium dioxides, conversion dioxides into
22 metal in a reduction furnace, creating and

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1 rolling ingots, and machining the resultant
2 parts.

3 Because of the fissile nature of
4 the metal and the toxicity of the various
5 chemicals, most of the work was performed in
6 glove boxes. As the metallurgical operator
7 assigned to the coatings lab on the p.m.
8 shift, my coworkers, who can corroborate my
9 words, were [identifying information
10 redacted]. We were required to work in
11 Building 774 and pass the J-line tritium
12 vessel daily.

13 It was well known that the tritium
14 pressure vessels were sent to Rocky Flats from
15 the Pantex plant in Amarillo, Texas for
16 disassembly and recovery. We were told by our
17 supervisors, [identifying information
18 redacted] and [identifying information
19 redacted], that if we were exposed tritium
20 would merely pass through our systems, so
21 alarms were routinely ignored due to their
22 frequency.

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1 We were told that our respirators
2 wouldn't stop the trit gases but it would
3 leave our systems if we drank a lot of beer or
4 other liquids and that tritium was not
5 considered a hazard at Rocky Flats Plant. The
6 day shift supervisors at this time were
7 [identifying information redacted].

8 We were told to leave our work
9 areas in the coatings lab to go to breaks or
10 lunch and not worry about the trit alarms
11 because the stationary operating engineers,
12 the SOEs, would take care of it by air flow
13 measures. I conservatively estimate that this
14 happened 20 or more times while I was assigned
15 to coatings.

16 During the 1980s, at the peak of
17 weapons production with three shifts running
18 24 hours a day to meet production schedules,
19 32 months of my dosimetry records were lost or
20 mishandled and coworker dose calculations were
21 used to determine my radiation exposure
22 levels.

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1 This unscientific practice has
2 been a standard procedure for NIOSH when
3 records are unavailable. Who oversees NIOSH's
4 formulas? Why has this been allowed and how
5 is this claimant-friendly?

6 I was a sheet metal technician at
7 Rocky Flats from 1990 to 1996 and as such was
8 trained in arc welding. I used thorium
9 welding rods and was never monitored for
10 radioactive thorium fume exposure. NIOSH did
11 not, to my knowledge, include these exposures
12 in dose reconstruction calculations for any
13 Rocky Flats welders.

14 During the decommissioning and
15 dismantling of the Rocky Flats Plant, until
16 the facility was closed in 2005, I was a
17 radiation control technician, RCT. And I saw
18 how the safety standards were lowered for a
19 quick closure. The job that was supposed to
20 take 30 years was finished in 6 years at a
21 huge cost savings. The rewards and bonuses
22 all went to the subcontractors, \$450 million,

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1 and the legacy for the nuclear workers was
2 cancers, sickness and death.

3 Nuclear workers who worked with
4 direct access, hand-on in the production areas
5 of Rocky Flats for decades and have contracted
6 cancers, deserve compensation for their wounds
7 just as soldiers on the fields of battle. As
8 Americans we all deserve the rights to clean
9 water, air, and food, and we also deserve the
10 right to know the truth about our work
11 environment and the hazardous situations where
12 we toil.

13 The Constitution promises us the
14 rights of life, liberty, and pursuit of
15 happiness. It's impossible if your life has
16 been cut short by job-induced cancer. Nuclear
17 workers have believed in America, defended her
18 and have given her the ultimate sacrifice.

19 The current EEOICPA program
20 squanders millions of administrative dollars
21 and redundancy is rampant with no oversight
22 and bonuses for claim denials, I've heard.

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1 If we don't speak out to right
2 this wrong, if we sit and let this waste and
3 corruption continue, our country will continue
4 to spiral out of control. For present and
5 future nuclear workers, standards and limits
6 should reflect the dangers of potential
7 nuclear exposures and the biological effects
8 in a clear and transparent language.

9 Please consider the Special Cohort
10 status for the nuclear workers at Rocky Flats
11 in Colorado. I swear and affirm that the
12 above is true. I submit my affidavit. Thank
13 you.

14 CHAIRMAN MELIUS: Thank you.
15 Thank you very much. Jerry Harden. Is Jerry
16 Harden here? That's fine.

17 MR. HARDEN: Ladies and gentlemen,
18 honored Board Members, fellow workers. My
19 name is Jerry Harden. I was employed at the
20 Rocky Flats Nuclear Weapons Facility for 37
21 years, 35 years of those as a radiation
22 control technician. I also served three terms

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1 as the president of United Steelworkers of
2 America Local 8031 that represented the
3 production and maintenance workers.

4 In my many years of service,
5 tritium was rarely discussed in the training
6 classes. We also did not have any available
7 or reliable field survey instruments. I
8 believe that tritium was present at the Flats
9 many times. My last awareness was the
10 inertial fusion project in 881 building. I
11 believe the tritium releases of the 70s
12 undoubtedly contaminated everyone and
13 everything on plant site downwind of the
14 776/777 building exhaust stacks.

15 The plume was discovered in the
16 city of Broomfield's water supply and I have
17 no doubt that the workers also were
18 contaminated in their normal daily
19 assignments. Most of us were never monitored
20 for it, to my knowledge.

21 Today I want to also talk about
22 some significant events and that's why I held

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1 some of my outburst until this public comment
2 period.

3 First, the 771 building fire in
4 1957. Originally, Dow Chemical denied that
5 there was ever any occurrence. And then as
6 the evidence was revealed, they admitted that
7 there was a problem but they downgraded the
8 significance of it.

9 The second event was the area 903
10 barrel storage facility that was outside.
11 This also was denied as a problem by the
12 government but coincidentally they bought
13 additional land that was downwind to control
14 the contamination plume.

