

UNITED STATES OF AMERICA
CENTERS FOR DISEASE CONTROL

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NATIONAL INSTITUTE FOR OCCUPATIONAL
SAFETY AND HEALTH

+ + + + +

ADVISORY BOARD ON RADIATION AND
WORKER HEALTH

+ + + + +

75th MEETING

+ + + + +

WEDNESDAY
FEBRUARY 23, 2011

+ + + + +

The meeting convened at 8:25 a.m.,
Eastern Standard Time, in the Marriott Hotel &
Suites, Two Tenth Street, Augusta, GA, James
M. Melius, Chairman, presiding.

PRESENT:

JAMES M. MELIUS, Chairman
HENRY ANDERSON, Member
JOSIE BEACH, Member
BRADLEY P. CLAWSON, Member
R. WILLIAM FIELD, Member
MICHAEL H. GIBSON, Member
RICHARD LEMEN, Member
WANDA I. MUNN, Member
JOHN W. POSTON, SR., Member

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PRESENT: (continued)

ROBERT W. PRESLEY, Member

DAVID B. RICHARDSON, Member

GENEVIEVE S. ROESSLER, Member

PHILLIP SCHOFIELD, Member

PAUL L. ZIEMER, Member

TED KATZ, Designated Federal Official

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REGISTERED AND/OR PUBLIC COMMENT PARTICIPANTS:

ADAMS, NANCY, NIOSH Contractor
AL-NABULSI, ISAF, DOE
BARRIE, TERRIE*
BELL, BARBARA
BURGOS, ZAIDA, NIOSH
CRUZ, RUBEN, CDC
EVASKOVICH, ANDREW
FITZGERALD, JOE, SC&A
GARDNER, DEMETRIA, MASO
HAND, DONNA
HINNEFELD, STU, DCAS
HOWELL, EMILY, HHS
KINMAN, JOSH, DCAS
KOTSCH, JEFF, DOL
LEWIS, GREG, DOE
LEWIS, MARK, ATL
LIN, JENNY, HHS
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MAURO, JOHN, SC&A
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PORTER, DIANE, DCAS
PRESLEY, LOUISE
REUTMAN, SUSAN, DCAS
RUTHERFORD, LAVON, DCAS
THEISSEN-BUGG, JOANN
THURBER, BILL, SC&A*
VLIEGER, FAYE*
WADE, LEW, NIOSH Contractor

*Participating via telephone

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

2 8:26 a.m.

3 CHAIRMAN MELIUS: Good morning, and
4 welcome to Meeting Number 75 of the Advisory
5 Board on Radiation and Worker Health. We
6 should be having a party or something later to
7 celebrate Number 75.

8 For those of you attending the
9 last meeting, I know it looks as if we've
10 shrunk, but it's the - gotten a lot shorter,
11 but it's just the chairs here.

12 (Off-record comments.)

13 CHAIRMAN MELIUS: The tables are
14 high, yes. Sort of a laid back Advisory
15 Board. Leaning back. So I'll turn it over to
16 Ted to -

17 MR. KATZ: Thank you. Welcome.
18 I'm Ted Katz. I'm the Designated Federal
19 Official of the Advisory Board. Welcome,
20 Board Members, participants, members of the
21 public in the room and mostly, I hope, on the
22 line.

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1 We have a quite full agenda. I'll
2 just note one thing particularly for public
3 participants.

4 We have two public comment
5 sessions. There is one that begins at 6:30
6 tonight, 6:30 to 7:30 tonight. And a second
7 public comment session preceded by some
8 presentations on the Savannah River Site
9 tomorrow night beginning at 5:30 and going to
10 7:00 p.m.

11 Let me just for folks on the
12 phone, let me ask that you mute your phones.
13 If you don't have a mute button, *6. And
14 please do not at any point put the call on
15 hold, but hang up and dial back in if you need
16 to leave the meeting for some time.

17 Last thing to note is attendance.
18 Today we have all Board Members but two. Mr.
19 Griffon will be joining us later this
20 afternoon, we hope, and Dr. Lockey will be
21 absent for most of this meeting. He will be
22 calling in for at least one session tomorrow,

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1 and the agenda is yours.

2 CHAIRMAN MELIUS: Okay. Good.
3 Welcome, and our first presentation will be a
4 NIOSH program update with Stu Hinnefeld,
5 followed by Lew Wade.

6 MR. HINNEFELD: Thank you, Dr.
7 Melius, and good morning, everyone.

8 You provided in your package and
9 on your ScanDisk, the copy of the statistics
10 that I normally run through on this
11 presentation.

12 At the last meeting, we discussed
13 and, I believe, agreed to, that in the
14 interest of brevity that rather than run
15 through all those slides, I would just provide
16 a couple news updates and answer any questions
17 anyone might have on the statistics that were
18 provided.

19 So I am intending to proceed that
20 way unless you would like me to do something
21 different. And we'll see how this goes this
22 time and see how you like this.

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1 Program news is relatively brief.

2 Things are running along pretty much sort of
3 like an operating manufacturing plant now. We
4 get the gozintas and the gozoutas and we get
5 new claims and try to turn out dose
6 reconstructions.

7 I did have a couple pieces of
8 news. One is that we have selected a new SEC
9 Petition Counselor to replace Laurie Breyer,
10 who left DCAS some weeks ago in order to take
11 another position within NIOSH.

12 And our new counselor is Josh
13 Kinman, who is here in the room. Josh, will
14 you stand up?

15 I think most of you probably have
16 received correspondence from Josh for a while
17 now because he's been working for us in a
18 somewhat different capacity for some time,
19 engaged in the SEC process.

20 So he's not a newcomer to the SEC
21 process. He has a pretty good understanding
22 of the process and has worked quite closely

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1 for quite a while with LaVon Rutherford and
2 the rest of the folks working on SECs.

3 And so we are hopeful this will be
4 a relatively smooth transition. And Josh is
5 of course getting used to the new role of
6 being the contact person for petitioners,
7 which is the additional part. So far that
8 seems to be going pretty well. And he is of
9 course fairly busy in that role because
10 petitioners are pretty interested in how
11 things go with their petitions.

12 Now, the second piece of
13 information I want to talk about relates to
14 one particular site, GE Evendale, which is not
15 on the agenda for this meeting. And so this
16 is sort of preliminary information in
17 describing some things that we'll be providing
18 to the Board on the O: drive, you know. Some
19 supporting information, explanatory
20 information about what's been going on.

21 But just briefly for background
22 purposes, as you'll recall at the November

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1 meeting, at the Board's November meeting,
2 during my presentation, I indicated that we
3 had asked the Department of Labor about the
4 possibility of defining the Class somewhat
5 differently.

6 And I didn't bring the exact
7 definition that we proposed to them, but it
8 was along the lines of all workers who worked
9 at the covered facility at GE Evendale, also
10 known as Air Force Plant 36 or something like
11 that. Words to that effect.

12 In their response to us which we
13 received just before the November meeting,
14 they replied that they did not believe there
15 were any records that would allow them to
16 administer that class.

17 And so they were not in favor of
18 having a class of that sort, because there
19 would be no record that would allow the
20 administration of that class.

21 And they said and in addition
22 because of some questions about the solidity

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1 of the evidence for designating this, this
2 site, we're going to ask the Department of
3 Energy to look into whether this should really
4 be a DOE site or not. Now, that was in the
5 letter they sent to me.

6 Okay. When they subsequently sent
7 a letter to the Department of Energy, they did
8 one of the two things they said they were
9 going to do in their letter to me. One of the
10 things they said was, we are asking the
11 Department of Energy - I'm sorry. They didn't
12 say they couldn't administer the Class.

13 What DOL said was they will ask
14 the Department of Energy if they have any
15 records that would allow us to put people in
16 Air Force Plant 36.

17 And then the second part was, and
18 also we're going to check this designation
19 thing.

20 Well, when they sent the letter to
21 the Department of Energy, all they asked them
22 was, do you have any records that would

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1 administer this class, and they didn't ask
2 about the designation. And so they have
3 elected not to do that.

4 I did call then and confirm with
5 Department of Labor that they had elected not
6 to pursue that question and to leave the
7 designation question alone.

8 So the designation is going to
9 stand as it is, which is a DOE facility from
10 1961 to 1970.

11 Department of Labor, I believe,
12 has responded by now that there really are no
13 more records. We don't have anything that
14 will let you, you know, would put you on Air
15 Force Plant 36. So that's one piece of the
16 story with GE.

17 The other piece of the story with
18 GE is also right before the November Board
19 meeting, if you'll recall, GE had agreed to
20 provide to us, and we had just received, all
21 the radiation exposure records that GE holds
22 for their employees. They gave us the entire

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1 document.

2 And so we've been analyzing what
3 we have in terms of exposure records for GE.
4 And for the years of 1961 to 1970, for the
5 covered period, we do in fact have individual
6 exposure cards for some number of people in
7 each year.

8 And we have sort of - you can
9 analyze these things in a number of ways, and
10 this is the way we've elected to analyze it
11 is, how many individual exposure records do
12 you have for each of these ten years. And it
13 ranges from a high of somewhere around 1200 in
14 1961, the first year - and this is
15 individuals, you know, people - and then it
16 drops immediately down to about 200.

17 It's in like the 200 to 300 range
18 from '62 through '69. And then 1970 it drops
19 again maybe down to the mid-100s.

20 So that's the - and we have not
21 looked at the names to see it's the same 200
22 people. We have not done that. We have not

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1 done that at all just yet.

2 So these are external exposure
3 results. The internal exposure data is
4 limited essentially to three years in the
5 middle. I think it's '64 through '66. And
6 those tend to be - well, two of those years
7 were about 180 data points. Almost all
8 uranium bioassay.

9 And the third year there were 60
10 data points. Again, mainly uranium bioassay.

11 There was some thorium bioassay in there.
12 And then there were a couple data points from
13 1970 just kind of stuck out there.

14 Most of the results, this includes
15 both the internal and external results, do not
16 put a location with that person. So this
17 person got this dose. We don't know where
18 that person worked.

19 In something like seven of the ten
20 years, the only location listed for a person
21 who has an exposure record is the health and
22 safety. So apparently the health and safety

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1 people recorded their locations, and the other
2 people didn't.

3 So we are continuing that
4 analysis. We'll provide what we have. We'll
5 probably do some additional things. As I go
6 through these things, more questions always
7 pop into my mind, which I'm sure pop into your
8 mind as well.

9 And we'll be providing that
10 information on the O: drive for the Board's
11 future consideration. We're not suggesting
12 any action today, but we want to sort this
13 out.

14 The internal data is very limited.
15 I mean, there are like three years when you
16 have any internal data at all. I think
17 there's one in vivo count for the entire
18 covered period. So the internal data is
19 really quite limited from this.

20 And so it looks, you know, we
21 don't really see a lot of hope for
22 reconstructing all the doses for the people.

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1 And so we're going to have largely the same
2 question we've had all along about, what do we
3 do with this site.

4 So we'll be providing additional
5 information as time goes forward on GE, but my
6 plan is to put it on the O: drive and inform
7 the Board when we've added something and put
8 some explanatory notes on what it is. And
9 then maybe collect some more questions from
10 Board Members as additional questions come to
11 people.

12 Okay. That is the extent of the
13 news I had intended to cover. Are there
14 questions about that or about any of the
15 statistics that were sent to you?

16 CHAIRMAN MELIUS: Yes. I have one
17 question on GE.

18 Would you be issuing either a new
19 Evaluation Report or a supplementary report?

20 It seems that there's been a lot
21 of information. The old report seems a little
22 bit out of date.

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1 MR. HINNEFELD: I think - yes, I
2 think we will submit a supplementary report.
3 I think that we want to make sure we have an
4 idea of how to go on that.

5 CHAIRMAN MELIUS: Yes.

6 MR. HINNEFELD: Before we issue the
7 report. And I think maybe some feedback from
8 the Board might be instructive. Rather than
9 for us to write one in the absence of feedback
10 from the Board and then hash it out here, it
11 might be instructive to get feedback from
12 Board Members, you know, individual Members or
13 collectively, however you prefer to do it, and
14 try to develop a position on this.

15 CHAIRMAN MELIUS: Okay. Well,
16 another possibility would be a Work Group that
17 maybe -

18 MR. HINNEFELD: That would be
19 certainly true, yes.

20 CHAIRMAN MELIUS: - we can talk
21 about later.

22 MR. HINNEFELD: Yes.

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1 CHAIRMAN MELIUS: I just get
2 concerned as we get to making a decision on
3 this that there's so much information, it's
4 all sort of on the O: drive, and it's really
5 hard for Board Members to sort of pull it
6 together and remember it all from -

7 MR. HINNEFELD: Well, I mean,
8 things that people, I think, things that were
9 going through my mind, what would people want
10 to see. Well, they'd want to see an example
11 of these records, you know. What's this
12 record look like that we got for Joe Smith,
13 you know? That kind of thing.

14 CHAIRMAN MELIUS: No, no, putting
15 it on the O: drive is very helpful. I think
16 that just having a report beyond that, I
17 think, sort of pulls it together and it's
18 useful.

19 MR. HINNEFELD: Oh, yes. Yes.

20 CHAIRMAN MELIUS: And it may be
21 that a Work Group - we decided not to do a
22 Work Group initially thinking we were going to

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1 get -

2 MR. HINNEFELD: Yes, we recommended
3 adding a Class and -

4 CHAIRMAN MELIUS: It sort of got -
5 so we can talk about that later yet.

6 Josie?

7 MEMBER BEACH: I thought we had
8 actually asked the 250-day Work Group to look
9 at it.

10 CHAIRMAN MELIUS: No, we actually
11 decided not to ask the 250 - I think I
12 volunteered one of the Work Groups and we
13 decided that, well, no, it would be handled by
14 the next meeting. I think we had one or two
15 questions then, and one or two questions have
16 sort of grown exponentially. So we can talk
17 about that during our Board working time.

18 MR. HINNEFELD: Yes, it's like
19 radiation biology. The more questions you
20 have - the more answers you get, the more
21 questions you have.

22 CHAIRMAN MELIUS: Any other

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1 questions for Stu? No?

2 Okay. Go ahead.

3 DR. WADE: Good morning.

4 CHAIRMAN MELIUS: Good morning.

5 DR. WADE: Always a pleasure to see
6 the smiling faces of the Advisory Board. And
7 I must say every time I come here, it lifts my
8 spirits to chat with you folks.

9 So I bring you warm regards from
10 Dr. Howard, the director of NIOSH. Before I
11 make my comments about the program review, Dr.
12 Howard has asked me to make the announcement
13 that he has appointed Stu Hinnefeld as the
14 permanent director of DCAS.

15 John had Stu in that position
16 acting for a while and was pleased with the
17 response of the community to Stu. So Stu is
18 now permanently the director of DCAS.

19 And we would expect him to expend
20 all of his efforts to pursue good science, but
21 also to do it kindly, with the needs of
22 petitioners and claimants in mind as he does

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1 his job.

2 To the issue of program review, an
3 update, I will remind you that the ultimate
4 purpose of this program review is to, again,
5 help NIOSH do a better job serving the needs
6 of petitioners and claimants consistent with
7 its responsibilities under the Act.

8 We've been at this for about a
9 year now and I think mercifully we're coming
10 to the end and I'd like to share some of that
11 with you.

12 I recently took the liberty of
13 sending you all a brief note. And attached to
14 that note I put a draft of the introduction to
15 the Phase 1 of the program review to provide
16 you with a memory jog as to the details of
17 that.

18 Let me tell you where we are
19 briefly, and where we hope to be in the near
20 future.

21 The program review is to happen in
22 two phases. The first phase, we call that

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1 Phase 1, was to be a data-driven attempt to
2 explore NIOSH's performance under the program.

3 We were doing that in five areas:
4 the area of dose reconstruction, the area of
5 timing of NIOSH's work, SEC petitions, quality
6 of science and customer service.

7 Let me tell you where we are in
8 each of those phases. In terms of dose
9 reconstruction and timing, you've had the
10 first draft of those reports for some time.

11 Those reports are up on the
12 website. We're receiving comments. We've
13 received thoughtful comments from Drs.
14 Richardson, Melius and Ziemer on those
15 reports.

16 Those reports will be modified
17 based up on the input we receive and presented
18 to you in near-final form before the May
19 meeting.

20 Two things you're seeing
21 relatively new for the first time, the quality
22 of science piece that was authored by Drs.

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1 Daniels and Spitz is now available to you.
2 It's on your stick, it's on the website, it's
3 on the table. I would ask you to give that a
4 bit of a read.

5 And then the customer service
6 piece offered by Ms. Chang is now available to
7 you in the same format.

8 I would ask Board Members to look
9 at those. If you have comments you would like
10 to share with the authors, please do. They'll
11 also be on the website. They're on the
12 website now.

13 Based upon your comments and
14 comments received on the website, those
15 reports will be again rewritten and presented
16 in near-final form prior to the May meeting.

17 The fifth piece is the SEC
18 petition piece, ably authored by Randy
19 Rabinowitz.

20 You've seen the first draft of
21 that. Randy has rewritten that report based
22 upon your comments, comments received from

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1 others, and is anxiously awaiting the release
2 of that to you as its second draft. It's
3 currently going through a policy review at the
4 Secretary's level.

5 And once that clears hopefully in
6 the very near future, we'll see that second
7 draft. It will be on the website. Again, I
8 would encourage you to make comment upon that
9 back to Randy.

10 It's my hope to have all of the
11 Phase 1 reports modified and to you along with
12 an introduction and a conclusion section prior
13 to your May meeting.

14 So you'll have the entire Phase 1
15 report in your possession, he said naively,
16 but we have to have goals in life. And that's
17 our goal.

18 The Phase 1 report ends with
19 author's observations and conclusions, and I
20 count - there are about 40 recommendations now
21 embodied in those reports.

22 Those 40 recommendations, once

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1 they're finalized based upon your comments and
2 others' comments, will be the basis of moving
3 on to Phase 2.

4 In Phase 2, John Howard and NIOSH
5 leadership will take those recommendations,
6 evaluate them and decide what recommendations
7 to implement in terms of improving the
8 program.

9 I would sincerely hope that, prior
10 to your May meeting, I will be able to bring
11 you the first draft of John's Phase 2.

12 The reason I'd like to do that is
13 I think, once a draft of Phase 2 exists, I
14 think then the Board really needs to look at
15 it in earnest and decide what input it wants
16 to make to the finalization of Phase 2, which
17 will, again, be the selection of the program
18 modifications to be made.

19 I'm a little less certain I'll get
20 you a draft of Phase 2 prior to May, but I'd
21 really like to see that happen rather than
22 wait until your next meeting, you know. The

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1 time unit we're working here are Board
2 meetings, and I would hate to slip beyond the
3 May meeting.

4 So if things work right you'll
5 have a draft final of Phase 1, you'll have the
6 first draft of Phase 2, which will be John's
7 thoughts as to program changes he intends to
8 implement.

9 And I have asked Dr. Melius if
10 that is available to you, I'd like to spend a
11 half an hour or so with you at the May meeting
12 talking about John's thoughts on
13 recommendations, and then your thoughts on
14 recommendations so we can get on with the
15 business of program review, which is really
16 making a better program to serve the needs of
17 the people. We're all here to serve the
18 claimants and petitioners.

19 So that's the status of it. May
20 be an optimistic view forward, but I do think
21 we're coming to a point where we can really
22 begin to look at improvements to the program.

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1 As always, I thank you for your
2 time and attention, and any comments you would
3 like to make as individual Board Members would
4 be welcomed by all authors.

5 Anything you'd like to say as a
6 Board, always holds great sway with
7 impressionable people like me.

8 CHAIRMAN MELIUS: A couple of
9 comments, Lew. First, for those of you
10 looking for the Phase 1 reports there, you
11 create your own separate tab on our drives
12 here. So it is under - they're under
13 Miscellaneous. So maybe by next time we'll
14 give you your own tab.

15 Secondly, I would suggest that we
16 set aside some time at the next Board meeting
17 not only for talking Phase 2, but also for
18 comments on Phase 1, should we have them.
19 Presumably if we get them in time before the
20 May meeting, the reports, we'll have a chance
21 to go through them.

22 And I think it would be worthwhile

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1 for the Board to have some discussion of those
2 and then talking about the Phase 2 and what
3 needs to be addressed there. So I think that
4 would be good. So, Ted, if you can set aside
5 the time?

6 MR. KATZ: Yes.

7 CHAIRMAN MELIUS: Third thing I
8 think I can say on behalf of all the Board
9 Members, congratulations to Stu. We look
10 forward to continuing to work with you. Sort
11 of a seamless transition, I guess, but we
12 appreciate your efforts and think it's a good
13 decision on the behalf of NIOSH. So thank
14 you.

15 And now, questions. Dick Lemen
16 had a question.

17 MEMBER LEMEN: I just had a
18 question of clarification.

19 How come the report of Randy
20 Rabinowitz has to go up through secretarial
21 review, and the other phases I don't think
22 went through that same review?

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1 DR. WADE: There are two types of
2 authors. There are authors who are NIOSH
3 employees. Their reports have to go through
4 the NIOSH internal review process.

5 And then there are contractors,
6 myself, Randy, and Nancy Adams. Those reports
7 all have to go through the Department to
8 policy review, and they did.

9 Randy's report has taken a bit
10 longer, I guess, maybe because it's more
11 substantive, but we follow the same procedures
12 for all based upon whether they were contract
13 authors or NIOSH authors.

14 You've seen Randy's first draft.
15 I sincerely hope you'll see her second draft
16 very soon.

17 CHAIRMAN MELIUS: Other questions?

18 Okay.

19 DR. WADE: Thank you.

20 CHAIRMAN MELIUS: Thank you.

21 MEMBER RICHARDSON: Could I ask
22 just a quick question?

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1 CHAIRMAN MELIUS: Oh, I'm sorry.

2 MEMBER RICHARDSON: This is just
3 kind of a big-picture question.

4 On the one hand, it's titled as a
5 review of the Radiation Dose Evaluation
6 Program, and yet the kind of - the stated
7 purpose under the text kind of lays out that
8 NIOSH is involved in this and this is a review
9 of NIOSH's program in support of the EEOICPA.

10 And yet the - is this a review of
11 the entirety of NIOSH's activities in going
12 through Division of Compensation Analysis and
13 Support or is it a review just of the
14 dosimetry activities within that?

15 DR. WADE: The former. All of
16 NIOSH's activities under the -

17 MEMBER RICHARDSON: So there's lots
18 of things that NIOSH is doing in support of
19 the Compensation Program that are not just
20 dosimetry. And, yet, like the quality of
21 science thing is solely focused on quality of
22 science as it applies to dose reconstruction.

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1 I was sort of wondering where
2 those other sections were.

3 DR. WADE: Could you give me an
4 example so I'm sure I understand what you -

5 MEMBER RICHARDSON: I mean the
6 quality of science related to risk assessment,
7 the use of Monte Carlo methods for deriving
8 those, the decisions about radiogenicity of
9 certain cancers, you know. All of those other
10 things are all part of what goes into making a
11 decision for a worker about Probability of
12 Causation or a compensation decision, and none
13 of those are reviewed.

14 DR. WADE: I think they're all fair
15 game for review. I guess I would ask you to
16 comment that you would like to see the review
17 expanded to consider those, if you would.

18 Again, we didn't put binders on
19 the people who did the science review. We
20 asked them to be as broad as they would like
21 to be, and this is what they've come back
22 with.

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1 So if you think a broader view
2 would be in order, then please let us know
3 that.

4 MEMBER RICHARDSON: Okay. Yes, it
5 was sort of a scope whether people had been
6 tasked. Because on the one hand, the reports
7 that have come back have really been tasked
8 with - we were asked about the program and
9 dose evaluation.

10 That's totally fair. That's a
11 huge effort and maybe that's enough for people
12 to provoke some.

13 But I didn't know whether at some
14 place along the line this was supposed to be a
15 bigger ten-year review of -

16 DR. WADE: No. And you make me
17 think, Dr. Richardson, about, you know, how we
18 got to the point we did.

19 I think we were really interested
20 in the place where the NIOSH activity met
21 those people we were intending to serve, the
22 petitioners and the claimants.

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1 And it could be that that
2 particular focus made us a bit more limited
3 than we needed to be. I don't know, but
4 that's possibly one explanation.

5 But if you think that that would
6 be a benefit, please, I mean, nothing is out
7 of bounds here. That stuff gets a bit
8 esoteric, but if it needs to be done, then by
9 all means.

10 CHAIRMAN MELIUS: Can I just
11 comment?

12 I actually think in the beginning
13 of the program we did spend a fair amount of
14 time on some of those issues at least as they
15 apply to the program. And there's discussion
16 and development of the regulations and sort of
17 initial methods.

18 And then I think you're right,
19 David, we sort of then sort of focused on dose
20 reconstruction as a relationship to exposure
21 as sort of our main activity and gotten away.

22 I do think that the Science

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1 Working Group, Scientific Issues Working Group
2 at least as I wrote up the charge for that,
3 was focusing on those other sort of risk-
4 related issues and also to identify issues
5 that aren't, you know, scientific issues that
6 may also need to be addressed.

7 And so that may form the basis for
8 further review as Lew suggested, and I think
9 we can talk about that as we go forward at our
10 meetings and with NIOSH, because I think those
11 are - I think you raise some very good points
12 and I think we should be paying attention to
13 those also.

14 Hopefully through the Work Group,
15 the Board can start that, and then with our
16 dialog with NIOSH, we can determine what else
17 needs to be done.

18 DR. WADE: By all means. I mean,
19 certainly NIOSH leadership stands ready to
20 take on that task. If and when the Board
21 thinks it's appropriate, we would like to do
22 it in concert with the Board. So what Dr.

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1 Melius suggests maybe is the right path
2 forward.

3 It's interesting when you get to a
4 place and you turn back and look at the places
5 you didn't get and why you didn't get there.

6 DR. WADE: Also, if you think, it's
7 probably been seven years since we talked
8 about IREP at a meeting in terms of a topic
9 for presentation.

10 It gets talked about in passing or
11 there's some tweaking that goes on in various
12 places, but sort of, you know, basic issues
13 like that we've not gone back to for quite a
14 while. And I think it would be good if we did
15 do that. Thanks.

16 CHAIRMAN MELIUS: Any other
17 questions for Lew? Wanda, did you -

18 MEMBER MUNN: No.

19 CHAIRMAN MELIUS: Okay. Good.
20 Okay. Thank you, Lew.

21 I would also - I was remiss. I
22 should also congratulate Josh Kinman on your

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1 new position. We also hope that LaVon
2 survives without you. So we'll see how he
3 does in his presentation later to that, but
4 good luck. But we look forward to working
5 with you. It's an important interface for the
6 Board and for NIOSH.

7 Our next presentation is the
8 Department of Labor. Jeff, welcome.

9 MR. KOTSCH: Good morning. First
10 of all, I have to apologize. I'm working
11 through the back end of a cold and my voice
12 got a lot worse this morning than it was
13 yesterday. So apologies for that.

14 This presentation, the front end
15 of it we've all seen a number of times. It's
16 like the briefing we get on the airplane
17 flights, you know. You hear it continuously
18 and it - but I do it for the few people maybe
19 in the audience that haven't seen this one
20 yet, but maybe we'll go a little more quickly
21 through it.

22 The Act was enacted in October

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1 2000. Part B was mandatory federal
2 entitlement, which was given to the Department
3 of Labor. And Part - the old - what is now
4 the old Part D, the state workers compensation
5 assistance, was given to the Department of
6 Energy.

7 The Act was amended in October
8 2004. It abolished Part D, created Part E,
9 which was then transferred to the Department
10 of Labor. We'll see in a minute that's the
11 non-cancer side of the program.

12 As of - and I think most of these
13 slides are February 6th, 141,159 cases had
14 been filed and over \$6.7 billion in total
15 compensation and medical benefits have been
16 paid to date.

17 The agencies involved are Labor,
18 Energy, Health and Human Services and the
19 Department of Justice primarily for the RECA
20 portion.

21 And Labor has operations - of
22 course the main office is in Washington, and

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1 has district offices in Jacksonville,
2 Cleveland, Denver and Seattle.

3 As I noted, total compensation to
4 date is about \$6.7 billion. 3.8 billion of
5 that is Part B. 2.3 billion is Part E and 689
6 million is for medical expenses. And there
7 are the percentage breakdowns.

8 At this point, I always remark
9 that the number of payees is always greater
10 than the number of cases because cases may
11 have, if the worker is deceased, may have one
12 or more survivors.

13 So we've had about 67,000 payees
14 and about 49,600 Part B and Part E cases. And
15 there you see it's about 46,000 Part B payees
16 for about 29,900 cases, and 21,000 Part E
17 payees in about 19,800 cases. About sixty
18 percent Part B, forty percent Part E.

19 This is just - the next couple
20 slides are just tables of the employee
21 eligibility between the two parts. I'll go
22 through that fairly quickly.

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1 There are differences such as the
2 DOE federal employees are not covered under
3 Part E, nor are the AWE employees or the
4 beryllium vendors.

5 And beryllium sensitivity is
6 medical monitoring in Part B, but it is paid
7 in Part E. And Part E is primarily toxic
8 exposure and Part B is primarily cancer,
9 beryllium and silicosis.

10 There's the survivor definitions.
11 They vary a little bit because of the way the
12 amendment to the law was written for Part E.

13 And those are the benefits paid
14 under Part B, 150,000. 50,000 for the RECA.
15 Impairment is for - under Part E, is 2500
16 percent of impairment. And wage loss ranges
17 between 10 to 15,000 per the Act. And there
18 is that CAP of 400,000.

19 These are just a list of how DOL
20 verifies employment using the Department of
21 Energy, ORISE, CPWR, corporate verifiers,
22 Social Security Administration wage data and

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1 affidavits.

2 And then this is just a listing of
3 how we verify toxic exposures, including the
4 Occupational History Questionnaires, the Site
5 Exposure Matrices, which I think are
6 completely - and Greg will probably update us
7 on this, but I think all the elements, all the
8 facilities for those are now on the public
9 website.

10 That database identifies toxic
11 substances related to labor categories,
12 processes, buildings and major incidents.
13 Then there's the DAR request and the claimant
14 records.

15 Obviously, the dose
16 reconstructions are conducted by NIOSH. And
17 the Probability of Causation calculations are
18 ultimately run by the Department of Labor.

19 SEC Class, Worker Group
20 designations, the presumption is occupational
21 radiation causes cancer. There were four
22 legislated SEC Classes, the three gaseous

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1 diffusion plants and Amchitka test site in
2 Alaska. And as of February 15th, 2001, there
3 have been, by our count, 71 SEC Classes.

4 There are the requirements for
5 employment. 250 days. 22 specified cancers
6 which are stated under the law.

7 And a brief statistic on Part B
8 cases, the left side are the final decisions
9 that have been approved. That's about - well,
10 it is 31,786. And then on the right side are
11 the denied cases totaling 21,820.

12 And then you see the distribution
13 or the rough breakdown of some of the reasons
14 why they're denied, including survivor
15 ineligibility, PoCs, which is the prime one,
16 being less than fifty percent, and medical
17 information insufficient to support the claim.

18 These are the Part E's final
19 decisions. A little over 26,000 approved.
20 About 20,600 denied.

21 The referral status to NIOSH,
22 34,000. About 34,100 cases referred to NIOSH

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1 for dose reconstruction. About 30,900 have
2 been returned primarily with dose
3 reconstruction, sometimes without dose
4 reconstructions, if we pull them - the
5 Department of Labor pulls them back for a
6 variety of reasons primarily including SEC
7 Classes.

8 And we're indicating right now
9 3220 cases at NIOSH, of which 683 are reworks
10 or returns.

11 As far as SEC Classes withdrawn
12 from NIOSH, we're indicating 3268 withdrawn
13 for SEC Class review. And there's the
14 breakdown. We've got about 2900 final
15 decisions issued and 2819 final approvals.

16 The difference there is just that
17 the fact the district office decides on the
18 recommended decision, then it has to go to our
19 Final Adjudication Branch, and they make the
20 final approval. So there's a little bit of a
21 lag as far as the numbers there as far as the
22 approval process - review and approval

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1 process.

2 Again, 26,866 cases have been
3 returned by NIOSH that are currently at DOL
4 with a dose reconstruction.

5 22,606 have a dose reconstruction
6 and a final decision. And there's the
7 breakdown. Final denial is about 65 percent.
8 Final approval is about 35 percent.

9 This is just a listing of the Part
10 B cancer cases with final decisions to accept.

11 We've accepted dose-reconstructed cases,
12 about 7500 for \$1.11 billion in compensation.

13 SEC cases, 13,066 for about \$1.93
14 billion in compensation. The combination of
15 SEC Class and a PoC greater than 50 for
16 medical is 69.6 million in compensation. So
17 that totals 20,995, resulting in \$3.1 billion
18 in compensation.

19 Just the Part B breakdown monthly
20 of cases we send to NIOSH running, you know,
21 probably averaging the low 300s.

22 And not all cases obviously get

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1 referred to NIOSH, so these are the numbers
2 that are coming in monthly to the Department
3 of Labor currently running about, you know, a
4 little over 400.

5 The difference being, again, ones
6 that go straight to SEC, ones involving
7 chronic beryllium or silicosis.

8 We usually like to list the top
9 four worksites generating Part B cases. The
10 list is Hanford, Y-12. This time Bethlehem
11 Steel was bumped up because of the Class
12 designation. That's been a few months ago
13 now. And K-25.

14 And then these individual slides
15 just show the monthly trends, I think, for the
16 last year or so.

17 And you can look through those,
18 you know. You're running probably in the 30s
19 and the 40s. Bethlehem Steel showed the bump
20 because of the SEC Class designation. And
21 then K-25 has always been kind of high or
22 relatively higher.

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1 On the left side of this is
2 percentage of new AWE cases and Part B DOE
3 cases. Left side is the new AWEs, and the
4 right side is the new DOE cases.

5 And it runs about - I think it's
6 running about, I don't know, 30 percent AWE,
7 70 percent DOE cases that we see from those
8 kinds of facilities during a month.

9 And then the last few slides, and
10 I'm not going to go through all of these,
11 again we list data for the primary sites that
12 either are under discussion at the meeting or
13 that are local sites to the meeting.

14 So we have Chapman Valve, Dow
15 Chemical, Grand Junction, Linde Ceramics,
16 Bliss & Laughlin, Fernald, Norton. Savannah
17 River site we've seen 12,296 cases. We've
18 issued 4344 final decisions. That's Part B.
19 And of those, 1539 were approvals. Part E
20 approvals were 2,046. And total compensation
21 and medical bill payment was \$426.2 million.
22 Again, that's dated as of the 14th of

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1 February. And then Vitro is there.

2 And this is just a pie chart for
3 the distribution of the Part B cases that have
4 been filed and how they get dispositioned.
5 NIOSH, RECA, SEC cases and other, again, which
6 is the silicosis, the chronic beryllium and
7 those categories. And I think that should be
8 it.

9 Any questions?

10 CHAIRMAN MELIUS: Brad.

11 MEMBER CLAWSON: This is kind of a
12 general question.

13 If a claimant filed a claim under
14 Part E, how come would they get received back
15 from the Department of Labor a letter saying
16 that they're waiting for NIOSH to do their
17 dose reconstruction?

18 MR. KOTSCH: For Part E, that's
19 probably if - it's for a non-cancer?

20 MEMBER CLAWSON: Yes.

21 MR. KOTSCH: Then, unfortunately,
22 that's an error.

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1 Usually when a claim comes in as a
2 Part E, it automatically will also be
3 dispositioned as a Part E. But it shouldn't
4 work that way if it's just a Part E, you know.

5 They shouldn't go in and revert to the Part B
6 portion, which would be a referral denial.

7 So that's just - I don't know. If
8 you have specific information, we can talk
9 offline, but that shouldn't - I don't think
10 that should be happening.

11 MEMBER CLAWSON: Yes, because I've
12 seen this several times.

13 There was another one in your
14 slides where people are compensated under Part
15 E and there was DOE federal employees.

16 We've seen at several sites,
17 especially I believe it was with firemen or
18 whatever that - like, they were federal
19 employees for four years. And then it
20 switched over to DOE.

21 And there seems to be a disconnect
22 on if they're actually being classified as

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1 federal employees or DOE employees.