15 The third event was the 776
16 building fire. It happened on Mother's Day.
17 This was the most costly fire in U.S. history,
18 industrial fire, to that time. And it was
19 originally downplayed by the contractor as
20 being a minimal event.

21 The fourth was the tritium, when
22 it was discovered in the city of Broomfield's

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1 water supply, Great Western Reservoir. The
2 contractor and the government denied it at
3 first but later spent over \$50 million on a
4 new water supply system and later on the
5 Standley Lake diversion project on the east
6 side of Indiana.

7 The fifth was the FBI raid in
8 1989, the first time that a DOE facility had
9 ever been raided by the FBI. And the
10 contention was it was due to fraudulent
11 record-keeping and poor procedural things,
12 handling hazardous materials.

13 The sixth is the federal grand
14 jury. And this group went on for two years.
15 And the irony of it is the federal judges
16 ruled that all the documents involved in the
17 testimony and in the presentation be sealed.
18 Bear with me here.

19 This book was created by the
20 foreman of the grand jury, Wes McKinley. And
21 my challenge to you tonight is how could you
22 possibly review any of these documents if they

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1 were sealed under a federal court order? They
2 certainly have been denied to us as the
3 workers at the facility.

4 The other part of my rant here
5 tonight is the Jim Stone false claims lawsuit
6 against Rockwell, in which DOE joined Jim
7 Stone. And that amounted to the biggest
8 environmental fine in U.S. history, to that
9 point, against the contractor, which was later
10 appealed.

11 The eighth event is the Marilyn
12 Cook case, which took over 15 years to reach a
13 verdict. And the jury said, yes, the
14 contractor and the government were negligent.
15 And the award mushroomed to over \$900 million.
16 Unfortunately, that verdict was appealed and
17 thrown out through the appellate process.

18 Now, that leads me to another
19 thing, and it's probably going to be painful
20 to a few people here, and that's this. We're
21 in the process of talking about SECs. This is
22 an ongoing series that was in the Rocky

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1 Mountain News in the year 2009. And that is
2 Charlie Wolf with a mask on his face as he was
3 subjected to radiation therapy for his brain
4 tumor. Charlie later succumbed to that. He
5 was an employee at the Flats and he was the
6 poster child for the so-called Charlie Wolf
7 Act.

8 The reason that I bring this up is
9 not to torment his widow but to use it as an
10 illustration. That was in nineteen -- or in
11 2009. I'm sorry, 2008. Sorry, it's the
12 bifocals.

13 The other thing that was ironic
14 was this other newspaper article, and that's a
15 comment by our U.S. Senator Mark Udall. And I
16 agree with this, enough is enough. But look
17 at the passage of time. Virtually nothing has
18 happened of any great consequence, that I can
19 see. We still have sick and dying workers.
20 We have unanswered claims, unanswered
21 questions.

22 The current record, according to

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1 the DOL website this morning, is we have 2,189
2 claims that have been settled so far, with
3 approximately 6,000 more to go, at a cost to
4 date of about \$277 million. It's ironic that
5 DOE awarded the vacating contractor Kaiser-
6 Hill with a bonus of \$450 million for leaving
7 an environmental wreck and problems with many
8 of these workers' lives.

9 I find it hard to believe that
10 EEOICPA has existed for 12 years and we're
11 still arguing about whether the sick and dead
12 workers were exposed to hazardous materials at
13 their work site at Rocky Flats.

14 I also don't know how this or any
15 other group can render an objective decision
16 when the records are sealed or destroyed by
17 federal court order. This is a classic
18 example of medieval law. The king can do no
19 wrong and we as subjects and workers
20 unfortunately fall on the wrong side of that.

21 The cleanup and closure of Rocky
22 Flats was the most costly event that has ever

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1 occurred in this state, over \$7 billion with a
2 B. The airport that many of you flew into
3 cost half of that amount. Where is the value?

4 The other thing I would tell you
5 is Rocky Flats has been the most deadly
6 employer in this state. As I've already
7 mentioned, we've had over 2,100 people that
8 have either succumbed to their worker
9 exposures or have suffered one of the 22
10 recognized cancers.

11 All I can ask you tonight is
12 please help the sick workers and their
13 families. And I would say that these workers
14 are desperately needing answers to their
15 questions, justice, and closure.

16 And with that I would thank you
17 and ask you if you have any questions, but
18 make them quick because I need a beer. Thank
19 you again.

20 CHAIRMAN MELIUS: In light of your
21 last request, we won't hold you up with
22 questions then. But thank you for coming.

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1 MR. HARDEN: Thank you for taking
2 consideration of the needs of the elderly.
3 Thank you again.

4 CHAIRMAN MELIUS: Okay. Next one
5 up is Jeff Schultz.

6 MR. SCHULTZ: Good evening and
7 thank you for letting me speak tonight. I
8 wanted to bring up the fact that the Rocky
9 Flats Nuclear Workers Group, which is a group
10 made up of former workers who have filed
11 claims and are having a lot of difficulty with
12 this process. And we all encourage each other
13 to keep trying, et cetera.

14 We got together with United
15 Steelworkers Local 8031 and we sponsored an
16 event and had NIOSH come out. Jim Bogard came
17 out and interviewed our workers to discuss
18 this tritium SEC.

19 So the workers we assembled had
20 pretty significant experience. We had a lot
21 of RCTs in the group. We had a former rad
22 control manager and a number of workers that

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1 were even involved in changing out these
2 distilled water bubbler tubes, and people with
3 real experience with the tritium exposure
4 issues.

5 We had two sessions, one in the
6 morning, one in the afternoon. And a number
7 of significant comments were made. And I'll
8 just summarize briefly that the instruments
9 were very ineffective and very unreliable.
10 Medical's response was to go drink some beer
11 and wash the stuff out of your system.