2 MR. KOTSCH: Yes, and that one I
3 don't know. Again, those things are looked at
4 on a case-by-case basis by the district
5 offices. I don't know how they, you know,
6 we'd have to look at the specific data to see
7 how they're reviewing that individual.

8 MEMBER CLAWSON: Okay. I'll talk
9 with you offline on that.

10 MR. KOTSCH: Sure. I appreciate
11 it.

12 CHAIRMAN MELIUS: Jeff, I have one
13 question on your last slide, the pie chart
14 there and just on the SEC cases. You have SEC
15 cases never sent to NIOSH. So those are after
16 an SEC's been approved.

17 But then you have SEC cases
18 referred to NIOSH, and those would be cases
19 that were referred before an SEC was approved.

20 MR. KOTSCH: Yes.

21 CHAIRMAN MELIUS: But does it
22 include - which category do you have cases

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1 that are non-SEC cancer? So are those under
2 sort of the NIOSH referrals?

3 MR. KOTSCH: Yes, they would be
4 under there.

5 CHAIRMAN MELIUS: Okay. I'm just
6 trying to understand the numbers. Okay.
7 Thanks.

8 Any other questions for - yes,
9 David then Paul.

10 MEMBER RICHARDSON: I was
11 interested in the slide that's related to the
12 means of verifying toxic exposures and the
13 description that there's site exposure
14 matrices that have been developed for that.

15 I'm wondering if there's things
16 that this Board could learn from the process
17 that you've undertaken in order to handle
18 those situations, because they're very much
19 the situations that we encounter.

20 I mean, I know a little bit about
21 trying to reconstruct non-radiological
22 exposures for workers at DOE sites and it's

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1 extremely complicated.

2 If we have gaps in dosimetry
3 records, the gaps in industrial hygiene
4 records are, you know, orders of magnitude
5 worse.

6 And so I'm wondering what process
7 you've used in order to develop fair, timely
8 methods for making these decisions about
9 whether claimants have had these toxic
10 exposures, what the process is for review and
11 evaluation of these matrices that have been
12 constructed.

13 Because, you know, we have
14 comparable situations in some places where the
15 kind of objective monitoring information is
16 really lacking.

17 You sort of describe a process
18 which we wished we could do, but we don't, of
19 identifying workers with potential exposures
20 based on labor categories, buildings,
21 incidents.

22 We don't do any of that because

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1 we've been told we can't place workers
2 reliably into those categories.

3 So I'm wondering if we could learn
4 something about how those SEMs are used and
5 whether there's something more missing.

6 MR. KOTSCH: This slide probably
7 gives that particular system more credit than
8 it deserves.

9 The SEM is a fairly qualitative
10 process unlike the NIOSH process, which is
11 actually comparatively very quantitative.

12 We don't do any dose
13 reconstruction on the Part E side. It's more
14 of a qualitative assessment as far as based on
15 things like work title - and I don't do the
16 Part E side that much, you know, work title,
17 facilities, where they're at in particular
18 buildings, what kind of operations they're
19 doing, and then what potentially they could
20 have been exposed to.

21 And then our industrial hygienists
22 just try to make some correlations to exposure

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1 and things like that.

2 We can talk more offline or I can
3 even put you in touch with some of our people
4 if you're interested in some of that.

5 Because, like I said, I don't
6 really deal with a lot of that, especially the
7 SEM portion.

8 MEMBER RICHARDSON: I mean, I think
9 that sounds very reasonable and I sometimes
10 feel like we need to go in that direction.

11 Frankly, I mean, I'd be more
12 comfortable making a qualitative judgment that
13 somebody was exposed, than assigning a
14 quantitative score.

15 MR. KOTSCH: I mean, our industrial
16 hygienists are thrilled if they ever see any
17 kind of monitoring data -

18 MEMBER RICHARDSON: Yes.

19 MR. KOTSCH: - that's to be
20 submitted with the case. It's very, very
21 limited, you know.

22 Like recently we've been doing

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1 some noise exposure assessments and, I mean,
2 reviews for noise exposure and solvents and -
3 well, for the more recent years, we actually
4 tend to see some noise surveys and things like
5 that, which is useful.

6 MEMBER RICHARDSON: Starting in
7 1980.

8 MR. KOTSCH: Right.

9 MEMBER RICHARDSON: And then you've
10 got to figure out what happened in 1950.

11 MR. KOTSCH: Yes, it's not - it's
12 been the last couple decades kind of things,
13 but we can talk more if you'd like to.

14 MEMBER RICHARDSON Thank you, sir.

15 CHAIRMAN MELIUS: I would just add
16 that those matrices, I believe a number of
17 them are now, if not most of them, are now
18 available through the -

19 MR. KOTSCH: I think all the
20 facilities - yes, all the facilities are now
21 up. They had a few that were hanging out at
22 the end there.

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1 MR. LEWIS: Yes, this Greg. As of
2 December 30th, they're all up.

3 CHAIRMAN MELIUS: Okay. The last
4 two years or year or whatever it's been, the
5 DOL's made those available after review by DOE
6 for issues.

7 If you want to look at one of
8 those -

9 MEMBER RICHARDSON: Yes, I have
10 looked at them. And I think, I mean, the
11 other thing that's interesting to me is that
12 they're - I guess I would say they're highly
13 synthetic and dynamic in the information
14 that's going into them. It's not as though
15 there was an expert who constructed the
16 matrix.

17 I think that they're taking
18 information provided by the claimants about
19 their recollection of agents they worked with,
20 and using that to inform or revise the
21 matrices, which is something which, you know,
22 NIOSH has been criticized about.

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1 And, you know, it's a really
2 different model for developing this -

3 MR. KOTSCH: Well, the claimant
4 information is definitely included in the
5 assessment, but the - and, again, I'm not real
6 familiar with SEM, but the data came initially
7 from the Department of Energy, you know, that
8 populates that as far as the chemicals and
9 things like that.

10 CHAIRMAN MELIUS: I think much of
11 it came from the medical surveillance program.

12 MR. KOTSCH: Yes, there were a
13 number of inputs.

14 CHAIRMAN MELIUS: That was one of
15 the inputs. There's other inputs from other
16 reports and so forth.

17 MEMBER RICHARDSON: But I just
18 found it interesting.

19 CHAIRMAN MELIUS: Paul, sorry.

20 MEMBER ZIEMER: Mine is a follow-up
21 question on that pie chart also.

22 On the SEC cases returned - or

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1 sent to NIOSH, I guess most are ones that had
2 been there originally before an SEC claim - or
3 before an SEC existed, SEC Class, and then
4 they went back.

5 Now, did you also indicate, then,
6 that those who didn't have the specified
7 cancer are in that part of the pie chart as
8 well?

9 MR. KOTSCH: No, they shouldn't be
10 in there. They should be in the NIOSH piece.

11 MEMBER ZIEMER: They're in the
12 NIOSH piece.

13 And what about those who if you
14 have an SEC Class where they don't meet
15 another requirement such as the 250 day?

16 MR. KOTSCH: Then they'd be in the
17 NIOSH piece.

18 MEMBER ZIEMER: They're in the
19 NIOSH piece also. Okay.

20 MR. KOTSCH: Yes, if you don't meet
21 - if you don't meet the criteria for the Class
22 regardless of whether it's a cancer or

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1 employment for even a facility, the time
2 portion of facility, because obviously some
3 facilities have pieces that are SEC and non-
4 SEC.

5 MEMBER ZIEMER: Right.

6 MR. KOTSCH: Some of them have
7 multiple SECs.

8 MEMBER ZIEMER: Okay. Thank you.

9 CHAIRMAN MELIUS: Any other - Phil,
10 yes. Sorry.

11 MEMBER SCHOFIELD: Yes, I've got
12 two questions. You were talking about the
13 requirements.

14 What if you have a claimant who
15 has like 230 days in the SEC period, and
16 continues to work maybe ten, 20 years after
17 that point?

18 How is that handled?

19 MR. KOTSCH: Well, his time - his
20 employment during the SEC period is what's
21 counted. Even if his time after the SEC
22 period is - well, basically all that time

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1 would be considered in the dose
2 reconstruction, but he wouldn't have - he
3 wouldn't be eligible for the SEC Class,
4 because he doesn't meet the 250-day
5 requirement.

6 Now, we'll often try to look at
7 the number of days employment within the Class
8 and see if we can extend it or add days, you
9 know, things like that to try to get it up to
10 250 days.

11 But failing that, you have to have
12 the 250 days to be considered in the Class.
13 And if you don't have that, then that time
14 just goes into NIOSH's larger dose
15 reconstruction.

16 And of course during that period,
17 more than likely - well, it will be a partial
18 dose reconstruction. So there will be some
19 pieces of that dose during the SEC period
20 that, you know, the claimant will not, you
21 know, get credit for during the dose
22 reconstruction, you know, by virtue of the

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1 definition.

2 MEMBER SCHOFIELD: The second
3 question is when you were talking about Part
4 E, I realize we don't deal with this, but the
5 - you take anybody who had an occupation who
6 spent a lot of time in different labs,
7 different facilities and were exposed to who
8 knows what all, I mean, directly they didn't
9 work with it, any of those chemicals, per se,
10 but they spent a great deal of time around
11 facilities where there was a lot of different
12 chemicals in use.

13 For a Part E claimant, how would
14 you recommend they document any of this?

15 MR. KOTSCH: Well, as, you know,
16 obviously the more information they can
17 provide as to what facilities they worked in,
18 the period - the durations, what kind of
19 activities they did in those facilities, that
20 all helps to feed into the - primarily the
21 industrial hygienist, but it may also be a
22 toxicologist, their review of, you know,

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1 potential exposure.

2 Most people don't - are unable to
3 provide, you know, actual monitoring data and
4 we wouldn't normally expect that.

5 But, you know, if you have it,
6 like I said, occasionally we do find
7 information that either claimants provide or
8 the facility has for a little bit of IH
9 monitoring, which is fantastic.

10 But, like I said, most of the time
11 we don't have that information. So all we can
12 depend on is, you know, the list of chemicals
13 that we know to be or we think were in that
14 building.

15 The claimant certainly can add
16 what he thinks, he or she thinks they were
17 exposed to, what activities they did, you
18 know, while they were employed, things like
19 that.

20 Whatever they can do to fill out
21 the definition of what they did is always
22 useful, but that's about the, you know, I

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1 don't - there's probably something I'm
2 missing, but that's primarily it.

3 CHAIRMAN MELIUS: Any other
4 questions?

5 (No response.)

6 Okay. Thank you.

7 MR. KOTSCH: Thank you.

8 CHAIRMAN MELIUS: Thank you very
9 much, Jeff.

10 Our next speaker is Greg Lewis
11 from the Department of Energy.

12 MR. LEWIS: All right. Thank you,
13 Dr. Melius. And, again, I'm Greg Lewis. I'm
14 the acting director of the Office of Former
15 Worker Screening Programs at DOE, and our
16 office is responsible for supporting the
17 EEOICPA program.

18 So our core mandate at DOE is to
19 work on behalf of program claimants to ensure
20 that all available worker and facility records
21 are provided to DOL, NIOSH and the Advisory
22 Board.

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1 So essentially our role under this
2 program is to provide the records that allow
3 DOL to adjudicate claims and NIOSH to
4 reconstruct dose.

5 As part of that, we have three
6 primary responsibilities. First is to respond
7 to requests for individual information. So
8 for NIOSH or DOL they will need to - DOL will
9 need to verify employment. NIOSH will need to
10 gather dose information on a specific
11 individual. And all of our sites will receive
12 those requests and respond back typically
13 within 60 days.

14 The second responsibility is to
15 provide support for large-scale records
16 research projects, including the DOL SEM that
17 we just talked about, NIOSH Site Profiles, the
18 SEC research that NIOSH conducts, things like
19 that.

20 And then our third responsibility,
21 which is smaller than the other two, but just
22 as important, is to conduct research on

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1 facility designations or covered facilities.

2 So if someone believes that a
3 facility should be covered for additional
4 years or is covered for years that it
5 shouldn't be, we'll go through our records and
6 try to determine, you know, or respond to
7 NIOSH or DOL.

8 While the Office of Former Worker
9 Screening Programs in DOE headquarters funds
10 and coordinates the efforts to respond to DOL
11 and NIOSH, the bulk of the work is actually
12 done by our sites.

13 And every one of our sites has a
14 designated EEOICPA point of contact. And
15 these POCs are really the engine that makes,
16 you know, our program run over at DOE.

17 They coordinate all of the
18 research activities with NIOSH, the Advisory
19 Board and the contractors. They set up site
20 visits and tours. They arrange for the
21 research groups to review records. They set
22 up interviewees or locate former workers on

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1 occasion to come in and do interviews with the
2 researchers.

3 And then in addition, these
4 EEOICPA POCs will manage the effort to respond
5 to these individual requests.

6 For the individual records, we, as
7 I mentioned before, we do three different
8 types of requests. Employment verifications
9 come in from the Department of Labor, NIOSH
10 will send us dose reconstruction requests, and
11 DOL will send us what we call DARs, document
12 acquisition requests, which are essentially
13 requests for any additional exposure, non-rad
14 and non-employment information, but any other
15 exposures. So industrial hygiene, medical
16 records, incident and accident records,
17 training records, things like that.

18 The total number of requests
19 completed in 2010 - FY2010. So from October
20 of '09 to October of 2010, we did about 17,000
21 records requests.

22 Now, our numbers are never going

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1 to actually match up quite with what DOL and
2 NIOSH has because we count one request at a
3 site as one request.

4 So typically many of these
5 individuals might have worked at two to three
6 sites. They might have visited other sites.
7 So we'll get a request, say, for a Los Alamos
8 employee who was working for an extended
9 period of time in Nevada for a test shot or
10 Amchitka, the Pacific Proving Grounds, things
11 like that, you know. We'll get a request
12 there and we count that as a request, because
13 we still have to go pull the records.

14 These individual records requests
15 are often very complicated. As I just said,
16 claimants could have worked at multiple sites
17 for multiple contractors or subcontractors
18 within the site. They could have retired and
19 come back as a subcontractor. They could have
20 been in different jobs or divisions.

21 So we may have to go to many
22 different locations just to pull records on

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1 one individual.

2 Often, the records packages we
3 provide back to DOL and NIOSH are hundreds of
4 pages long. And, you know, on occasion we've
5 had a cubic foot of records, which is about
6 one standard records box or more on a single
7 individual.

8 You know, for a typical request at
9 each site, we will have to go to many
10 different departments. As I mentioned before,
11 the medical department, industrial hygiene,
12 radiological controls, human resources, we go
13 for incident and accident reports, things like
14 that.

15 So we often have to tie in five,
16 six and seven different divisions within a
17 site all need to respond within the required
18 60 days before we can get it back to NIOSH or
19 DOL. And as an example, one DOE site, and
20 this is not the highest, it's probably about
21 average, routinely checks about 40 different
22 sources for responsive records.

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1 That would be up to 40 different
2 sources for one individual, including hard
3 copy paper records, microfilm, microfiche,
4 multiple databases both containing electronic
5 images, as well as databases that just contain
6 a finding aid that leads them to a hard copy
7 record.

8 So the second major responsibility
9 the DOE has under EEOICPA, is to support
10 large-scale research projects.

11 These projects are driven by the
12 needs of Department of Labor and NIOSH, again,
13 with the SEM, and then the Site Profile work
14 or Site Profile follow-up and SEC research
15 projects.

16 These projects can take years
17 depending on the complexity and, you know, the
18 size of the project. And they can cost
19 hundreds of thousands of dollars to support.

20 So we do need to keep on our toes
21 to make sure that the right resources are in
22 the right places to support these projects

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1 when the need arises.

2 One of the complications we run
3 into with these projects is that, due to the
4 nature of the work DOE conducted, historically
5 many of their records that are requested need
6 to be reviewed for classification. So far for
7 each of these projects, you know, millions of
8 pages can be reviewed. It can be a very time-
9 consuming and costly process. It does slow
10 down the overall process, but we do our best
11 to get these documents reviewed and in the
12 hands of the requester in a reasonable time
13 frame.

14 And often we're supporting four to
15 five projects at once. In fact, many times
16 more so, although they are in various stages,
17 some are just starting, some are in the thick
18 of it and some are completing. So it is tough
19 to balance the workload among our sites.

20 Currently, these are a few
21 examples of the projects we're supporting for
22 NIOSH or for the Board: Hanford, Savannah

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1 River, Pantex, Brookhaven, Sandia and SLAC,
2 Stanford Linear Accelerator Center.

3 But, again, these are some of the
4 examples. We are currently supporting a few
5 additional ones as well.

6 Just to talk about a few of them,
7 Sandia seems to be right in the thick of the
8 research that we're spending a lot of time and
9 effort to support that right now.

10 There's been four site visits
11 since August for records review, data capture
12 and worker and former worker interviews.

13 We're also supporting inquiries
14 into Ross Aviation and the Clarksville Medina
15 facility, which because of the work that those
16 facilities did, many of their records ended up
17 at Sandia. So even though it's not directly a
18 Sandia project, Sandia is in the position of
19 supporting those three projects as well.

20 Thus far there's been about ten
21 square feet or cubic feet of records requested
22 by NIOSH. And those are currently undergoing

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1 classification review. We hope to get them in
2 the hands of the requesters within the next
3 couple months.

4 As I mentioned before, one of the
5 problems that we run into quite often with
6 these projects, especially at the NNSA
7 facilities and the weapons lab like Sandia, is
8 we struggle with classification reviews.

9 For our project at Hanford, which,
10 you know, was on the previous slide, we ended
11 up bringing back subcontractors and former
12 classification reviewers to enable us to
13 review the documents in the required time
14 frame.

15 At Sandia, it hasn't been quite as
16 easy in that they've had some retirees
17 recently. And those retirees are not willing
18 to come back as subcontractors or are
19 uninterested or unreachable.

20 So they had to in terms of
21 manpower to support their existing mission, as
22 well as this surge of requests for classified

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1 material, they were really struggling to do it
2 in a timely manner.

3 So at headquarters we worked
4 within, you know, our network of contractors
5 and throughout our facility to find a
6 contractor that we believe we could bring in
7 for this project and handle this surge
8 capacity, I guess.

9 So we're in the final stages of
10 arranging for this contract. And when we've
11 set it up, the records that are requested at
12 Sandia will be sent offsite to this contractor
13 who is located in the Denver area.

14 They have up to 20 classification
15 reviewers that are knowledgeable about the
16 site. They will be brought in for a week or
17 two weeks at a time after a visit to hopefully
18 get these documents right back to the
19 researchers.

20 So we're excited about that. We
21 believe it will be useful at Sandia. And we
22 also think in the future if there's additional

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1 sites where we want to do the same process, we
2 won't have to reinvent the wheel. We'll be
3 able to call on this contractor to come in and
4 assist us when needed.

5 At Pantex, we're currently - we
6 believe the bulk of the research has been
7 completed or at least on our end, the support
8 that we need to provide. Although, there are
9 still issues here and there that we're
10 provided information back.

11 Currently, we're scheduling a
12 meeting at Department of Energy headquarters
13 in Germantown where Members of the Advisory
14 Board, their contractor, NIOSH and their
15 contractor can come in, review all of the
16 classified documents requested under this
17 project and, you know, I think, you know,
18 discuss the issues they need to discuss while
19 we'll be able to support them with the
20 classification staff that can, you know, help
21 answer their questions and guide them as far
22 as what information they can and can't put

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1 into reports.

2 And at Savannah River, we've
3 supported, I'd say, close to here, but I think
4 it's actually been probably over ten different
5 data-capture visits during the last year.

6 And, you know, we continue to
7 support data-capture efforts. Although, we
8 believe they're becoming more targeted as you
9 focus on specific issues that they need to
10 resolve for the research. So we'll continue
11 to support that as needed.

12 And, again, at headquarters, we
13 also have a role supporting document reviews.

14 Not the documents requested at the sites.
15 But as the Board and NIOSH prepare their
16 reports and drafts and White Papers and things
17 like that, we at headquarters review those as
18 interim and draft reports, as well as the
19 final reports.

20 We, about two years ago in 2008,
21 we determined that there was a need for this
22 review capability.

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1 We worked with both NIOSH, the
2 Board and DOL to come up with a DOE EEOICPA
3 security plan, which we believe has been
4 working very well and governs how we operate
5 with these document reviews.

6 You know, again, the plan, we
7 believe, has been working pretty effectively.

8 However, recently we have run into some
9 concerns, questions over official-use-only
10 information, which, you know, in our original
11 plan we had concentrated primarily on
12 classified information, because that was the
13 big concern at the time. And we probably
14 weren't as specific as we needed to be with
15 official use only.

16 So we're currently reviewing our
17 procedures and regulations regarding OUO and
18 hope to amend our security plan in the next
19 couple months to reflect that.

20 So we'll be working closely with
21 NIOSH and the Board to make sure that
22 everyone's on board with what we're proposing.

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1 Now, for the headquarters document
2 review since the last Board meeting in
3 November, there have been approximately 97
4 documents submitted to DOE for classification
5 review.

6 Our headquarters group has been
7 turning those documents around in about eight
8 working days. Although, in certain cases
9 where there's been a request for an expedited
10 review, we've returned them in one or two days
11 as needed.

12 And this is just a general slide
13 on SEC support. That's obviously probably the
14 largest single type of project that we support
15 here, is the SEC reports, now that the DOL SEM
16 is mostly completed.

17 We have our subject matter experts
18 on site, contribute to Working Group and
19 conference calls held by the Board and by
20 NIOSH, and we also have facilitated secured
21 meetings and conference calls when necessary
22 where classified discussions can take place.

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1 As I just mentioned, we're in the process of
2 doing that for Pantex right now.

3 And then the third major role that
4 the DOE has to support EEOICPA is facility
5 research. We research and maintain the
6 Covered Facilities Database which is on our
7 website. The link is down at the second
8 bullet there.

9 And there are over 300 facilities
10 currently covered under EEOICPA. That
11 includes AWEs, Atomic Weapons Employers, DOE
12 facilities and beryllium factories.

13 And this slide, our Office of
14 Legacy Management helps us with their
15 research. They have staff who have been
16 involved in DOE records work for 20 years, 20
17 and 30 years each. So they have extensive
18 experience.

19 Jeff Tack is our primary
20 researcher and I know many of you have worked
21 with him. He has extensive experience in the
22 DOE world. And he has some capable staff to

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1 help him when needed, as well.

2 I'm going to talk about a couple
3 of initiatives we're working on right now at
4 DOE. We always have an ongoing effort to
5 identify additional records collections useful
6 for EEOICPA.

7 From time to time the - many of
8 these DOE sites have been operating since the
9 '40s and '50s. And while in general they have
10 excellent records management programs, there
11 are certainly some collections that have been
12 mislabeled that we don't realize exactly
13 what's contained in them or don't understand
14 the importance to EEOICPA.

15 So from time to time we will
16 locate a collection or we'll open a box that
17 is labeled as something and we'll realize that
18 it's something else, and that those records
19 would be very valuable to either DOL or NIOSH
20 under the program.

21 So when we do find that, we have
22 the funds set aside to support an effort to

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1 either digitize the records or just index the
2 records, you know, take some step so we make
3 sure that we can then use those records
4 effectively for EEOICPA claims and these
5 large-scale research projects.

6 When we identify and index
7 collections like this, we'll work with NIOSH
8 and DOL to make sure that all past claims, we
9 run those names through so if there's any
10 additional records, those claims can be
11 reopened. I know that has happened in the
12 past.

13 So that's an effort that we're
14 always working on here at headquarters.
15 There's usually, you know, a few collections
16 every year that we find out at these sites and
17 we do everything we can to make sure that
18 they're used effectively.

19 Another initiative we are working
20 on currently is a secure web-based file
21 transfer system. We don't anticipate this
22 having much impact on how the program

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1 operates, but we believe that it's going to
2 allow DOE, DOL and NIOSH to transfer documents
3 and information between the various agencies
4 quickly and securely.

5 It will be encrypted. There's a
6 lot of personally identifiable information,
7 PII information within these claims. And it's
8 extremely important that the government
9 protect those records and make sure people's
10 information aren't lost or compromised.

11 So we believe that this secure
12 file transfer system would make sure that
13 those - that information is as secure as
14 possible, and it would also allow for the
15 transfer of information, probably saving about
16 a week in terms of each records request.

17 If it's a 60-day time frame, we
18 anticipate saving five or more days just by
19 going to this electronic file transfer system.

20 We've recently renewed our
21 Memorandum of Understanding with both Health
22 and Human Services and DOL. Really, we were

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1 operating under the previous MOU. It had
2 become somewhat outdated and I think all
3 agencies had changed their processes or how
4 they actually had been working in the field.
5 And so we just wanted to make sure that the
6 MOUs were updated to reflect how we're
7 operating these days. Those are both posted
8 on our website if anyone is interested.

9 And I know there were some
10 questions during Jeff's presentation, DOL's
11 presentation, about the DOL SEM database.

12 The database was originally
13 completed in 2008. And in 2009, I believe in
14 late 2009, DOL requested that DOE review the
15 database for classification and OUO and
16 unclassified nuclear controlled information -
17 controlled nuclear information, excuse me.

18 And so they could release that
19 database to the public. So we've been doing
20 that over the last year, and here's the steps
21 of release.

22 I think we released the first

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1 batch on April 30th, forty-eight sites, as
2 well as all of the mines, mills and ore-buying
3 stations. And then as you can see leading up
4 until December 30th of last year, we released
5 the last six sites.

6 So at this point, all sites have
7 been reviewed and are released to the public.

8 They're on DOL's website. And no rest for
9 the weary, we've almost immediately within a
10 month after completing the initial review, we
11 started a second review. During the
12 last two years as we were working on our
13 review, each of our sites were evaluating
14 material that was already contained in DOL's
15 database. DOL was working with our DOE sites
16 to collect additional information to fill in
17 gaps. Claimants and members of the public
18 were able to review the sites that had been
19 posted and were submitting additional
20 information where they knew there were gaps or
21 the SEM didn't accurately reflect the
22 activities that took place at the site.

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1 So right now we're already
2 starting to work with DOL to review that
3 additional information. We won't be reviewing
4 the whole database again. We'll just be
5 reviewing for each site, those chemicals,
6 locations, and job categories and things like
7 that that have been added. We will be
8 reviewing, and those will be updated to the
9 website.

10 We're not exactly sure what the
11 time frame for that is going to be, whether
12 it's going to be a phase release like last
13 time or because this is a smaller scope, we'll
14 be able to do it all at once.

15 But hopefully by the next Board
16 meeting, I'll be able to update you on that.
17 And if not, the sites may actually be released
18 by the next Board meeting although I certainly
19 can't promise that.

20 One of the initiatives that we've
21 had over the last couple years, and I know
22 this slide has been in previous presentations,

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1 is our outreach. Our headquarters group
2 initiated what we called a Joint Outreach Task
3 Group, which includes representatives from
4 DOE, DOL, NIOSH, the DOE Former Worker
5 Screening Programs, and the Ombudsman's Office
6 from both DOL and NIOSH.

7 The goal of this Working Group is
8 to coordinate our outreach activities.
9 Essentially, each of these groups are
10 attempting to reach the same population
11 although with a slightly different message and
12 focus. So we thought that by combining some
13 of the outreach efforts of these groups, it
14 would both make us more efficient and broaden
15 the reach of each of those groups on their
16 own. So we've had 19 town hall meetings last
17 year, and we have some more information on the
18 Joint Outreach Task Group on our website.

19 And the last thing I'm going to
20 talk about is the Former Worker Medical
21 Screening Programs. Again, it's somewhat
22 complementary in nature to the EEOICPA. We

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1 have these former worker screening programs
2 that are set up to cover every site in the DOE
3 complex. And for both production workers and
4 construction workers they offer free medical
5 screening programs to any former worker that's
6 interested.

7 They are very knowledgeable. Each
8 of these groups that it covers, the sites are
9 very knowledgeable about what type of
10 activities took place at the site, what kind
11 of hazards were there. And so they will
12 tailor the screening specifically to the
13 individual, the years they worked, and the
14 things that they might have been exposed to.

15 And then, you know, once they get
16 results if they believe that there's a need,
17 they will refer them, you know, either to
18 additional care or then on to the compensation
19 program as well. So we feel like it fits
20 right into the mission of EEOICPA, and we
21 hopefully provide EEOICPA with quite a few
22 referrals.

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1 The local screening programs for
2 Savannah River site for production workers,
3 the principal investigators are Donna Cragle,
4 John McInerney, and Lee Newman. And for
5 construction workers, the principal
6 investigator is Knut Ringen. And the contact
7 information is provided right there.

8 And if for anyone at this meeting
9 who, you know, is out there in the crowd or
10 anyone on the Board or on the staff meets
11 anyone, there's information on the back table.

12 This presentation has its contact
13 information, and the contact information is on
14 the DOE Former Worker Screening Program
15 website as well.

16 So with that, are there any
17 questions?

18 CHAIRMAN MELIUS: Questions for
19 Greg? Useful update. Yes, Dave.

20 MEMBER RICHARDSON: Quick question.
21 You described this kind of costly and
22 intensive process of declassifying documents

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1 about each site and providing that information
2 to NIOSH. When it's provided to NIOSH, is it
3 provided with any caveats, or is NIOSH free to
4 use that information and dispose of it as they
5 like?

6 MR. LEWIS: I'm not sure exactly
7 what I said. I may have misspoke if I said
8 "declassify." We review them. Some of them
9 are - if they are no longer classified, we
10 declassify them. If they're still classified,
11 we obviously just mark them appropriately.

12 So we will provide them - and this
13 is something that we cover in our security
14 plan, one of the things that was causing a lot
15 of confusion back when we realized that we
16 needed it, is we usually - we attempt to
17 provide all of these records stamped and
18 marked as they are and how they should be
19 used.

20 So if there's, say, an official-
21 use-only document, that could be used by NIOSH
22 and all of the contractors and those working

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1 on the program to write the reports and do all
2 the things that they need to do, but that
3 document couldn't be, say, posted on the
4 website. I mean, it can be on the behind-the-
5 firewall NIOSH Site Research Database, but it
6 can't be, say, posted out for the public.

7 And the same thing for classified
8 information. You know, we've arranged for
9 certain secure locations where NIOSH or their
10 contractors or the Board or SC&A can use these
11 classified documents and work on them in a
12 secure space and create a document that's then
13 reviewed by our classification folks. And
14 hopefully that document is unclassified or we
15 can change a few words that allows it to be
16 released to the public.

17 So we try to mark documents as
18 they are, and we do make sure that NIOSH and
19 the contractors understand what the
20 requirements are for those different types of
21 documents.

22 MEMBER RICHARDSON: Because one of

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1 the things that I've been impressed by is the
2 level of engagement and interest and resources
3 put by claimants into understanding the Site
4 Profiles and critiquing them and digging up
5 new information that helps to kind of change
6 interpretation or perspective on kind of
7 exposures that happen at a site.

8 And so it raises the question of
9 how much of this information that - you're
10 putting a huge amount of effort to go through
11 and review millions of pages of documents and
12 stamp them accordingly, and are we sharing
13 them as appropriate? Are those getting out?

14 So that's a question. I don't
15 know. How is NIOSH ensuring that as much
16 information as possible is available to the
17 claimants to review and scour themselves?

18 MR. LEWIS: I mean, I'm not exactly
19 sure how to answer that question. I know the
20 -

21 MEMBER RICHARDSON: I mean, it's
22 not really a question for you. I guess it's

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1 actually for NIOSH.

2 MR. LEWIS: Yes, typically it's
3 driven by NIOSH. We will review documents for
4 public release if necessary if requested. But
5 if not requested for public release, we
6 typically won't review them for public release
7 because there's a number of additional steps.
8 We may have to go to legal or general counsel
9 or go to the different programs.

10 So if we try to review it to the
11 level that's needed to get the work done and
12 not more, you know, from an efficiency
13 standpoint both with cost and turnaround for
14 getting you back the documents.

15 MEMBER RICHARDSON: Right. Because
16 I've seen some correspondence, I mean, where
17 it sounds like claimants are doing FOIA
18 requests to various agencies, which may
19 suggest that maybe they're reduplicating
20 efforts if the FOIA and something from you,
21 which NIOSH has done.

22 MR. HINNEFELD: If I could offer -

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1 this is Stu Hinnefeld. If I could offer, I
2 think what Greg just said is kind of the key
3 issue here. He says they review them to the
4 extent necessary for the program use and not
5 further. So the fact that a document has been
6 released to us by the Department of Energy
7 does not mean it's okay to be made public; is
8 that correct?

9 MR. LEWIS: Yes, unless we mark it.

10 MR. HINNEFELD: Okay. And so we
11 are not in a position then to just carte
12 blanche make available to the public the
13 documents that the Department of Energy has
14 provided to us.

15 So in the event of a - and, quite
16 frankly, we don't know which document - when
17 we get a document, we don't know if it's okay
18 to release it to the public or not in all
19 cases. Because over the course of history of
20 the program, not everything has been stamped
21 when it's been sent to us.

22 So of our holdings, we don't know

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1 for any particular document, whether it's free
2 to be released to the public or not. So when
3 we get a FOIA for documents for a particular
4 site, and we have documents we have received
5 from the Department of Energy, we ask the
6 Department of Energy, are these releasable?

7 So that FOIA essentially we send
8 to them for their judgment on whether these
9 documents are publically releasable or not.
10 For that reason, then, we have not carte
11 blanche made these generally available to the
12 public.

13 MR. LEWIS: And just to address the
14 other part of what you said, we do often get
15 FOIAs. There is some extent of redundancy in
16 terms of we may get a request from DOL or
17 NIOSH for information related to a particular
18 individual and that individual may FOIA their
19 own records. And so we're kind of sending it
20 two different directions. It's not too much
21 redundancy on our part because, you know, with
22 electronic records and things like that once

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1 we've scanned it and made it available to one
2 group, usually it's typically pretty easy to
3 turn around to the other, but it's - there is
4 a bit of administrative work required.

5 CHAIRMAN MELIUS: Brad.

6 MEMBER CLAWSON: Yes, Greg, this
7 will be unusual because usually I'm beating on
8 you because we haven't had a tour of Pantex,
9 but I know the Work Group for Pantex would
10 like to thank DOE for the marvelous job that
11 they did do on that, and the information that
12 we received was so valuable. And the people
13 at Pantex were marvelous. And we know what
14 work it took to be able to put that on, and I
15 just want to personally tell you thank you.

16 But also, too, on the OUO, I would
17 like to make sure that as being the Work Group
18 Chair for the security groups for our Working
19 Group, I would like to be kept apprised of
20 that because this is an issue that is somewhat
21 building up. Do we have any kind of a time
22 frame that we'd be looking at to be able to

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1 address these things or -

2 MR. LEWIS: You know, I can't give
3 you a specific time frame. I know Michael
4 Lohr who is our security liaison at
5 headquarters is working on gathering all of
6 the regulations, manuals, documents, things
7 like that at headquarters that mention OUO and
8 have some OUO guidance. So he's drafting, I
9 think, a new section for the security plan
10 right now.

11 Now obviously we wouldn't put that
12 into place until we've met with the various
13 groups to make sure that that meets their
14 understanding and that that's going to meet
15 their needs as far as the program goes. I
16 would hope to be following up with you within
17 a few weeks to schedule a meeting at least.

18 And one of the suggestions has
19 been that we're, I believe, going to hold a
20 meeting on Pantex at DOE headquarters in
21 Germantown or there's some plan to do so.
22 There's been a request. And that may be a

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1 good time to also discuss this OOU issue. So,
2 you know, depending on when you guys decide to
3 set up that meeting, we might be able to
4 combine the two.

5 MEMBER CLAWSON: I appreciate that.
6 I'd just like to be kept in the loop on that,
7 and you do. And I'd like to compliment you on
8 trying to get the records back to us in a
9 timely manner. I know there's a few that kind
10 of get into some problem areas, but I'd like
11 to thank you for the - what you've been able
12 to accomplish for us. Thanks.

13 MR. LEWIS: Appreciate that, Brad.
14 We do our best.

15 CHAIRMAN MELIUS: Paul.

16 MEMBER ZIEMER: There is an
17 underlying concern, I think, Dr. Richardson,
18 that comes out from the questions you raise.
19 And that is can decisions on a claim be made
20 based on classified information that's not
21 available to a claimant. And this is a
22 concern that this Board has had discussions on

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1 probably before you were part of us. And it's
2 an ongoing concern, of course.