12 Alarm response in general was just
13 total confusion. The RCTs that testified
14 pretty much said that they didn't know what to
15 do when the alarm went off. There wasn't much
16 of a response formulated. It was pretty much
17 the SOEs would be informed to turn up the
18 ventilation system and just blow the tritium
19 outside where someone else could enjoy it.

20 Record-keeping was very lax. A
21 number of people have testified that they're
22 unaware of any tritium exposure records in

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1 their entire careers while at the site, that
2 it was never raised with them as an important
3 issue.

4 And another one was I believe from
5 Jerry Harden. He mentioned that the truck
6 transports that were used for busing this
7 material all over the country were surveyed by
8 the RCTs but the only instruments they had
9 were alpha-measuring instruments. And an
10 instrument is mentioned, I guess a triton.
11 And I believe another worker said that in
12 order to see if it was working or not they
13 would smoke a cigarette next to it to come up
14 with a beta source to see if the instrument
15 was even working. So there was a very low
16 confidence level by these people that were
17 using these instruments.

18 So, it seems that NIOSH, in
19 writing their report, all they seem to use as
20 this reference document is a report generated
21 in 1973 about one incident. Despite all of
22 our workers testifying and telling them about

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1 numerous exposures on the site, the type of
2 record-keeping, the lack of instrumentation, a
3 very lackadaisical attitude by the operating
4 contractor to tritium exposure, tritium
5 releases and protecting the employees, none of
6 that information seems to be showing up in
7 their final report.

8 And I'd like to really encourage
9 everybody here to try to find the unredacted
10 report from those two days, those two sessions
11 of testimony by the workers. So they had
12 somebody recording the testimonies and they
13 were also taking notes. What we've heard is
14 that the recorder somehow broke and that some
15 of the testimony was not transcribed onto the
16 text, which is kind of an interesting story in
17 itself.

18 And because the document is so
19 heavily redacted I think a lot of the
20 meaningful testimonies have been kind of
21 chopped where there's not much information
22 there. I would encourage the Board to get a

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1 hold of this full text if you can and read all
2 this. And Wanda was there with us for both
3 sessions. So I'm hoping that you can find
4 this document and you'll read it and take it
5 seriously.

6 And if you need more testimony
7 from these workers we can identify these
8 workers and they would be happy to speak with
9 you more about this. A lot of them are in the
10 room today.

11 Thank you very much.

12 CHAIRMAN MELIUS: Okay, thank you.

13 And thank you for your effort and the efforts
14 of others to help arrange those meetings and
15 so forth. We are aware of the minutes of the
16 meetings that were gathered and so forth. And
17 so we and our contractor and the Board's
18 contractor will be following up on that and
19 do.

20 And I suspect we'll also be taking
21 you up on -- as well NIOSH may also on the
22 need for talk to more, gather more information

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1 also.

2 I'm having a little trouble with
3 this name so I apologize up front. Yvonne?
4 Garrimone, okay. I'll blame it on Ted then.

5 MS. GARRIMONE: I'm Yvonne
6 Garrimone and obviously I'm not Rocky Flats
7 worker, but my father was. And I'm just going
8 to give you a brief history of where we're at
9 at this point in time.

10 He was diagnosed with pancreatic
11 cancer April 2001. He then applied for this
12 compensation program June 2001, had his
13 interview October 2001, and then he passed.
14 Last Monday was the 9-year anniversary of him
15 passing, so that was September 10th, 2003.
16 And in that time frame it took NIOSH four and
17 a half years to come up with his dose
18 reconstruction, which the PoC was at 44.01
19 percent. So obviously it wasn't at the 50
20 percentile that we needed for causation.

21 They later said they were going to
22 redo it and compensate for the S type

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1 plutonium, which you would think would
2 increase. We came back with a 22.1 percent
3 PoC because they used coworker dose. I know
4 for a fact that one of my dad's coworkers was
5 Judy Padilla. She worked right next to him,
6 but not the exact same job.

7 At this point in time, just
8 listening to what was said with the tritium,
9 there are a bunch of holes in what the
10 research and stuff has done. I, myself, not
11 being anywhere near a nuclear physicist or
12 pretending to be one, there are lots of
13 questions that I need answers to.

14 I realize that my dad had Top
15 Security clearance. He worked in all the hot
16 buildings. He was an NDT tech. He was a med
17 op. He worked in the labs. He did everything
18 in there. And he worked p.m.'s, which meant
19 we hardly ever saw him, and because of the
20 classification of his job and the high
21 security clearance we know absolutely nothing.

22 So we are dependent upon his records and the

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1 testimony and everything else that he gave
2 before he died for all these dose
3 reconstructions and stuff that we need to
4 prove that he died -- or that he got his
5 cancer from Rocky Flats.

6 When he died he was 47 years old.

7 So he would have been 56 today. There needs
8 to be the SEC for this. I'm only one story
9 out of who knows how many, and a lot of these
10 people, you're losing all their valuable
11 information because they're sick and they're
12 dying. And there's nothing more that we can
13 do except for be denied yet another time.

14 So I'm asking you to please pass
15 the SEC, not just for my sake but for the sake
16 of everybody else here. Thank you for your
17 time.

18 CHAIRMAN MELIUS: Thank you. The
19 next person I have listed is Memory Delforge.

20 MS. DELFORGE: Yes, I'll speak
21 from here.

22 (Off microphone comments.)

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1 CHAIRMAN MELIUS: Okay, thank you.
2 Dee Hasenkamp? Is there a Dee Hasenkamp here?