3 And I think we've all been sort of
4 committed to the idea that the decisions that
5 we make on individual compensation, both - we
6 don't make those decisions for the
7 individuals. But the material on which that
8 is based, whatever the decision is, has to be
9 material that's available to that individual,
10 as well as available to the Board as we review
11 how decisions are made.

12 So this is one of the dilemmas,
13 but I think what we're searching for here is a
14 way to extract from the classified material
15 the pertinent information that can be made
16 publically available on which decisions both
17 individually and system-wide are made. But I
18 think we'll always have that sort of tension
19 between what can be made public and the basis
20 for which we even evaluate the scientific -
21 sort of the scientific basis for site-wide, as
22 well as individual decisions.

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1 MEMBER RICHARDSON: Thank you.
2 That's much clearer and more thoughtful kind
3 of engagement with the process - or with the
4 problem. But and I also - I agree with that,
5 and I think - there are - different claimants
6 have kind of different ways of engaging with
7 NIOSH and the other agencies that are
8 involved. And some of them really do seem to
9 want to go through that information and look
10 at the detailed records and evaluate that.

11 And it sort of seems unsatisfying
12 to me to say that NIOSH has huge troves of
13 information right now which have been
14 reviewed, and yet despite the fact that
15 they've been reviewed, NIOSH feels unclear
16 about the status of those records. I had
17 taken your statement to be that there was sort
18 of a triage going on and some documents were
19 marked for public release or declassified, and
20 others were not.

21 And if that's the case, then it
22 may at some point be useful to try and - it's

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1 sort of late. There's huge amounts of
2 information, and somebody has to do it. But
3 as you're going forward if information can be
4 declassified and available, I think that's -
5 it helps with the spirit of transparency of
6 this process.

7 MR. LEWIS: Yes, and I would say,
8 you know, we are doing that to the extent
9 possible now. I think the problem with, I
10 guess, the Site Research Database is that
11 NIOSH has been collecting documents for ten
12 years or even - I guess more under some of the
13 previous programs, a lot of those, it hasn't
14 always been consistent how things are marked.

15 And even in the past, you know, as
16 recently as a few years ago before we
17 implemented the security plan, different sites
18 would do it in different ways. One site might
19 say, well, you know, we're not going to
20 actually stamp these "OUO" because, you know,
21 in the interest of time we're going to give
22 them to you with the understanding that you'll

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1 treat them as OOU, you know.

2 And, again, a lot of it was trying
3 to get the job done and to get the information
4 quickly. And there was a rush on time, a push
5 on getting information out. But because of
6 some of the confusion that caused us in the
7 past, that's why we evaluated how we were
8 doing things and realized that we probably
9 need to have a more standardized approach
10 across the board. And that's why we put in
11 that security plan.

12 So, you know, just to go back
13 through all of those documents, I mean, it's
14 possible. It could be done, but it would
15 require significant resources and time.

16 MEMBER RICHARDSON: So right now
17 DOE does something which is fantastic of
18 maintaining these DOE reading rooms which are
19 also huge repositories of information that's
20 been reviewed and declassified. And they have
21 turf, right, reading rooms related to specific
22 sites?

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1 MR. LEWIS: Yes.

2 MEMBER RICHARDSON: Is there a
3 possibility of DOE kind of beginning to
4 provide some seed money to the reading rooms
5 to engage with you on a process of these
6 declassification decisions and pulling the
7 information for those sites that have been
8 declassified through this process and getting
9 those into the reading rooms? Because that's
10 a great public archive source. I mean, that's
11 where many people would go to try and find
12 detailed information about the history of a
13 site.

14 MR. LEWIS: I mean, that's
15 definitely a good suggestion. I'd be glad to
16 talk about it with you, you know, offline or
17 with the Board or possibly my management.

18 I do think, you know, for some of
19 these projects, and I believe Hanford is one,
20 there were quite a few documents ended up
21 being reviewed to the publically releasable
22 level. And I don't know if they were placed

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1 in the reading room or how they were made
2 available, but that's, you know, a good
3 suggestion for those documents either to put
4 them on the site's online library or public
5 reading room.

6 And I know another one of our
7 sites, the Office of Science and Technical
8 Information, which is basically a DOE report
9 library, anything that's requested by the
10 Board or the contractors, you know, on behalf
11 of EEOICPA, if it's reviewed and found to be
12 publically releasable, they will then kind of
13 consistently add that to their online library.

14 So I know because of our program,
15 many, many documents have been put up on their
16 publically available online library. But in
17 general, that would be a good suggestion.

18 CHAIRMAN MELIUS: Paul, a final
19 comment?

20 MEMBER ZIEMER: Just a follow-up
21 also, Dr. Richardson, and that is beyond the
22 individual cases, we also have the SEC case

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1 where decisions have to be made as to whether
2 there should be an SEC Class. And that's
3 often based on either their availability or
4 the absence of records. And the real struggle
5 would be, for example, if only the cleared
6 Board Members had access to records on which
7 such a decision were to be made.

8 We struggled with this a bit some
9 years back, I think, originally with the Iowa
10 case where a lot of the information was
11 classified. And at least conceptually, you
12 could have such a case again where certain
13 records upon which an SEC decision might have
14 to be made were classified records. And I'll
15 just say rhetorically, what do you do in a
16 case like that? So that's one of the issues,
17 too.

18 CHAIRMAN MELIUS: Thanks. I know
19 we'll be coming back to this issue. And,
20 again, when DOE revises its security plan for
21 the program, we'll be discussing it here as
22 well as the Work Group.

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1 Time for our break. Let's take
2 that. Just a couple follow-up issues. Even
3 though Stu did give a brief presentation at
4 our request and so forth, if you have
5 questions about the data that were on his
6 slides or something, we can come back with
7 that at one of the Board working times.

8 So I don't want to feel - you
9 know, let Stu off the hook entirely on that
10 stuff so do that. And we'll come back here at
11 10:15. Thank you.

12 (Whereupon, the above-entitled
13 matter went off the record at 9:57 a.m. and
14 went back on the record at 10:21 a.m.)

15 CHAIRMAN MELIUS: Okay. Our first
16 presentation after the break here is Jim
17 Neton's going to be updating us on use of
18 coworker data, as well as OTIB-70, and I'm not
19 sure what order you're going in, Jim, so the
20 floor is yours though.

21 DR. NETON: Okay. Thank you, Dr.
22 Melius. Good morning. In lieu of my usual

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1 science update presentation, which I kind of
2 provided an update at the Board's
3 teleconference a few weeks ago, I was asked to
4 provide a presentation on a couple key aspects
5 of how we do dose reconstructions that might
6 be useful for the Board in their deliberations
7 during particularly SEC petitions.

8 The first of these is the use of
9 coworker data in dose reconstruction. And the
10 second piece that I'll talk about is the dose
11 reconstruction during residual radioactivity
12 periods at Atomic Weapons Employers, which of
13 course is the only place that we do dose
14 reconstructions during residual activity
15 periods.

16 Before I get started on that,
17 though, I would like to take an opportunity to
18 introduce our newest staff epidemiologist who
19 is here to meet the Board, at least to the see
20 the Board and the proceedings this time. And
21 that's Dr. Susan Reutman who's sitting in the
22 back of the room.

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1 She has joined us, I don't know,
2 six to eight months ago. I have forgotten the
3 time now, but she's slowly learning the arcane
4 science behind the dose reconstruction
5 process. Her background is heavily embedded
6 in epidemiology, and she's picking up some of
7 the science of dose reconstruction and doing a
8 good job at it, I might add.

9 CHAIRMAN MELIUS: Okay. Welcome on
10 behalf of the Board.

11 DR. NETON: Okay. To get to the
12 issue at hand, let's start with coworker data
13 in dose reconstruction. There are a number of
14 Technical Information Bulletins on this. I
15 think I counted four when I went through the
16 literature. There's TIB-19 and TIB-20 are the
17 key ones that deal with dose reconstruction -
18 coworker models for internal dosimetry and
19 coworker models for external dosimetry.

20 The main reason for why we would
21 need a coworker model, of course, is because a
22 worker could have been unmonitored and

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1 potentially exposed. And we have to remember
2 back in the days, and this principally applies
3 before 1990-ish, that the monitoring programs
4 in particular for internal dosimetry programs,
5 were there really just to demonstrate
6 compliance with sort of a set limit, you know.

7 The internal exposure limits were
8 such that, you know, if you were less than a
9 hundred percent of the value, you were good to
10 go. So the monitoring programs were based
11 around that and not necessarily there to be
12 able to establish what the actual dose to the
13 person was. And, frankly, in the earlier
14 years, the models were so inexact they really
15 couldn't come up with very good doses, in my
16 opinion.

17 So that's the main reason that we
18 will have coworker data - models. But in some
19 cases, the worker may have been monitored, but
20 the data was lost or destroyed. Occasionally,
21 we'll get people who might have been chemical
22 operators and such and could have been, likely

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1 been in the monitoring program like all his
2 coworkers, but the data just for some reason
3 aren't there.

4 And a minor reason for coworker
5 data would be that the monitoring methods were
6 not reliable. That's not a very big player
7 here. I can think of only really one example
8 maybe of where we've had neutron badging that
9 was using the old nuclear track film and very
10 insensitive to low-energy neutrons. And
11 concomitant with that or very close in time
12 frame with that, they had used another more
13 superior technology such as albedo
14 thermoluminescent dosimeters and may be able
15 to establish some sort of a scale coworker
16 based on that.

17 And the final reason is available
18 data might be insufficient to complete a dose
19 reconstruction - a sparsely-monitored worker,
20 I mean, he might have a couple of samples,
21 bioassay samples in one year, nothing for five
22 years and something subsequent. So a coworker

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1 model would be needed.

2 The source of the coworker data
3 obviously from the database, is maintained by
4 the DOE. And that's not really DOE, but the
5 DOE sites that collected the data from all
6 their routine monitoring programs and incident
7 sampling programs.

8 But there are some other developed
9 databases out there that rely on the DOE
10 databases, and those are the Center for
11 Epidemiologic Research at ORAU that took the
12 original DOE data and developed it to some
13 extent. Kind of coordinated it and developed,
14 you know, improved upon it a little bit so it
15 was easier to understand.

16 And you also have the CEDR data,
17 the Comprehensive Epidemiologic Data Resource,
18 which is available, as well as the claimant
19 data which there's a TIB out there, I believe
20 it's TIB-75, that actually when data are not
21 available from the DOE sites, can you actually
22 use the claimant data itself to establish

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1 coworker distributions? And we think the
2 answer to that is yes.

3 So what is the general approach of
4 how we would do a coworker evaluation? Well
5 first we look at the data for the monitored
6 population that we have. We get the whole DOE
7 data set and conduct a data pedigree review.
8 That is, take a look at the data whether it's
9 a database, electronic database itself, or in
10 some rare instances the log books, log sheets
11 themselves, and look at the data to see if
12 they're complete.

13 One of the first steps is be sure
14 to take a look at the claimant data that we
15 have and look at the database that we have and
16 say, does this make sense? Is there sort of a
17 one-to-one correspondence between what DOE is
18 sending us as individual dose records and
19 what's in the electronic database? If that
20 matches up, it gives us a little better feel.

21 We also have to try and get a
22 sense of do we have the complete data set, are

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1 there gaps, missing data points, what are the
2 detection limits, that sort of thing.

3 Then we have to establish the
4 monitored population as representative of the
5 workforce. I mean, you know, typically in the
6 internal dosimetry monitoring programs the
7 workers with the highest potential exposures
8 were monitored, but that might have not always
9 been the case.

10 Particularly in the very early
11 years such at Oak Ridge in the 1940s, it was
12 pretty well understood that these cohort -
13 there were cohorts that were monitored as
14 opposed to the highest workers where they
15 would take one member of the work crew and
16 monitor them. So you need to take all that
17 into account when you're developing these
18 models.

19 And lastly you need to determine
20 if the measurement method's reliable? I mean,
21 can it really measure what it purported to do?

22 I made the mention of neutron dosimeters were

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1 insensitive to low-energy neutrons. You have
2 a lot of thorium bioassay. Thorium,
3 particularly in the very early years, the
4 detection limit for thorium measurements when
5 they use these fluorometric or calorimetric
6 technique was so high that it really if you
7 used a coworker model based on that, it -
8 ended up in some very implausibly high doses.

9 So that wouldn't make a valid coworker model.

10 So these are some of the general
11 considerations that go into developing a
12 model. So the approach to the evaluation is
13 review the data to determine if statistical
14 distribution can be generated. And by and
15 large, you know, based on review of the
16 literature and our own experience with
17 occupational exposure data, they fit fairly
18 well to log-normal distributions.

19 One needs to group the data as
20 appropriate. You either group them by, you
21 know, year of exposure - for example, coworker
22 model for internal would be for 1956, '57,

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1 '58. However, the data are very sparse. We
2 will go up to a three-year grouping as long as
3 you can determine that the technology of the
4 work processes hasn't changed substantially.

5 One also needs to take into
6 account work stoppages, changes in processes,
7 that sort of thing. So a lot of background
8 information needs to go into this before it
9 can be used.

10 And then finally we generate
11 summary statistics and evaluate the fit of the
12 data to log-normal. And that guidance would
13 be published in either a TIB or a Site
14 Profile.

15 Now one thing I should mention is
16 that these coworker models that we're
17 developing are very different than one might
18 think of when you're thinking of a traditional
19 epidemiologic job exposure matrix. That tries
20 to attempt - it attempts to correlate a
21 worker's job description with exposure.

22 And we tried that in the very

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1 early days of this program. And, in fact,
2 what happens is you really don't know with any
3 degree of certainty where people work in time
4 and space over their entire career. It's just
5 very difficult. Even though we've gone back
6 and obtained human resources, you know,
7 descriptors, people come back and say, well,
8 no, he was temporarily on loan over this
9 department for five years.

10 So we have adopted, in general, a
11 one-size-fits-all model. And I'll show you
12 what I mean by that. This is an example of
13 coworker distribution for - this is the
14 Savannah River site out of the HPAREH database
15 for 1975.

16 I should point out this is raw
17 data, not - we always add for external
18 coworker missed dose on top of this. So this
19 is raw data without the missed dose component
20 added.

21 What you see there is it fits
22 reasonably well to a log-normal distribution,

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1 except for at the upper end of the tail where
2 it curves away. And this is very typical of
3 what you see for external exposures because as
4 workers get closer and closer to the detection
5 - I mean the regulatory or administrative
6 limit, they start pulling them out of the
7 workplace. So you have this sort of curvature
8 in the upper end of the distribution.

9 This is a z-score plot. And a z-
10 score is nothing more than a normal standard
11 deviate or think of it as numbers of standard
12 deviation. So a z-score of zero would be the
13 median value, and a z-score of one would be
14 that value is one standard deviation above the
15 median and so forth.

16 So you can see in this particular
17 case that the median value is somewhere around
18 a hundred millirem. And if you went out to
19 the 95th percentile, it's somewhere in the
20 order of one rem.

21 In the internal coworker model
22 realm, the same concept applies except we just

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1 take the raw bioassay data and generate the z-
2 score plot and estimate what the intake would
3 have - what the uranium in urine would be for
4 that distribution. So in this particular
5 case, this is a 1953 plot for an AW - not an
6 AWE. I don't remember where this came from.
7 But nonetheless, the median value here is
8 somewhere around ten dpm per day being
9 excreted in the urine by all the workers
10 monitored in 1953. And the 95th percentile is
11 127 dpm per day based on this fit.

12 Now there's a little more work
13 done with this because obviously the urinary
14 excretion doesn't really tell the whole story
15 for an internal exposure. One needs to
16 convert that intake - or the excretion into
17 some sort of an intake. And what we do in the
18 terms of internal dose coworker models is to
19 estimate what a person could have been
20 excreting.

21 Let's say we use ten dpm per day.
22 What would have been their intake on a

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1 chronic exposure basis over the duration of
2 their employment that would give them an
3 excretion level of ten dpm per day? So you're
4 assuming a chronic exposure scenario in this
5 particular situation.

6 This tends to result in, I think,
7 claimant-favorable overestimates of intakes
8 because, first of all, most exposures were
9 probably not chronic to that extent. And
10 secondly, the likelihood of a person excreting
11 that level every day of their employment is
12 also pretty low.

13 So what would we take these
14 developed distributions - how would we apply
15 them to a dose reconstruction? Well, we need
16 to sort of tie the job category that person
17 was working or what we know best based on the
18 claimant interviews or the survivor interviews
19 or the files that we receive, what was the
20 person engaged in, to our best assessment,
21 during the course of their work?

22 And there are three categories

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1 laid out here that I've taken from TIB-14.
2 And these are certainly not meant to be all-
3 inclusive. They're just provided as examples
4 of what types of categories we might use in a
5 dose reconstruction. In reality, these are
6 done on a case-by-case basis.

7 So with little potential for
8 internal exposure, you would have job
9 categories such as administrators, cafeteria
10 workers, clerks, draftsmen, et cetera. A
11 little more potential for exposure,
12 intermittent-type exposure, might be
13 essentially the building trades-type folks,
14 bricklayers, carpenters, electricians. We
15 throw firefighters in there.

16 So you get the sense here that
17 these people would have had some potential for
18 exposure, but not as high as the upper
19 category, which is probable potential for
20 exposure, which would be people working daily
21 with loose radioactive materials that had the
22 potential for generating airborne. That would

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1 include chemical operators, machinists,
2 millwrights, production workers, et cetera,
3 what you see on the graph.

4 And in reality, what this comports
5 to is little potential for exposure would
6 likely end up receiving an ambient
7 environmental dose, that is, what is the
8 environmental levels that were measured at the
9 site. Some potential exposures would catalog
10 into using the 50th percentile of the
11 distribution. And probable potential would
12 more than likely result in the assignment of
13 the 95th percentile of the distribution. And
14 I guess I sort of just talked about that.

15 Now I will say that in the
16 internal dosimetry realm, we will assign a
17 GSD, geometric standard deviation, about the
18 50th percentile when it's used, which is equal
19 to the GSD of the distribution that was
20 generated or with a minimum value of three, I
21 believe is what we applied.

22 The idea behind that is that the

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1 internal dosimetry is unique in the sense
2 that, you know, you're not measuring it like
3 you're measuring a film badge and you have
4 some sort of normal 20 - plus or minus 20
5 percent distribution about it. You also have
6 some biokinetic issues going on there.

7 And when you assign the GSD of the
8 distribution, it's our opinion that that
9 incorporates the sampling distribution, but
10 that distribution also reflects the overall
11 biokinetic variability embedded in that
12 sampling regime. And as I mentioned earlier,
13 each situation is evaluated on a site and
14 case-specific basis.

15 These data are taken and then
16 generated into this TIB, as I mentioned, and
17 there are a number of TIBs out there that have
18 coworker models in them for Fernald, Rocky
19 Flats. I know Savannah River has one under
20 construction.

21 Most of the big sites, most of the
22 big DOE sites have coworker models. And those

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1 who are on those Working Groups know very well
2 how this goes.

3 Okay. I can take questions there,
4 or I can go through and finish up.

5 CHAIRMAN MELIUS: Why don't we take
6 questions now on coworker, and then we'll move
7 on.

8 DR. NETON: Okay.

9 CHAIRMAN MELIUS: Anybody have any
10 questions or -

11 MEMBER PRESLEY: I do.

12 CHAIRMAN MELIUS: Yes, Bob then
13 David.

14 MEMBER PRESLEY: Slide 8.

15 DR. NETON: Which one is that, Bob?

16 MEMBER PRESLEY: That's the one
17 examples of job categories.

18 DR. NETON: I knew that was going
19 to get me in trouble.

20 MEMBER PRESLEY: Yes, it did.

21 Low potential for internal
22 exposure, you've got the word "dispatcher."

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1 Speaking from experience at Y-12, our
2 dispatchers breathed the same air that the
3 machinists did. All of our dispatching groups
4 at Y-12 were out on the shop floor. Every one
5 of them.

6 DR. NETON: Okay. That's good -

7 MEMBER PRESLEY: So you need to
8 take a look at that. A lot of times that
9 dispatcher came personally in contact with
10 materials that were being chem etched, vibro
11 etched, the dust and things like that. And a
12 lot of that was done at an area where there
13 was not a whole lot of walk-in hoods and stuff
14 like that.

15 So in that particular slide right
16 there at Y-12, I do know that the dispatchers
17 got about the same amount of exposure that a
18 lot of machinists did.

19 DR. NETON: I appreciate that, Bob.

20 We'll take a close look at that. And I did
21 say at the beginning these are examples. It's
22 on a case-by-case basis.

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1 For example, if the coworker - or
2 if the claimant - the CATI interview, you
3 know, indicated something different than what
4 we're using here or if the data were there and
5 they were monitored, we certainly wouldn't,
6 you know, use a coworker model if they had
7 some kind of monitoring.

8 Do you know if the dispatchers
9 were monitored at all then?

10 MEMBER PRESLEY: Yes, sir.

11 DR. NETON: Well, see, then they
12 would be monitored.

13 MEMBER PRESLEY: Every one of them
14 had a badge.

15 DR. NETON: Well, but for internal
16 as well, do you think?

17 MEMBER PRESLEY: A lot of them were
18 on the -

19 DR. NETON: In those cases, then,
20 we would have the data and would obviously use
21 the data to do the dose reconstruction, but
22 it's a good point. If someone is a dispatcher

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1 and they somehow - the data are missing, we
2 would need to know that. Thank you.

3 CHAIRMAN MELIUS: Yes, David.

4 MEMBER RICHARDSON: One question
5 was you talked about a worker that was
6 unmonitored. Do you mean a worker year? So
7 you're dealing with missing data for any year
8 over the history of employment for which a
9 worker is missing information, or is this a
10 process that's applied to only when someone
11 has no monitoring information?

12 DR. NETON: No, I mean, if a person
13 were sparsely monitored, you know, very
14 sparsely monitored, we would apply something
15 like this as well.

16 MEMBER RICHARDSON: Well, what
17 about not very sparsely monitored? They
18 worked for 25 years, and they have 24 years of
19 dosimetry data.

20 DR. NETON: Okay. Yes, there are
21 other techniques that are outlined in our
22 documents that would do the nearby techniques

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1 or try to fill in the gaps based on the
2 person's own monitoring history. But,
3 frankly, I don't know if that's used very
4 often, but it is an option.

5 MEMBER RICHARDSON: Because it
6 would seem in those situations, it would be a
7 better option.

8 DR. NETON: Yes, I agree with you.

9 CHAIRMAN MELIUS: Dick.

10 MEMBER LEMEN: How do you - say you
11 have ten workers in one department, and two of
12 those workers don't have any monitoring. And
13 how do you assure that the monitoring has been
14 done on worst-case scenarios if the two are
15 outliers that don't really fit into that
16 normal pattern? It seems to me that that
17 could really underestimate their exposure.

18 DR. NETON: Well, we have to have
19 some evidence that those two people were true
20 - they did something different or, you know,
21 there was a reason why they, you know, based
22 on the CATI interviews or looking, I don't

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1 know, at the job descriptions and what they
2 were doing. I don't know.

3 It's unlikely, in my opinion, that
4 there were eight out of ten workers that were
5 monitored, and the two that weren't -

6 MEMBER LEMEN: What if there was
7 one that -

8 DR. NETON: - had higher exposure
9 than the eight that were monitored.

10 MEMBER LEMEN: What if there was
11 one monitored, and nine weren't monitored?

12 DR. NETON: Then we wouldn't have a
13 very good evidence for a coworker model in
14 that situation. That all goes under the very
15 up-front work which is trying to establish
16 were the workers who were exposed properly
17 monitored to begin with?

18 And, in fact, our experience has
19 been almost invariably at these sites for the
20 internal dosimetry perspective, the workers
21 with the highest potential for exposures were
22 indeed the ones that were monitored.

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1 It seems incongruous to me that
2 someone would go and set up a monitoring
3 program, monitor eight workers and then say,
4 well, these two very highly-exposed workers
5 I'm going to not monitor them.

6 MEMBER LEMEN: Well, we see that in
7 OSHA enforcement where workers are actually -
8 the lower-exposure workers are monitored by
9 management and that's - a lot of citations
10 come out of that. So I think that's an
11 assumption you can't make.

12 DR. NETON: Well, I would say that
13 that's very different than the experience that
14 I have seen at all these sites that I have
15 looked at. If you look at the job categories,
16 the titles of the people, the chemical
17 operators, the machinists, the people that are
18 really in there working with the particulate
19 radiation that has a potential for being
20 airborne, invariably they have the most
21 monitoring data, and not the people who were
22 the security guards, the people who sort of

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1 walked intermittently throughout those
2 processes.

3 MEMBER LEMEN: Also, since I've
4 been sitting on the Board and listening, it
5 appears to me that when you do the interviews,
6 you really don't do a great number of people
7 when you do the interviews. So how are you
8 assuring yourself that you've really got a
9 good sample to make that determination?

10 DR. NETON: I'm not sure of the
11 question. A good sample of what?

12 MEMBER LEMEN: Well, listening to
13 these site visits, you may interview five
14 percent or ten percent. Unless I'm listening
15 wrong or hearing wrong, a lot of these you
16 don't have over 50 percent of the people that
17 you've interviewed.

18 So how do you know that you've
19 interviewed, say, the electrician who has
20 worked next to a chemical operator fixing a
21 machinery that the chemical operator works,
22 and that electrician while he's doing that, is

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1 exposed to, say, equal amount or higher
2 amount?

3 It just seems to me that your
4 interviews are lacking in general for catching
5 those type of things. Maybe I'm wrong, but -

6 DR. NETON: No, I don't know. I
7 guess this comes down to how much evidence
8 does one need to develop this. I mean,
9 nothing is a hundred percent.

10 MEMBER LEMEN: But then you might
11 be -

12 DR. NETON: So if there's a one
13 percent or one in a thousand chance we've
14 missed it, okay. I mean, there's nothing we
15 can do about that.

16 We have monitoring data for these
17 workers. If workers - if chemical operators
18 were being monitored and the electrician was
19 next to him, typically we'll find that
20 electricians were also monitored on the same
21 job.

22 I can't prove, though, beyond, you

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1 know, some credible statistic that it didn't
2 happen once or twice or something in the whole
3 -

4 MEMBER LEMEN: Well, when it
5 happens even once on a compensation program -

6 DR. NETON: Well, I don't know. Is
7 that the standard?

8 MEMBER LEMEN: - that person is
9 going to be penalized.

10 DR. NETON: Right.

11 MEMBER LEMEN: The other thing -
12 I'll quit arguing with you on that.

13 DR. NETON: Okay.

14 MEMBER LEMEN: The other thing is I
15 think you really need to reexamine your job
16 categories because firefighter may be just as
17 heavily exposed as a waste handler or steam
18 fitter.

19 DR. NETON: Well, I would agree
20 with you on certain - but remember these are
21 intermittent-type exposures. Firefighters are
22 not every day. We're assigning them chronic

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1 exposures at the 50th percentile of all
2 monitored workers for every day of their
3 career.

4 If they worked there 20 years,
5 they would receive the 50th percentile urinary
6 output for their entire job history.

7 CHAIRMAN MELIUS: A reminder, Dick,
8 Board Members, you need to talk into the
9 microphone even though Jim's behind you. I
10 know it's hard. We could have Jim run around
11 to the other side, but -

12 MEMBER LEMEN: Well, probably what
13 I said is not worth recording anyhow.

14 CHAIRMAN MELIUS: I have sort of a
15 follow-up question, different version of that.

16 I think one of the questions is what level of
17 detail do you have to go down? How many
18 levels do you need to go down?

19 Because, you know, even looking at
20 your example that was up there, those people
21 can have not only, you know, different levels
22 of exposure, but there are also different

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1 distributions to their exposure. Firefighters
2 would be - intermittent exposure, and whereas
3 some of the construction workers have much
4 greater variance to their exposure.

5 And one of the criticisms that I
6 brought up, and I think others have also, is
7 you tend to put everybody into one building
8 and that becomes the distribution for the
9 coworker model whenever - reality, that's made
10 up of several different, you know, many
11 different, you know, distributions depending
12 on the type of job people had and so forth.

13 And I don't think that's always
14 been, you know, very well reflected in your
15 coworker models because it's hard because you
16 lose, you know, statistical power the further
17 down because your sample size gets smaller.
18 There may be only ten carpenters or, whatever,
19 ten operators in your model. And I think
20 that's more of a concern.

21 So you're just putting everybody
22 together and then assigning some, you know,

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1 level 95th confidence interval, whatever it
2 is, to that overall distribution. And I think
3 that's, I think, what worries us more. Much
4 more than sort of the, you know, what might
5 happen to an individual, what's happened to
6 this group of workers when it's included in
7 that. So what's your response -

8 DR. NETON: I would submit that for
9 the internal coworker models, we include a
10 geometric standard deviation that is sampled.
11 And that geometric standard deviation is no
12 less than three or whatever it is calculated
13 based on that distribution.

14 And the way the IREP program
15 works, of course, is depict the 99th
16 percentile of the distribution of all
17 Probabilities of Causation that are generated.

18 And so that distribution in itself is
19 incorporated into the statistical calculation
20 of the Probability of Causation calculation.
21 So it allows for us to incorporate that
22 uncertainty into the IREP calculation.

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1 CHAIRMAN MELIUS: But have you
2 tested that? I mean, I think that's the
3 question and - don't want to jump in because
4 I'm not even sure you've seen the report, but
5 I think some of these same questions are
6 raised by the outside review report that's
7 just been put on our information.

8 We just received it today. I
9 don't even know if you've had a chance to look
10 at it, but it raises a number of these issues
11 about the coworker model, sort of level of
12 detail.

13 I just glanced through the
14 recommendations today. And I think we have to
15 sort of think about how we're approaching it
16 because we are doing individual dose
17 reconstruction. There's data that is helpful
18 for that, but then we're just sort of losing
19 it all in this one big coworker model.

20 And while the, you know, 95th
21 distribution, the IREP model may sort of take
22 care of that in one way, I'm not sure it takes

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1 care of it in the way of actually looking at
2 doing individual, you know, dose
3 reconstruction.

4 DR. NETON: I have not seen the
5 final report, but I suspect that we will be
6 addressing it at some point.

7 CHAIRMAN MELIUS: I didn't mean to
8 surprise you. I just happened to look at it,
9 and now I can't get back on the drive they
10 gave me. So I couldn't even tell you what
11 page it's on.

12 Any other questions? Brad.

13 MEMBER CLAWSON: Jim, me and you
14 have talked many times about, you know, these
15 categories and so forth. And, you know, I
16 agree with Mr. Presley on some of the
17 situations. And I think that we could really
18 say that each site is going to be a little bit
19 different when we look at these categories,
20 the CATI report or whatever you say like that.

21 Because a lot of the issues - and
22 you've got to understand our standpoint on

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1 this. Being in the industry, we know when we
2 call somebody, say, a secretary or something,
3 a lot of times they're right down there on the
4 machine floor processing the paperwork for all
5 these people and so forth.

6 So this is why we have somewhat of
7 a - or I should say that I have an issue with
8 putting them into categories like this. And
9 the reason why is because we've seen at
10 numerous sites that in the NIOSH response they
11 said that they could not have been exposed to
12 this because of their job category. Which in
13 talking with the individual, they were right
14 in the middle of it.

15 And this is one thing I just want
16 to caution NIOSH about in their coworker model
17 is we can't take a lot of credit for job
18 categories. I agree that the production
19 workers and so forth like that, those are
20 right in there. But some of the other - more
21 questionable ones, I hope that we use the CATI
22 interviews and make sure that we understand

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1 what their whole job category was. Because
2 dispatcher, secretaries, everything else like
3 that, a lot of those were right on the machine
4 floor processing the paperwork and taking care
5 of the process right there.

6 But talking with what Dr. Lemen
7 said, one of the questions that I have is
8 because we're starting to see this come up in
9 the D&D era and we're going to have to make a
10 coworker model for them is at some of these
11 sites, not all people were monitored. Maybe
12 two out of 30 people had dosimetry. And those
13 people are also the only ones that had any
14 bioassay. And I'm talking after the `90s.
15 I'm talking in the D&D period.

16 You may have 30 people, but those
17 30 people may be split up in 15 or 20
18 different areas around the site. And I'm just
19 wondering how you can actually make a coworker
20 model that way because the two or maybe three
21 people out of those 30 people are in all
22 different areas.

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1 DR. NETON: Well, the short answer
2 is I don't think we could. I mean, if you
3 only had a couple bioassay samples, it
4 wouldn't be enough to develop a distribution.

5 But, you know, that - the coworker
6 is a subset of our hierarchy. Our hierarchy
7 is use individual monitoring data if it's
8 available.

9 MEMBER CLAWSON: Right.

10 DR. NETON: Secondly, develop
11 coworkers based on individual monitoring data.

12 And then you get down into looking at area -
13 you know, air sampling programs, external dose
14 rate surveys, that sort of information. And
15 that of course would have to be the next level
16 that we would go to to try to establish what
17 the conditions were in those work places.

18 MEMBER CLAWSON: Well, this may be
19 for DOE, too, but this is - the whole thing
20 that comes out of this is in the later years,
21 the D&D periods, we're seeing at more and more
22 sites that people weren't monitored the way

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1 they were during the production periods -
2 those are justification, I just -

3 DR. NETON: I'm a little confused
4 by that. I think my experience has been once
5 the '90s came around and 10 CFR Part 835 was
6 instituted where, you know, you were required
7 to have a monitoring program for anyone that
8 had a potential to receive 100 millirem dose,
9 that the monitoring programs increased
10 dramatically.

11 So I'd be surprised if you saw in
12 the '90s that there was only one or two people
13 monitored, unless there was a source term
14 there that was evaluated that indicated that
15 the potential for exposure was pretty low
16 where these people were wearing, you know,
17 powered air purifying respirators and that
18 sort of thing.

19 MEMBER CLAWSON: The classification
20 of this, and I can't go into the sites because
21 some of us are conflicted on these and so
22 forth like this, but their theory on this was

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1 that the production period is over and so they
2 didn't need to monitor everybody.

3 Many of these sites that we're
4 getting into right now are into this
5 situation, and we're getting into the -
6 they're part of the SEC. And we're coming to
7 find out that numerous ones that they - they
8 determined that since the production period
9 was over with that they didn't need to monitor
10 to that depth.

11 But then you look at it from the
12 workers' standpoint. They're going in and
13 ripping out 50 years of history that on the
14 surface may have looked very clean. When you
15 start ripping them out, breaking up floors,
16 you're exposing 50 years of history there, and
17 we've seen numerous ones come back.

18 And this is somewhat of what Dr.
19 Lemen was saying of to what point do we do
20 this? And, you know, it's just an
21 observation.

22 DR. NETON: Yes.

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1 MEMBER CLAWSON: I'm just telling
2 you what some of my issues with the coworker
3 models have come out. And I know that the
4 `90s did become better, but also it's kind of
5 the pendulum we've swung clear to the other
6 side sometimes, too.

7 DR. NETON: Right. I appreciate
8 that, Brad, and I guess we'll have to take it
9 on a case-by-case basis. I haven't seen the
10 data that you're talking about.

11 CHAIRMAN MELIUS: Yes, David then
12 Bill, then we need to wrap this part up
13 because we're running into the SEC.

14 MEMBER FIELD: I guess I had more
15 of a question in regard to a clarification.
16 For your job categories, the goal is to have
17 them site-specific and also building-specific?
18 I'm just looking at the overarching goal that
19 you have for developing -

20 DR. NETON: These job categories
21 are merely meant as a starting point for
22 someone to start looking at the data set to

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1 say what was this person's potential for
2 exposure. And I don't think anybody, a dose
3 reconstructor, would take this and say, oh,
4 it's an administrator, I'm assigning ambient
5 environmental. You look at the whole package.

6 Were there any monitors in the
7 place, you know? What does the Site Profile
8 say about this kind of stuff?

9 MEMBER FIELD: And how much, I
10 guess, how much focus is there on the CATI
11 interviews for developing these?

12 DR. NETON: They're all reviewed.
13 They're definitely all reviewed. They're
14 certainly an integral part of this.

15 MEMBER FIELD: And then the other
16 question I had, you were mentioning the
17 bioassay distribution. So you assume a
18 chronic intake; is that right?