3 MS. HASENKAMP: Well, I am. I
4 didn't sign up so I don't have anything in
5 writing to give you.

6 CHAIRMAN MELIUS: It's not
7 required. You're not required to speak
8 either, but if you'd like to.

9 MS. HASENKAMP: Well, there is
10 one thing if it's okay if I do that.

11 CHAIRMAN MELIUS: Would you mind
12 doing it from the mic so that we can get it
13 recorded?

14 MS. HASENKAMP: My husband Gerald
15 was an RCT at Rocky Flats for 13 years and he
16 died in 2007. And the doctor wrote letters on
17 two different occasions stating that the way
18 his cancers presented was not anything he had
19 ever seen before, his oncologist. He said it
20 was extremely rare because he had three
21 primary cancers and then he had two
22 secondaries and he had two more that they

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1 tried to -- or one more, rather, that they
2 tried to biopsy but because the tumor was so
3 close to a carotid artery they couldn't do it.

4 In other words, his body was totally ravaged
5 with cancer.

6 But what I found was so
7 interesting about the process, because I've
8 been denied, or he was denied -- and me,
9 because I had to start the process over again
10 after he died I think a total of four times
11 for the radiation. But on the last time that
12 I was denied I had filled out the paperwork
13 and was denied and I filed an appeal. And I
14 had a date set for my hearing.

15 And 10 days before that hearing
16 was to happen I got a phone call from NIOSH
17 asking me if I would reconsider the appeal if
18 they would consider the fact that my husband
19 had lung cancer as a primary cancer. Of his
20 three primary cancers -- he had colon cancer,
21 adenocarcinoma in his mouth and lung cancer --
22 and I have biopsies of all three of those

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1 saying that they're all primary cancers and
2 they were not metastasized. Later he got bone
3 cancer and other cancers that were
4 metastasized.

5 But they had this information the
6 entire time and every time they run the dose
7 reconstruction they did not include the lung
8 cancer even though they were very much aware
9 that it was a primary cancer. So when I got
10 this phone call they said to me, would you
11 consider dropping the hearing if we go back
12 and do another dose reconstruction and include
13 the lung cancer this time. And I said I
14 absolutely would because that was the whole
15 basis of my hearing was the fact that they
16 were not including the lung cancer.

17 So they did it. I waited several
18 months and finally got another denial, but at
19 least this time it did go up a little bit. It
20 was 40.10 or 40.16, I can't remember. Because
21 I wasn't prepared to speak I don't have the
22 documentation in front of me.

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1 But when they know that there was
2 an additional primary cancer and chose to
3 ignore it until I filed for a hearing, and
4 then they finally run it including that cancer
5 as his third primary cancer, I don't
6 understand why they wouldn't do it to start
7 with. They waited for me to keep pressing the
8 issue before they finally addressed the issue.

9 And I come closer, still didn't make it.

10 But I think that says something
11 about the process when they're ignoring
12 information that they have in their files.

13 And a lot of my husband's -- other
14 people have addressed this -- a lot of my
15 husband's records -- I think it was over one-
16 fourth of his work history was missing. And
17 so they filled in with a coworker's
18 information. And not in conjunction with his
19 cancer but he was in an industrial accident at
20 the plant in a plenum and there was a report
21 done on that. And I have actually read the
22 report because it was circulating the plant

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1 and I got to see it and read it. But when I
2 have asked for copies of it I've been told
3 that it's also missing. So, there's a lot of
4 data missing that would help us with this.
5 Thank you.

6 CHAIRMAN MELIUS: Thank you. The
7 next person I have listed is Dr. and Mrs.
8 Stanley Beitscher.

9 DR. BEITSCHER: Thank you for
10 taking my testimony. I worked at Rocky Flats
11 for 30 years as an associate scientist. My
12 background is in metallurgical engineering
13 with degrees in physical metallurgy, nuclear
14 physics, and physics. So I can't claim not to
15 have a background in some of the subjects
16 we're talking about, particularly what I heard
17 today from the representative of NIOSH.

18 I spent 30 years of my career and
19 several more years beyond that doing
20 analytical studies considering the accuracy of
21 analysis, the probability of error, and
22 whether or not a conclusion can be valid from

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1 a statistical point of view, not just a shrug-
2 of-the-shoulders point of view.

3 I listened very carefully to the
4 excellent presentation by the NIOSH
5 representative and my conclusion is that,
6 although an analysis can be made to
7 reconstruct a dose of radiation, the question
8 is, is the analysis accurate to a probability
9 that one can take seriously? And it sounds to
10 me that when an analysis is based on a dose of
11 radiation beyond 18 half-lives of that
12 particular specie of element that there's a
13 very strong possibility that the error is so
14 profound that the analysis is not accurate.
15 Although an analysis can be made doesn't mean
16 the analysis is accurate enough to be
17 accepted.

18 Furthermore, as a metallurgical
19 engineer dealing almost exclusively with
20 mechanical properties I can assure you that if
21 tritium containers were handled at Rocky Flats
22 and they were radiographed to assure that they

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1 were whole and intact, I can assure you that a
2 radiograph does not show that there's a strong
3 possibility of leakage.

4 A radiograph is an indication of
5 the radio-opacity of the material. A crack
6 doesn't affect the radio-opacity of the
7 material, and a crack is the type of thing
8 that leaks gasses out of containers. So, the
9 fact that a radiograph was obtained or was
10 made at Rocky Flats of containers containing
11 tritium has absolutely no relevance to whether
12 or not the containers were leaking. That's
13 one comment that I would like to make about
14 the NIOSH analysis.

15 Furthermore, one other very brief
16 story. I can give you a firsthand testimony
17 and experience about a tritium release.
18 Sometime in the 1970s, and I didn't document
19 this myself, I was working in my laboratory.
20 I had two laboratories, one in 79 and one in
21 79A, right across from the hydride lab that
22 Dr. DeGrazio ran in 79A.