19 DR. NETON: Yes.

20 MEMBER FIELD: There's always
21 exceptions to the rule, but couldn't you get
22 higher exposures if it was episodic and you

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1 were monitoring after a period of time?

2 DR. NETON: About six years ago we
3 went through this during the Board
4 deliberations, and I think we pretty
5 conclusively demonstrated through some
6 presentations that, in general, almost in all
7 cases, a chronic exposure, if you have a
8 chronic exposure at some level, then any
9 incidents that would have happened that could
10 have been higher were averaged out over that
11 chronic exposure period, it's - in other
12 words, you could have had a chronic exposure,
13 a spike, a very brief spike.

14 But, in general, if you're giving
15 that chronic exposure it integrates it over
16 time, for picocurie per liter days it comes
17 out fairly claimant favorable.

18 MEMBER FIELD: And then just one
19 final question, and maybe I just didn't catch
20 this, when you have a distribution, say, of
21 bioassay for uranium, and then you have your
22 different exposure categories -

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1 DR. NETON: Right.

2 MEMBER FIELD: - and assuming the
3 highest one has the highest potential, how do
4 you break them down? Do you use the same
5 distribution for the highest exposed
6 individuals, or do you have a different
7 distribution for each category?

8 DR. NETON: No, no, no, everyone
9 would - everyone in the highest-exposed
10 category, for example, in the slide that I'm
11 showing here, the uranium bioassay
12 distribution, they would receive 127 - they
13 would be assumed to have excreted 127 dpm per
14 day over their entire work history.

15 And then a back calculation would
16 be done to see what kind of intake that would
17 have - what kind of chronic intake scenario
18 would have had to have been in place for that
19 person to be excreting that level.

20 MEMBER FIELD: Okay. So how would
21 you use that then for the lowest-exposed
22 group?

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1 DR. NETON: I'm sorry. This
2 distribution - I probably was confusing. This
3 distribution is only used for the 50th
4 percentile and the 95th percentile. Ambient
5 environmental is based on the air sampling
6 program that had been in place to establish
7 what the environmental levels were for the
8 site.

9 MEMBER FIELD: Okay. I guess I'm
10 just trying to figure out what distribution
11 you use to go back then and give some sort of
12 value for the different categories.

13 DR. NETON: Well, there's three.
14 There would be an ambient environmental based
15 on the environmental air sampling program if
16 it existed at the site. And that's not really
17 a distribution, that's - well, it could be,
18 but it's based on that. And then there's this
19 distribution which would be used to have
20 either the 50th percentile or the 95th
21 percentile assigned.

22 MEMBER RICHARDSON: Could I ask you

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1 a quick question?

2 CHAIRMAN MELIUS: Yes, you can ask
3 a quick question because we're going to have
4 to wrap up here and bring Jim back for Part 2.

5 MEMBER RICHARDSON: Could you go
6 back one slide to the external? I was - there
7 were several funny things to the slide that
8 made me think about it a little bit.

9 I mean, one is this tail which -
10 well, you talked about the upper tail. The
11 lower tail is an artifact of recording
12 practice.

13 DR. NETON: Right.

14 MEMBER RICHARDSON: So they're
15 recording like five millirem or something -

16 DR. NETON: Right.

17 MEMBER RICHARDSON: - for values -
18 for some values that are above the detection
19 limit, but not all of them. I think the
20 detection limit at the time was like ten
21 millirem maybe for these - or in that
22 ballpark. So there's some -

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1 DR. NETON: I think the LOD over
2 two is what would be recorded here probably.

3 MEMBER RICHARDSON: Yes, actually
4 not, though. So the Savannah River in 1973
5 had 20 percent of the badges were returned in
6 that year - or 18 percent of the badges
7 returned in that year and - have a blank value
8 on them. They were below detection limit, and
9 the practice at the time was to record no
10 value for those.

11 But in other years and at other
12 sites, they do different things with what
13 they're going to indicate as the below-
14 detection limit. And that really has a big
15 impact on where the median and 95th percentile
16 are.

17 So that's completely an artifact
18 of, well, two things. How many people do you
19 badge and what's your practice for indicating
20 below detection on the badges.

21 So here you've got this, like this
22 line which has got some of the mass for the

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1 low-exposed people. And it's because there's
2 some values reported below the detection
3 limit, but not all of them. Like 20 percent
4 of the mass is missing.

5 But it means that, like - that the
6 practice of assigning these scores is partly -
7 it's kind of an administrative artifact where
8 you're going to get this 50 percentile. How
9 are they counting all these people who are
10 being badged to have really - they're at the
11 limit of detection of the measurement device?

12 DR. NETON: Well, at the limit of
13 detection, they would be assigned LOD over two
14 for every badge that was assigned - that's not
15 even - I think I pointed out this is not -
16 this is a raw data plot. I apologize for not
17 having a fully developed distribution.

18 MEMBER RICHARDSON: So you've
19 added that 18 percent.

20 DR. NETON: Yes, that's all been
21 added back in.

22 MEMBER RICHARDSON: And now you've

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1 got - you're assigning a value that's the
2 median and the 95th percentile -

3 DR. NETON: Right.

4 MEMBER RICHARDSON: - for all the
5 badged workers in that year.

6 DR. NETON: Right. And it has - it
7 shifts the distribution. And, in fact, let's
8 say a person had -

9 MEMBER RICHARDSON: So the median
10 wouldn't look anything like this median.

11 DR. NETON: Right.

12 MEMBER RICHARDSON: And the 95th
13 doesn't look anything like -

14 DR. NETON: I apologize. I didn't
15 have - I thought I could just get away with
16 showing a general distribution here. But the
17 idea is that if a person had like quarterly
18 monitoring and had one badge that was positive
19 and three that were less than detection limit,
20 we would add in three times the LOD over two
21 to that one reported positive as their
22 potential dose during that year.

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1 So, yes, I apologize for having a
2 somewhat incomplete picture here.

3 MEMBER RICHARDSON: I mean, I'm
4 still trying - it's like a different approach
5 to doing this and it's - I haven't thought
6 about it, but it's different than how we've
7 used coworker data at Savannah River and Oak
8 Ridge and other places where we've assigned
9 dosimeters to areas and the 95th percentile
10 then for people who are, let's say, reactor
11 operators would look very, very different than
12 this 95th percentile for everybody who's badge
13 monitored at the site.

14 DR. NETON: Right.

15 MEMBER RICHARDSON: I mean, it's
16 going to be orders of magnitude different.
17 And so, you know, I can see your argument for
18 that there was a difficulty early on in
19 constructing assignment of dosimeters, but it
20 has an impact for thinking about how
21 administrative practices play into the
22 assignment of low doses, what the median

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1 means.

2 DR. NETON: Right.

3 MEMBER RICHARDSON: I don't -

4 DR. NETON: Yes, there's a lot to
5 it that we probably can't get into in this
6 brief discussion. But Dr. Melius did point
7 out that this seems to be - has been raised in
8 the Quality of Science review, which I'm sure
9 we'll be taking up in some detail.

10 CHAIRMAN MELIUS: Which is also, I
11 think, at least glancing at it, sort of an
12 epidemiological approach, I would say, which
13 would look a little bit different.

14 And what I'm going to suggest, we
15 have an SEC scheduled with the petitioners on
16 the line. So we need to break off this
17 discussion.

18 We will come back probably at our
19 next Board work session. So around
20 immediately following our discussion on Dow
21 we'll have Jim sort of finish up the second
22 part of the presentation on OTIB-70.

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1 DR. NETON: It might be better if I
2 do the discussion before the Dow because Dow
3 was one of my examples for developing these
4 distributions, but it's your call.

5 CHAIRMAN MELIUS: Yes, maybe we can
6 do that as a lead-in into Dow, and then we'll
7 hold some questions until a little bit later
8 so that we don't - because there are some
9 scheduling issues with some of the people, but
10 that would make sense.

11 And then on the coworker issue, I
12 think we'll schedule some time for further
13 discussion on the next Board meeting. I think
14 a number of Board Members have concerns about
15 this and those issues, and I think we really
16 need to spend some more time talking about
17 this because it affects a large number of
18 sites, large parts of the program. So I think
19 it's worth our while to spend time.

20 Our next issue is the Chapman
21 Valve SEC Petition, and I'm not exactly sure
22 how we're going to start this. John, are you

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1 going to have a few words to say or -

2 MEMBER POSTON: Yes, I can.

3 CHAIRMAN MELIUS: Okay. I didn't
4 know if you were expecting that. I was trying
5 to -

6 MEMBER POSTON: Well, I'll try to
7 keep it short. The Working Group met by
8 telephone on February the 9th. And the Group
9 was composed of Dr. Roessler, Mr. Gibson, and
10 Mr. Clawson. Mark Griffon was not available,
11 and Brad is the alternate. So he was there.

12 Our purpose was to review or hear
13 about the success or lack thereof of data
14 recovery which was carried out in December of
15 2010. There were actually a couple of efforts
16 where a number of boxes of data or information
17 was discovered, and it had to be reviewed.
18 Mark Rolfes reported on what had been found,
19 which basically was not much that would help
20 us resolve the issue.

21 So one piece of information I
22 think that was introduced was that there - at

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1 the close-out of the Chapman Valve, there were
2 additional samples taken. The number - I'm
3 not sure. The number six or seven sticks in
4 my mind, but we can find it in the transcript
5 if anybody wants to know the exact number.

6 But these were all analyzed by
7 alpha spectrometry, which is the best method.

8 And they were all consistent with natural
9 uranium.

10 So here we have the same conundrum
11 that we have always; we have a series of
12 samples showing natural uranium, and one
13 showing what we believe is something on the
14 order of one to two percent enrichment, and we
15 still have no idea the origin of that sample.

16 So my approach was to let everyone
17 state their opinions and so forth and have
18 sort of a discussion, and we may want to have
19 them restate their positions rather than me
20 try to summarize it. But basically after
21 having a discussion, we turned out to be
22 essentially a hung jury, so to speak.

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1 We had two people on the Committee
2 who were in favor of granting the SEC and two
3 people on the Committee who thought that we
4 should take NIOSH's recommendation that they
5 can reconstruct doses. So after some
6 discussion, it was decided by the Work Group
7 that we would bring it to the Board
8 essentially as I have stated it. And so that
9 concludes my report.

10 CHAIRMAN MELIUS: Okay. The Board
11 thanks you. Did anybody have suggestions for
12 further - the need for further information or
13 suggestion - I shouldn't say "the need."

14 We obviously need more - would be
15 nice to have more information, but suggestions
16 for where there might be additional
17 information, or has that been exhausted, I
18 guess -

19 MEMBER POSTON: Well, I think the
20 general consensus was that we had exhausted
21 all avenues. Some of the boxes that were
22 reviewed that had "Chapman Valve" on it,

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1 basically had nothing that was helpful.

2 I might point out, and I was
3 remiss in not doing so, they're in your folder
4 for this meeting. There are six pieces of
5 documents. There's a transcript from previous
6 meetings. There's also data samples and so
7 forth that were obtained by NIOSH when they
8 were in their data gathering.

9 But, again, if you review those,
10 there's very - well, there's essentially no
11 information that would help us. And so I
12 think the general consensus of everybody on
13 the Committee, including the folks from NIOSH
14 - I won't speak for SC&A, but I think they
15 would agree we basically have exhausted all
16 avenues.

17 CHAIRMAN MELIUS: Okay. Thank you.

18 NIOSH, Stu, do you have anything to add or -

19 MR. HINNEFELD: I don't think I
20 have anything particularly relevant to add.
21 Some of this latest data search, we searched
22 on - based on some key words that we thought

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1 might lead to Chapman Valve, and they didn't.

2 So we just - that was that records
3 collection at Oak Ridge that we were - the
4 last one we looked at. We just didn't find
5 anything down there that was helpful.

6 CHAIRMAN MELIUS: So NIOSH's
7 recommendation would be that this - what is
8 your conclusion on this mystery sample,
9 whatever you want to call it?

10 MR. HINNEFELD: Well, we've not
11 really formed an opinion on the mystery
12 sample. Our presentation and our position so
13 far is that the work we know that was done for
14 AEC at Chapman was the machining of natural
15 uranium rods for loading of a reactor at
16 Brookhaven National Laboratory.

17 That's what we know happened
18 there. So based on that we really can't - we
19 choose not to offer, you know, speculation
20 about the one sample.

21 CHAIRMAN MELIUS: Okay.

22 MR. HINNEFELD: But of the work

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1 that we know happened, we're pretty confident
2 that was natural uranium, and we have
3 information that will allow us to generate
4 dose reconstruction.

5 CHAIRMAN MELIUS: John, if you want
6 to -

7 MEMBER POSTON: When we interviewed
8 the folks at Chapman Valve, and I think Arjun
9 and John can speak to this if they want, we
10 were told that there were some manifolds that
11 came into Chapman Valve and were offloaded and
12 taken to another facility.

13 When we did our data search, we
14 found no data that indicated there was ever
15 shipments in to Chapman Valve. Everything
16 that we found in the data set was all about
17 new valves being shipped out. So that's the
18 mystery.

19 We think that if this, you know,
20 the people were quite clear in their
21 remembrance of these manifolds. They
22 described them quite well and so forth. And

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1 we thought, well, maybe that's the source
2 because maybe it came from the thermal
3 diffusion plant or somewhere else in Oak Ridge
4 where you might have a low-enrichment
5 facility.

6 The Navy sort of, they were very
7 cooperative. But at the same time, they
8 pointed out that they weren't interested in
9 low-enriched uranium. So they gave us a lot
10 of help, but not anything that would allow us
11 to reach a conclusion.

12 CHAIRMAN MELIUS: I mean, I think
13 the - I don't know if SC&A, Arjun or John, you
14 have anything to add, want to add, but it's
15 sort of - then trying to get this - we have
16 this one sample. We got this information from
17 the people at the site.

18 Can someone refresh my memory?
19 Was the time frame for that within the - sort
20 of the current scope of where - the covered
21 period for the site?

22 MEMBER POSTON: It was in the - it

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1 was the FUSRAP sample that was taken many
2 years after, as I recall.

3 CHAIRMAN MELIUS: Right, right.
4 But I meant the recollection from the people
5 that - Arjun, do you?

6 DR. MAKHIJANI: Well, the one
7 worker who was very clear in her memory of,
8 you know, the returning manifolds and so on,
9 was also very clear that that work stopped
10 after - immediately after World War II.

11 So in the months that followed
12 certainly before - now this is from my memory,
13 which is not as good as hers.

14 (Laughter.)

15 DR. MAKHIJANI: But stopped by
16 January. Immediately after the war ended in
17 Japan, and certainly by January 1946. So it
18 doesn't overlap the period that Stu just
19 talked about.

20 MR. HINNEFELD: '48, '49.

21 CHAIRMAN MELIUS: So it does not.
22 Does not.

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1 DR. MAKHIJANI: It does not, no.

2 CHAIRMAN MELIUS: Yes. So,
3 hypothetically, if we wanted to base an SEC,
4 just again hypothetically, on that
5 information, it would not be during the
6 current covered period. I think that's a fair
7 statement to that.

8 And so if the sample that was
9 found, the slightly enriched uranium, if it
10 was related to that source, it would have most
11 likely come before the covered period. I'm
12 just trying to frame this in terms of an SEC
13 decision/recommendation that we have.

14 DR. MAKHIJANI: Yes, that's clear,
15 but we, you know, we have no knowledge of
16 where that sample came from, as Dr. Poston has
17 just said. But if it is connected to the
18 manifold, then it would have been before.
19 Exactly right.

20 CHAIRMAN MELIUS: Right, right.
21 Yes, and our other hypothesis was it was
22 connected to the Navy. And I think that's

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1 been at least largely ruled out from their
2 information and so forth.

3 And, you know, I guess the third
4 possibility, it comes from some other, you
5 know, AEC or other process at that site that
6 we're just not aware of and there's no
7 records. And nobody, at least in the
8 information we have, no one has reported
9 anything to us that would account for that.

10 Is that a fair statement?

11 MEMBER POSTON: Jim did due
12 diligence by talking to the folks at Oak Ridge
13 about the sample. And they, as I recall, were
14 adamant that the result, which was a one or
15 two percent enrichment, was correct.

16 CHAIRMAN MELIUS: Yes.

17 MEMBER POSTON: Is that summary -

18 DR. NETON: I would say "adamant"
19 might be a little strong, but they certainly
20 did believe that the number was valid.

21 CHAIRMAN MELIUS: Yes, because
22 originally we had concerns about the validity

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1 and -

2 DR. NETON: Right. They still
3 couldn't establish what technique was used
4 whether it was alpha spec or mass spectrometry
5 or even gamma spec. But, in general, they
6 felt that during that time period it would
7 have been either alpha spec or mass
8 spectrometry, which would have been adequate
9 to establish that degree of enrichment.

10 CHAIRMAN MELIUS: Paul, then Gen.

11 MEMBER ZIEMER: Dr. Poston, can you
12 remind us was that sample a soil sample or was
13 it a smear sample or something else?

14 MEMBER POSTON: My recollection is
15 it was a soil sample taken at outside -

16 MEMBER ZIEMER: By the loading
17 dock.

18 MEMBER POSTON: - by the loading
19 dock.

20 MR. HINNEFELD: I was just
21 wondering if Mark Rolfes was on the phone.
22 This is Stu.

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1 MEMBER POSTON: Well, now I'm -

2 MR. HINNEFELD: Okay. It was
3 either a soil sample - I was under the
4 impression it was a sweepings. It was a
5 sample of essentially floor sweepings from a
6 corner close to the door. That's my
7 understanding is it was floor sweepings.

8 MEMBER POSTON: We have a bunch of
9 understandings because Josie just said she
10 thought it was a smear.

11 DR. NETON: This is Jim Neton. I'm
12 pretty sure that this was inside the loading
13 dock, not outside. Just inside the loading
14 dock.

15 And it was - call it soil, call it
16 dirt, but there was some contamination that
17 they identified, I think, with a frisker on
18 the first basis. And then they sampled it
19 because the reading was a little bit higher
20 than normal. And it was a small amount of
21 dirt, soil, whatever you want to call it.