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1 I don't know exactly what I was
2 doing but I was in either one of those two
3 labs and we were told to evacuate the
4 building. And we evacuated the building and
5 of course I'm one of the most curious people
6 you'll ever meet in your life. I wanted to
7 know why. I want to know why about
8 everything. I want to know why NIOSH came up
9 with some of the conclusions they did on
10 analysis that I'm very familiar with, being an
11 analytical scientist myself.

12 I wanted to know why. I was told,
13 well, it was a tritium release. And I said,
14 tritium? What are we doing with tritium at
15 Rocky Flats? Here I am, a scientist with
16 three degrees in the subject that we're
17 talking about here, metallurgy, materials
18 science, and I didn't even know tritium was
19 handled at Rocky Flats, nor was I told
20 anything about the hazards of tritium, the
21 dangers of tritium, nor was I ever tested for
22 tritium. And I spent a great deal of time

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1 within 20 or 30 feet of the hydride lab where
2 supposedly this tritium release occurred.

3 Thank you very much for listening
4 to my story. I want to particularly thank the
5 Rocky Flats activists that are responsible for
6 bringing the subject up. Laura and Jeff
7 Schultz and particularly Jerry Harden, who
8 although is quite a character, is an extremely
9 intelligent person and brings a great deal to
10 the stories we have to tell. Thank you very
11 much.

12 CHAIRMAN MELIUS: Thank you.
13 Thank you for your comments. The next person
14 I have listed is Doug Fennell.

15 MR. FENNEL: I promise I'll be
16 brief. I worked at Rocky Flats for
17 approximately 22-and-a half-years and long
18 before I heard from Jerry Harden and a lot of
19 these folks that have a lot more time out
20 there and have dealt with a lot of issues.

21 I want to talk about a couple of
22 things just to get where I want to go. In

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1 1957, there was a fire that spread radioactive
2 contamination, but residents were not told
3 about the extent of that fire until 1970.

4 In 1970, it was a group of
5 independent scientists that discovered
6 plutonium offsite of the Rocky Flats facility.

7 And at that point they came clean and told
8 the communities about the contamination.

9 In 1990, EG&G assumed management
10 of Rocky Flats. There was a class action suit
11 filed that Jerry spoke about. But this one
12 included 1,300 residents alleging that Dow and
13 Rockwell allowed plutonium contamination to be
14 on their property.

15 In '72, despite requests of the
16 grand jurors and indictments, the government
17 prosecutors negotiated a settlement with Rocky
18 Flats and they pled guilty and paid an \$18.5
19 million fine. Outraged grand jurors, as Jerry
20 spoke of, reported in detail of the ongoing
21 contamination and their report was sealed,
22 which it currently is today.

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1 In `75, a U.S. district judge held
2 the Department of Energy in contempt of court
3 for failure to release documents, millions of
4 pages of documents, regarding missing
5 plutonium, health issues and many more other
6 issues.

7 In 2000, legislation was passed to
8 help compensate ill workers exposed to
9 radiation, but missing records make that hard
10 to prove. And that's what brings us here
11 today.

12 I myself have some health issues
13 and I filed for compensation as I was supposed
14 to. I get a letter back from NIOSH that says
15 I never worked at Rocky Flats. I gave them my
16 man number, 513439, and to this day I never
17 worked at Rocky Flats. Their solution was to
18 get me to get an affidavit from one of my
19 coworkers and have them fill it out. So I
20 thought I'd go down to my priest and have him
21 do it for me, because they'd probably believe
22 him. Even though I worked there 22-and-a-half

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1 years, drew a paycheck all that time. That's
2 what we're faced with out there.

3 These folks here are a lot sicker
4 than I'll ever be, but they're faced with that
5 on a daily basis. And they get up and look in
6 the mirror in the morning and wonder what they
7 did wrong.

8 They did everything this
9 government asked them to do and more, and
10 they've even sacrificed their lives for that.

11 And this country's turned their back on these
12 folks and it's hideous. This needs to stop,
13 it needs to stop now, and you have the power
14 to make that happen, so we're relying on you
15 to do so. Thank you.

16 CHAIRMAN MELIUS: Thank you. I
17 had one more person listed, Knut Ringen.

18 DR. RINGEN: Good evening. My
19 name is Knut Ringen. I am the senior science
20 advisor for the CPWR, the Center for
21 Construction Research and Training, and I'm
22 here on behalf of the National Building Trades

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1 as well as the Augusta Building Trades and the
2 petitioners for the Savannah River Site.

3 And I have two separate issues
4 that I'm going to raise with you. I think
5 this is the seventh time I've addressed you
6 and you have my disclosures from previous
7 appearances.

8 The Savannah River Site, you
9 approved a limited SEC last December with the
10 understanding that there were other periods
11 subsequent to that time that the Class ended
12 that would be evaluated later.

13 In August, lead petitioner
14 [identifying information redacted] wrote you a
15 letter asking that you expedite the review of
16 exposures in those subsequent years. Since
17 then, [identifying information redacted] has
18 not received any response to his letter either
19 from this Board, from the Working Group
20 responsible for Savannah River, or from NIOSH.
21 Consequently, I'm back at his request.

22 In August 2011, Dr. Taulbee

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1 presented an addendum to his evaluation of the
2 SEC petition and in it he said he could not
3 bound dose for thorium in two areas, but he
4 could, he thought, bound dose for thorium in
5 most other areas by extrapolating further from
6 an extrapolation model developed from the 300
7 area.

8 He said he could limit the size of
9 the SEC by determining that those workers who
10 had been employed in the areas where they had
11 trouble bounding dose because they could
12 identify those workers using their dosimeter
13 codes, which he said were specific to the
14 place of employment.

15 However, subsequent to that the
16 petitioners did considerable research and
17 presented to you evidence that in fact the use
18 of dosimeter codes to establish employment in
19 a particular area in Savannah River had no
20 validity. And as a result you adopted the SEC
21 Class last December.

22 We think that it's time to

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1 expedite the review of the rest of the time
2 period since then, because questions that you
3 have to answer are very basic. What in the
4 period subsequent to the end of the current
5 Class, when during the subsequent periods were
6 exotic radionuclides used at the Savannah
7 River Site?

8 The second question is were there
9 opportunities for undocumented exposure during
10 those periods? In other words, exposures that
11 were not captured on dosimeters.

12 And third, does NIOSH have a valid
13 way to identify those workers who could have
14 been exposed in such a manner? NIOSH would be
15 able to come up with answers to those
16 questions very quickly. And if they can't,
17 then I think your consultant, the Board's
18 consultant could do so. And I hope that you
19 will take that into account and get it done
20 very quickly because I think the petitioners
21 at Savannah River and the workers down there
22 have waited long enough.

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1 The second issue I want to raise
2 with you is at the request of Sheldon Samuels,
3 who is a special representative for the Metal
4 Trades Department of the AFL-CIO and who can't
5 be here. But his request and our request is
6 would the Board be willing to define those
7 legislative changes that are needed to the
8 EEOICPA Act to overcome the numerous
9 deficiencies that have been found in NIOSH's
10 dose reconstruction program subsequent to the
11 establishment of Subpart B of the Act?

12 These deficiencies have been
13 clearly made evident by the fact that you're
14 spending all of your time evaluating SEC
15 petitions rather than reviewing dose
16 reconstructions. So there is a fundamental
17 problem with this program that we all know.

18 And NIOSH's 10-Year Review of it
19 concluded the same thing. It's a very big
20 problem, it centers on these very questions
21 that we've raised time and again since the
22 first dose reconstruction rule came out, and

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1 that is the question of what NIOSH means when
2 it says "sufficient accuracy." A dose
3 reconstruction has to be done with sufficient
4 accuracy in terms of its underlying science.

5 An SEC, or an addition to the
6 Class of the SEC, can be made when there is
7 not sufficient accuracy to determine that the
8 dose reconstruction can be done. Both of
9 these rules rely on this term that NIOSH has
10 never defined clearly.

11 I want to use one example to
12 illustrate how difficult this issue is. In
13 the SRS evaluation that Dr. Taulbee made and
14 that I referred to earlier, and I mentioned
15 that they used specific dose codes, dosimeter
16 codes, to define where people were employed on
17 the Savannah River Site.

18 After we reviewed that issue and
19 found it to be not valid, an attorney for the
20 many claimants from Savannah River, Bob
21 Warren, sent an FOI request to NIOSH asking
22 for the underlying evidence that was used to

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1 determine that dosimeter codes could be used
2 to make that determination.

3 What Bob Warren got back from that
4 was a one-page, a copy of one page from some
5 kind of report. And in the upper right-hand
6 corner of that is written in pencil "1956" in
7 a circle.

8 That report basically has -- or
9 page has two columns on it. One has areas
10 codes and the other has dosimeter codes. And
11 based on this one page, presumably NIOSH
12 concluded that therefore these codes had to be
13 specific to that place of employment, and if a
14 person had that code he had to work in that
15 place of employment.

16 As near as we can tell, the sole
17 documentation that NIOSH used to make that
18 critical determination in its evaluation of
19 the petition from the workers at Savannah
20 River was one page from a document that we
21 cannot find a reference for, either in Dr.
22 Taulbee's Evaluation Report or subsequent to

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1 that.

2 Now, Dr. Taulbee signed off on
3 this evaluation as did the leadership of this
4 program. And I think it was bogus.

5 And that brings us to the question
6 of, first, we don't know whether this page
7 came from 1956, whether it represented some
8 reality in 1956, whether it represented some
9 proposal for something that might be done in
10 1956, whether it represented the period before
11 1956. Was it valid for periods after 1956?
12 Was it ever valid? Nobody knows. But we know
13 from the cases that we presented to you that
14 it's not valid.

15 And this goes to the heart of what
16 is meant by sufficient accuracy. Is it really
17 sufficient accuracy to present information
18 like this in an Evaluation Report and to rely
19 on it to draw a conclusion? I don't think so,
20 but I would like to know more clearly what you
21 think sufficient accuracy is supposed to be in
22 terms of a standard that we should expect to

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1 have met in this program. Thank you.

2 CHAIRMAN MELIUS: Thank you. That
3 is the end of our people that have signed up
4 for public comment. Does anybody else wish to
5 make public comment? Okay. You, and then
6 we'll do -- okay. We've got three more. And
7 can you please identify yourself.

8 MR. MCCARTHY: My name is Bill
9 McCarthy. I'm a Rocky Flats retiree. I hired
10 on in 1962, September 5. I retired September
11 1, 1992.

12 My first days of employment was
13 Building 776. They come and got me in a squad
14 car and took me down there because my boss
15 would not go in that building. He was in
16 Building 444. In fact, I spent the biggest
17 part of my time in Building 776-777, 83, 81,
18 got the first pit in 371, 44, 460. I was one
19 of those people that every time a posting come
20 up I signed it because I wanted something
21 different. I didn't want to push the same
22 button every day.

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1 I've not spent a day in college
2 but when I left out there I was in special
3 weapons development and I'm not going to tell
4 you what we done. There might be a cop here.

5 But I was called a senior product engineer.

6 Now, I came up from a tool grind
7 to a senior product engineer because I had
8 good bosses that wanted somebody that was
9 willing to work and wanted to work. That's
10 the way I was brought up.

11 But we're talking about tritium
12 here. If they didn't think they had a problem
13 with tritium why did they have a gettering
14 system made and why did they have it put in
15 777? Just to have some money to blow off? I
16 don't know. But a lot of my time I spent
17 disassembling pits.

18 And I'm going to use the word
19 "units." I'm not going to say "pits" because
20 when I disassembled them they were units, and
21 I done it in what was referred to as a B box.

22 Does anybody know what I'm saying? It's a

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1 lathe with plastic all the way around it and
2 sliding doors. You could get in there and oil
3 it, you could clean it, anything else.

4 And we was taking return units
5 from Los Alamos, Lawrence Livermore, and
6 believe it or not, we even had some Pantex
7 involved there. I done all of my work in a
8 half-mask and a lead apron, and believe it or
9 not the lead apron only came up to here. I
10 was required to have my badge inside. I had
11 nothing up here. Do you want to talk about
12 these guys with brain tumors? Do your
13 homework, somebody, please.

14 I could hit the gettering system
15 with a snowball from where my lathe was that I
16 was cutting these units into. And I do not
17 hesitate one minute to say I probably cut over
18 300 units over my period of time.

19 And I'm going to use a term now
20 that not too many people in this room has
21 heard. I cut some neutron units apart. You
22 ever had that in your paperwork? I was

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1 cutting four units a day until a monitor --
2 and bless his heart, he's been called up -- he
3 didn't like what was going on and he got his
4 manager down there, and he brought all kinds
5 of instruments down there.

6 And they got me to where I was
7 cutting one neutron unit a week. And I had
8 lead gloves like usually goes into a dry box,
9 these were out of a sack or whatever and I put
10 on. I had a full face mask on. But all of a
11 sudden, you know, the light come on. Somebody
12 done their homework.

13 I was doing four a day and they
14 was on a cart, a little roll-away cart, one
15 cart. I've got a lead apron on. This is
16 before they got curious. And the other two or
17 three were parked behind me.

18 Now I'm not going to tell you,
19 but, yes, I've got cancer. And I've not filed
20 a claim because my mom told me a long time ago
21 don't push stuff up the hill unless you've got
22 an outlet. Mine's the grave. I'll take it.

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1 I'm not going to mess with this.

2 But I'm saying that you folks have
3 been lied to, misrepresented to and the main
4 product was filed in the trash can. And the
5 trash can involves these people's paperwork.
6 I know what went on out there. I'm a curious
7 person, that's the reason I signed these
8 postings and I bounced around all over and I
9 knew the different operations, the different
10 procedures and how to do them. And that's how
11 I managed to get up the ladder. And folks, do
12 your homework. Throw the trash can away.

13 Now, a parallel here is when the
14 FBI hit Rocky Flats, and I was there that day
15 when they stepped off the pad. You know, they
16 got their white smock on, they got their belt
17 on, they got their gun on the side and they're
18 getting ready to step off the pad in a hot
19 area. If they'd have fired a gun, blew a
20 window out, we'd have lost Kansas.

21 The FBI, they can do any darn
22 thing they want to -- I cleaned that up in a

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1 hurry, didn't I? But anyway, they wanted to
2 know where everything was buried out there.
3 So they spent millions of dollars on X-rays,
4 soil samples, metal detectors and stuff.

5 All they had to do was to go to
6 heavy equipment operator on the plant and
7 check with the guys that run the backhoes, the
8 front end loaders. They're the one that dug
9 the hole. Why did they have to go to a bunch
10 of desks to find out where that stuff was
11 buried? Two men could have told them, but
12 they carried lunch buckets. They wouldn't
13 talk to them. Too far down the ladder.

14 Folks, here's the people you need
15 to talk to, right here. These are the front
16 end loaders. These are the guys running the
17 backhoes. They know what went on out there,
18 they know where it's at. Thank you.

19 MR. LOGAN: Hi there, I'm Michael
20 Logan. I really appreciate you guys showing
21 up to give us some support if you can.

22 This young lady, I worked with her

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1 father for quite a few years, we had different
2 jobs, different departments we worked in. But
3 I helped support his department at times.

4 I've got a real big question that
5 I've had a real tough time struggling, trying
6 to figure out why her father, a good friend of
7 mine, and one other guy, they all did the same
8 exact job. They worked with the same
9 chemicals, they did the same thing day-in and
10 day-out. They all three died of the same
11 illness, pancreatic cancer.

12 [Identifying information redacted]
13 got awarded the money for his compensation for
14 it, but they're turning these other people
15 down? I mean, I'm not a rocket scientist but
16 I can't figure out why three people who do the
17 same job get turned down.

18 That's like when NIOSH did my
19 radiological dose reconfiguration. When I've
20 been trying to get my radiological report from
21 Washington they say it's missing. But when I
22 get the dose reconfiguration from NIOSH I had

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1 some questions so I talked to the guy who did
2 it.

3 And he says, "according to our
4 records." I said, "Records? What records is
5 that?" He said, "Well, your radiological
6 records." I said, "Oh yeah? Where did you
7 get those?" They said, "Washington." I said,
8 "No, you didn't, they're missing. That's what
9 they're telling me." He says, "No, I've got
10 them right in my hand."

11 So, how do you figure something
12 like that out? They tell me they're missing,
13 they're gone, but yet NIOSH has them? If you
14 guys can give me an answer I'd really
15 appreciate it, because I don't understand.

16 And I don't understand why her and
17 her mother have had such a fight to get things
18 done right and have them taken care of morally
19 and ethically and legally. I don't understand
20 how the system is failing them. Thank you
21 very much.

22 CHAIRMAN MELIUS: Thank you. And

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1 I believe there was one more person. Do you
2 have a public -- wish to make a comment?

3 MR. FREIBERG: Yes, and I'll make
4 it as brief as I can.

5 CHAIRMAN MELIUS: It's fine.

6 MR. FREIBERG: My name's Ken
7 Freiberg. I started out there after I got out
8 of the military in early '53 and worked out
9 there damn-near full-time until it was closed.

10 I've also worked at all the other sites and
11 I'm still working now at Los Alamos and Oak
12 Ridge and some of the other sites. And I'm in
13 my eighties.

14 I want to compliment the Board and
15 a lot of the DOE and Department of Labor
16 workers, which is a little different than some
17 of the things you've been hearing. But I've
18 had cancer five times. I was loaded with
19 plutonium, et cetera, and they treated me
20 right and took good care of me. And it worked
21 out very well.

22 Sitting here listening, and I was

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1 involved in almost every incident and every
2 fire out there during the period of time, and
3 in upper management most of the time. The
4 workers deserve whatever we can do for them
5 and their families.

6 And a lot of the data is
7 available, but it's not getting to, I don't
8 think, the right people. The old saying of
9 sit down around the table and sit down with
10 the right people and get the information you
11 need and you can answer the question very
12 rapidly.

13 Thorium was brought up here
14 earlier, thorium strikes. The only real
15 thorium strikes we did was on uranium-233,
16 which most people don't even know about, okay?

17 I was the health physics person that was in
18 charge of that for the thorium strikes. I
19 know why they were done and how they were
20 done, and know the people that worked on it.

21 There's about five or six people,
22 including Jack Weaver that was here a little

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1 earlier, that can answer that young lady's
2 question. There's not many of us old people
3 that are now in our eighties, okay, still
4 around that know exactly what happened, what
5 instruments we had, what we could do with
6 those instruments.

7 We couldn't read neutrons at the
8 very beginning, which most of you know,
9 because we didn't have the instrumentation.
10 We didn't even look for them until we got
11 spheres and things of that nature. We didn't
12 know what was plutonium and what was uranium
13 when we first started and I came up with the
14 isotopic analyzers that would separate the
15 energy so we could tell which was what of the
16 various different isotopes.

17 There's about five or six people
18 that I can name and give you the names of that
19 can answer most of the questions that were
20 brought up here tonight very quickly. I've
21 given deposition upon deposition, a lot of it
22 with [identifying information redacted] that

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1 is following up all these cases. I don't
2 believe any of the reams of documentation on
3 all the incidents, on all the accidents and
4 the special projects. Most of that data has
5 never gotten to the Department of Labor or to
6 DOE to review.

7 There's been an awful lot -- also
8 now we're starting the Cold War and the Rocky
9 Flats Museum. There's 120-some orals
10 including mine that go through all the fires,
11 the incidents and what experience the people
12 have and what they did.

13 And what I would highly recommend
14 is that when questions come up, there are
15 still -- there's only two plant managers left
16 that were there for a long time, that's
17 [identifying information redacted]. I just
18 made a video with those two guys on the
19 history of what we've seen, what we did at
20 Rocky Flats, including the good things.
21 Besides just making weapons like people think,
22 there was an awful lot of good things happened

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1 out there, a lot of technology and the workers
2 made that happen.

3 Generally speaking, even upper
4 management try to do the best job they did.
5 And I think most people in DOE, Department of
6 Labor, feel the same way now. But the people
7 -- a lot of things we didn't know. When we
8 first started we built the weapons by hand,
9 believe it or not. We didn't start machining
10 weapons until 1957. When we first started we
11 actually hand-sanded some of this stuff, okay?

12 And there was a lot of incidents and I
13 received a lot of plutonium.

14 But I lucked out and got well
15 taken care of, still get every 3 to 6 months
16 checkups and it's working out very well. But
17 a lot of these people, because the answers
18 aren't being given to the right people, aren't
19 getting what they deserve.

20 There's also a lot of things being
21 brought up now on trichlor, perchlor and other
22 solvents. A lot of the things at Rocky Flats

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1 wasn't from plutonium, it was from chemical
2 aspects, asbestos, the chemicals we worked
3 with and the other things. And that's causing
4 a lot of problems now with neuropathies and
5 other things like this that the doctors at
6 Jewish, University of Colorado, and other
7 hospitals in the area are well aware of. And
8 that should be looked at also.

9 But what I'd like to recommend is
10 I can make these names available. And that
11 includes the dose people that did the dose
12 rates. [Identifying information redacted] did
13 a lot of them. [Identifying information
14 redacted] did a lot of work on that,
15 [identifying information redacted], myself.
16 Most of them are slowly disappearing, because
17 like I say I'm in my eighties now and we won't
18 be around, like that young lady says, too much
19 longer.

20 And I'd recommend the questions
21 that came up here, like a simple thing like on
22 the thorium or the tritium, the people that

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1 were there, which I was there, should be asked
2 the questions, sit down around a round table
3 with some representative here, not hiring new
4 contractors that don't have any of the
5 background or the experience. We're not going
6 to lie, we're not going to say anything bad or
7 wrong, we're going to just say what it was and
8 what happened. And we can do that. And I'd
9 appreciate if somebody would maybe get someone
10 here to ask those questions and get with us,
11 the few of us that are still left, and go
12 through that.

13 And most of that data is available
14 in some of the production areas. Like I say,
15 Jack Weaver and I are still doing some work
16 with Los Alamos. We're now working on a CMR
17 facility and also Oak Ridge. Because the
18 newer kids -- people, I should say -- don't
19 have the background that we got by the hands-
20 on through many, many years of experience.
21 And I'd just like to recommend that somebody,
22 if the questions do come up and particularly

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1 for a person's exposure or something like
2 that, go with the people that worked there and
3 ask them, okay?

4 That's all I have to say. And I
5 thank you for your participation and, like I
6 say, taking care of a lot of us. A lot of us
7 have been well taken care of, but a lot of the
8 people still haven't. Okay, thank you very
9 much.

10 CHAIRMAN MELIUS: Thank you. And
11 I thank everybody for coming here tonight.

12 (Whereupon, the above-entitled
13 matter went off the record at 7:35 p.m.)
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