22 CHAIRMAN MELIUS: Paul, does that

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1 help - do you have further questions?

2 MEMBER ZIEMER: No. I mean, you
3 know, we can make all kinds of speculations
4 because, you know, I don't think we can
5 necessarily assume it was from earlier work.
6 I don't think we can necessarily assume - one
7 could argue that, you know, a lot of these
8 FUSRAP people were doing stuff at a lot of
9 different sites. They may have cross-
10 contaminated even. So you can think of all
11 kinds of scenarios.

12 The thing is, in my mind, that if
13 there was a prevalent amount of work with the
14 slightly enriched uranium going on there, to
15 find only a single sample during the cleanup
16 period seems to me to be a real stretch. That
17 takes more of a stretch than anything.

18 CHAIRMAN MELIUS: But we could also
19 speculate that the FUSRAP people were, you
20 know, a little sloppy. I mean, it's -

21 MEMBER ZIEMER: No, you'd have to
22 speculate that they were really good and they

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1 cleaned up almost everything. And that's the
2 stretch.

3 CHAIRMAN MELIUS: Yes, I like that.

4 Okay. Either way, right?

5 Gen.

6 MEMBER ROESSLER: We're putting a
7 lot of emphasis on this sample, and I have to
8 comment again about I just think that there's
9 a high probability that the sample was
10 identified incorrectly. If the people at Oak
11 Ridge can't even remember what technique was
12 used, I don't know how they can say, yes, it
13 was right.

14 I've done a lot of sample
15 counting, and I can't say that I was always a
16 hundred percent accurate in identifying what
17 was in the sample. There are a lot of
18 confounding factors, and I question that that
19 was really slightly enriched uranium that they
20 identified in view of the fact that there's
21 nothing else that supports that anything like
22 that went on at the site, whatever the year

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1 might have been.

2 CHAIRMAN MELIUS: Any other - yes,
3 Brad. Sorry.

4 MEMBER CLAWSON: Now you're
5 starting to see what part of the issue is.
6 Everybody keeps calling up the one sample.
7 We've only had two samples until later on.

8 The other problem is is you have
9 people that were telling us of these manifolds
10 and stuff going on. Now basically in this
11 situation, I have to take that NIOSH, I have
12 to take that the FUSRAP people did these
13 samples correctly, or if the site did them
14 correctly, we have a sample that is odd to
15 this.

16 My issue, also, and I have to fall
17 back onto my background, is I have product
18 that comes into my facility that I do not own.

19 The only thing it shows up on is my
20 criticalities. That's it. And I own - I
21 don't own it. And once it leaves, there's no
22 history of it because it's not my material.

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1 Now we have people telling us of
2 these manifolds and so forth like that.
3 That's where part of this - that's where part
4 of the confusion comes into this, and it's a
5 difficult one.

6 CHAIRMAN MELIUS: I would just say
7 in response, Brad, that one can say that the
8 sample is credible, it's real, that the end
9 results are, that the recollection of the
10 people at the site is real.

11 But for us to grant an SEC, I
12 think there needs to be some connection to a
13 covered period and a process, you know, that's
14 recognized at that site, you know, time period
15 and, you know, at least the recollection we
16 have, the sample we just don't know. We don't
17 know when that originated.

18 The recollection of the people at
19 the site, which, again, sounds credible to me,
20 but was for an earlier time period before the
21 covered period. So it would really be a
22 question of, I think, trying to find

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1 information that would connect some sort of
2 activity, covered activity to that earlier
3 time period.

4 And I think that's what we're
5 missing. And we've been approaching it, you
6 know, both from trying to find more
7 information on what happened at the site, but
8 - both from, you know, in terms of AWE
9 activity as well as, you know, possible DoD
10 activity at the site. And I think DoD has
11 said they have no records and so forth.

12 Again, there's limitations to
13 that, but I think we've done at least a better
14 job of trying to track that back.

15 Any other comments? We have some
16 petitioners, I believe, on the line that were
17 at least going to listen in. And I don't know
18 if they have comments.

19 If you have comments, you're
20 welcome to make them now. You're not required
21 to. If you're on mute, *6 should get you out
22 of mute also, as well as into mute.

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1 Okay. I guess hearing nothing
2 from them, which is fine, we have further -
3 yes.

4 MR. HINNEFELD: Dr. Melius, I think
5 we may want to check the phone system because
6 Mark Rolfes sent us an email that he is on the
7 line and he was talking, but we couldn't hear
8 him.

9 CHAIRMAN MELIUS: Okay.

10 MR. HINNEFELD: And so if the
11 petitioners are trying to say something, it
12 could be we couldn't hear them.

13 MR. ROLFES: Stu or Dr. Melius?

14 CHAIRMAN MELIUS: Yes.

15 MR. ROLFES: This is Mark Rolfes.

16 MR. HINNEFELD: We can hear you
17 now, Mark.

18 MR. ROLFES: Okay. Great. Stu, I
19 think you had asked a question earlier about
20 what type of sample was collected during the
21 FUSRAP remediation. And it was sample M-31
22 and M-10, which were collected in 1992.

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1 Sample M-31 was the sample that
2 was located at the intersection of the wall,
3 floor, and the loading ramp into the building.

4 MR. HINNEFELD: Okay. Now, Mark,
5 that's the one that was analyzed as enriched?

6 MR. ROLFES: The sample that was
7 collected next to the loading ramp was a dust
8 and debris sample which was enriched to 2.16
9 percent based upon the information presented
10 to us in the FUSRAP report. The other sample
11 that was collected was natural uranium.

12 MR. HINNEFELD: Right.

13 MR. ROLFES: And then subsequently
14 in 1997, there were seven samples that were
15 verification samples which were all consistent
16 with natural uranium as well.

17 MR. HINNEFELD: You might ask about
18 the petitioners.

19 CHAIRMAN MELIUS: Yes, I am. I
20 will.

21 Okay. Are the petitioners on the
22 line and wish to speak? We were having

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1 technical difficulties with the phone, so
2 couldn't tell if you wanted to say anything or
3 not.

4 Great. Okay. Again, I ask the
5 Board for any further questions/discussion,
6 or, if not, want to consider a motion. Since
7 we really don't have a recommendation from the
8 Work Group, it would be up to the Board.

9 Paul.

10 MEMBER ZIEMER: This is point of
11 information. Was Chapman Valve one of the
12 ones where we had tabled action on the SEC
13 Petition or Evaluation Report? I'm trying to
14 remember what the true status of this - did we
15 have a previous motion on this?

16 CHAIRMAN MELIUS: I think we -
17 Emily, do you recall? I remember this
18 question came up last time, and I can't
19 remember the answer.

20 MS. HOWELL: Yes, the last vote we
21 had was a tied vote. So we don't have a
22 tabled motion.

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1 MEMBER ZIEMER: Thank you.

2 CHAIRMAN MELIUS: So do people feel
3 that they've had enough time to look at the
4 information? I guess particularly the new
5 Board Members.

6 I hate to postpone this any
7 longer, but at the same time if you're feeling
8 uncomfortable with the information, if you
9 want to look at it over the meeting, we can
10 put this - do this follow-up tomorrow.

11 MEMBER LEMEN: Go with it.

12 CHAIRMAN MELIUS: What?

13 MEMBER LEMEN: Go ahead.

14 CHAIRMAN MELIUS: Okay.

15 MEMBER MUNN: Yes.

16 CHAIRMAN MELIUS: Oh, sorry, Wanda.
17 You're lost among the laptops. I apologize.
18 Go ahead, Wanda.

19 MEMBER MUNN: I am happy to make a
20 motion to support the assertion that we can in
21 fact do -

22 CHAIRMAN MELIUS: Can you speak a

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1 little louder? I'm not sure it's getting
2 picked up by the mic. At least I'm having
3 trouble -

4 MEMBER MUNN: - do a necessary dose
5 reconstruction as recommended by NIOSH.

6 CHAIRMAN MELIUS: Thank you. Do we
7 have a second?

8 MEMBER ZIEMER: Second.

9 CHAIRMAN MELIUS: From Paul. Any
10 further discussion?

11 Okay.

12 MEMBER ANDERSON: Go in reverse
13 order.

14 (Laughter.)

15 CHAIRMAN MELIUS: We have a
16 friendly amendment.

17 MR. KATZ: Just this one time,
18 Henry.

19 I'll note before I start that I
20 have two Board Members who are absent. And as
21 is the practice of this Board, we'll collect
22 those votes when they're ready to vote and

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1 available.

2 Dr. Ziemer.

3 MEMBER ZIEMER: Unaccustomed as I
4 am to going first, I will vote yes.

5 MR. KATZ: Mr. Schofield.

6 MEMBER SCHOFIELD: Yes.

7 MR. KATZ: Dr. Roessler.

8 MEMBER ROESSLER: Yes.

9 MR. KATZ: Dr. Richardson.

10 MEMBER RICHARDSON: Yes.

11 MR. KATZ: Mr. Presley.

12 MEMBER PRESLEY: Yes.

13 MR. KATZ: Dr. Poston.

14 MEMBER POSTON: Yes.

15 MR. KATZ: Ms. Munn.

16 MEMBER MUNN: Yes.

17 MR. KATZ: Dr. Melius.

18 CHAIRMAN MELIUS: Yes.

19 MR. KATZ: Dr. Lemen.

20 MEMBER LEMEN: No.

21 MR. KATZ: Mr. Gibson.

22 MEMBER GIBSON: No.

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1 MR. KATZ: Dr. Field.

2 MEMBER FIELD: Yes.

3 MR. KATZ: Mr. Clawson.

4 MEMBER CLAWSON: No.

5 MR. KATZ: Ms. Beach.

6 MEMBER BEACH: No.

7 MR. KATZ: Dr. Anderson.

8 MEMBER ANDERSON: Yes.

9 MR. KATZ: The yeas have it. We
10 have two outstanding votes to collect.

11 CHAIRMAN MELIUS: So what's the
12 tally?

13 MR. KATZ: The tally is we have
14 ten yeas, four nays, and two votes to collect.

15 CHAIRMAN MELIUS: Thank you.

16 I would just follow up that I
17 think it would - if NIOSH in your further
18 work, as well as DOE and DOL, if we can at
19 least keep this in mind and continue to pursue
20 it, again, we do have credible evidence that
21 something was going on at that site.

22 And as we go through new data

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1 sources or find new boxes of materials or
2 information, you know, let's try to keep
3 Chapman Valve in mind because I think it does
4 behoove us to do that.

5 Yes, Brad.

6 MEMBER CLAWSON: Jim, I just wanted
7 to compliment NIOSH because I was also
8 involved in reviewing boxes at Hanford that
9 had to do with Chapman Valve. And also when
10 they made a data capture back at Oak Ridge,
11 they had some boxes.

12 And so they have been doing that.
13 I just wanted to compliment them on keeping
14 us apprised of that and working towards that.

15 CHAIRMAN MELIUS: And I would add I
16 think that - appreciate, I think, NIOSH's
17 effort. I mean, some of us that were
18 concerned and, you know, might have voted
19 differently on this site in the past was - one
20 of the things that disturbed us was the
21 follow-up.

22 And I think, again, compliment

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1 NIOSH on their recent efforts and a little bit
2 more cooperation/help from the Navy. So I
3 think that's been very helpful to us.

4 Okay. It's coming up to 11:30,
5 which is our lunchtime. Ted, do you have any
6 - okay. Nothing more. Okay. We will take a
7 break, and we are scheduled to restart at 1:00
8 p.m. sharp.

9 So we have a number of petitions
10 to go through this afternoon, plus our ethics
11 training. So conflict of interest training.

12 So we'll see everybody back here
13 at one o'clock. Thank you.

14 (Whereupon, the above-entitled
15 matter went off the record at 11:30 a.m. and
16 resumed at 1:06 p.m.)

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1 And specifically, I want to talk
2 about TIB-70, which is our internal document
3 that provides a roadmap of how to do that.

4 So, for covered exposure during a
5 residual contamination period, only exposures
6 from AEC-related work are covered, you know.

7 That is if AWE had an AEC contract
8 and they worked with uranium, for example,
9 only the uranium work would be covered in the
10 residual period even though they might have
11 been working with other radioactive materials
12 during, for commercial purposes, such as
13 thorium or other isotopes.

14 That being said, however, though,
15 commercial sources, and this is actually in
16 the law, commercial sources that cannot be
17 reliably distinguished from AEC-related
18 sources are included.

19 That is if there's this whole sea
20 of contamination out there and you can't
21 reliably determine, you know, which part is
22 AEC and which part is commercial, then we

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1 would just include both and do the dose
2 reconstruction that way.

3 Just as another reminder, doses
4 from radiation-generating devices are not
5 covered outside the AEC period.

6 Natural background is not covered
7 unless it has been technologically enhanced.
8 And most of the time this would be referring
9 to radon. We don't include radon, natural
10 background from radon anywhere.

11 But if radon is there due to the
12 presence of radium that has been enriched for
13 some purpose - enhanced for some purpose, we
14 would include that. And, likewise,
15 occupational medical x-ray exposures are not
16 covered.

17 So, TIB-70 describes seven
18 possible scenarios as to what we could do to
19 reconstruct doses during this period. And the
20 method of choice, of course, depends upon how
21 much data is available.

22 It's been used at a number of

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1 sites in various ways. It certainly has been
2 used at Dow Chemical. Other sites that we've
3 used TIB-70 that come to mind are Revere
4 Copper & Brass, Simonds Saw and Steel, I
5 think. I'm pretty sure Blockson Chemical.

6 So, here is a table right out of
7 the document. There are seven scenarios
8 outlined here for our approach. And they
9 deal, as you would imagine, based on what's
10 out there for us to use, there's either - you
11 can either base it on air sample data or
12 surface contamination data.

13 So, in the first scenario, the
14 first line you can see that if you have
15 operational air sampling data and post-
16 operational air sampling data, that's the best
17 of all worlds for us to be able to figure out
18 what the exposures may have been during the
19 residual period.

20 And moving down the table you
21 could see, well, you could have operational
22 data, but no post-operational air sampling

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1 data and how would you deal with that?

2 And then when you get into the
3 realm of only post-operational data, that's
4 the third category.

5 And then moving further down when
6 you have surface contamination, the same logic
7 applies. You could have surface contamination
8 both post - during operational and post-
9 operational, or some combination thereof. And
10 I'm going to go through some examples of how
11 we do that.

12 This first slide is actually, I
13 believe it's the Dow Chemical plot, but this
14 is a situation where we have pre - or
15 operational. It's not pre-operational. It's
16 an operational air sample and a post-
17 operational sample. And you end up connecting
18 the dots using some sort of an exponential
19 function.

20 So, right at the end of the
21 operational period when they're collecting air
22 samples, we would take an air sample that is

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1 not necessarily a process air sample, but a
2 general area air sample would suffice.

3 And with the logic being that it
4 will certainly be no more than that general
5 area air sample during the residual period,
6 that will be our starting point.

7 And then in this particular
8 example 45 years later, the FUSRAP survey came
9 along and took some air sample data. I forget
10 the exact year, but somewhere around 2000.

11 And then one just fits an
12 exponential function between those two points
13 to come out with the exponential clearance
14 rate, and they would apply that to all the
15 intervening dose reconstructions.

16 Okay. This is where you have an
17 operational air sample and an air sample
18 during the FUSRAP era, but let's say you don't
19 have an air sample data from the FUSRAP
20 surveys, you just have an operational air
21 sample.

22 Well, you start with that same

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1 sample, but now you have to figure out what's
2 the depletion of this material over time. And
3 this is one - this is the equation that
4 generates the half-life for us in this
5 particular example, you know, where A is the
6 contaminated area, K is the resuspension
7 factor which we use one times ten to the minus
8 six, N is the ventilation rate and R is the
9 room volume.

10 If you rearrange this, you can
11 come out with the clearance halftime in days
12 by the expression on the bottom of $24KnH$.

13 If you assume that there is one
14 air change per hour and a resuspension factor
15 of five times ten to the minus eight, this
16 comes out to about one percent per day
17 clearance.

18 This is the value that is being
19 used for sites where we do not have any FUSRAP
20 data.

21 I will say that as you probably
22 know, this TIB is being reviewed by the

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1 Procedures Review Group. This is one area
2 where there is some discussion going on about
3 this one percent clearance per day.

4 It's debatable whether that's
5 exactly the number to use, whether we should
6 use a more site-specific value, but it in fact
7 is what we've used.

8 Not what we've used at Dow
9 Chemical. Dow Chemical used the last one, but
10 this is one that I'll be reporting on Wah
11 Chang, I think is what we use at Wah Chang
12 today.

13 So, that's if you only have a
14 starting air sample and no final air sample.
15 What happens if only post-operational data are
16 available?

17 You don't have anything during the
18 operations period to hang your hat on. Well,
19 what we do is we end up relying on TBD-6000,
20 which is you estimate the surface
21 contamination during the operation period.

22 And how you do that is you pick a

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1 representative work activity, you allow the
2 material to settle up to one year of that
3 activity, and then use the standard settling
4 velocity that we've adopted, which is .000075
5 meters per second, that has been vetted
6 through the review process.

7 And you end up with a predicted or
8 an estimated surface contamination value. And
9 then you can resuspend that material into the
10 air using this one times ten to the minus six
11 resuspension factor to get some estimate of
12 what the starting air concentration would be
13 at the beginning of the residual contamination
14 period.

15 Very similar now if we have no air
16 sampling data at all and we only have surface
17 contamination values, then we can take like
18 the situation where we have a starting air
19 concentration and ending air concentration, we
20 just merely have to take the measured surface
21 contamination values at the beginning of the
22 contaminated - at the end of the operations

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1 period, and then the surface contamination was
2 measured later on in the residual period, and
3 generate that same exact exponential function
4 that we did when we had air sample data.

5 So, that's very similar to what we
6 did before. In fact, you don't even have to
7 use the one times ten to the minus six
8 resuspension factor, because the clearance is
9 independent of the resuspension factor.

10 If only the operational data like
11 with the air sampling are available, then we
12 would use the same default depletion constant
13 of that one percent per day that I mentioned
14 earlier.

15 And that's a very brief nutshell
16 summary of how we go about re-suspending doses
17 in the residual period.

18 I will point out that the residual
19 period almost by definition, has no monitoring
20 data because, especially for AWEs that didn't
21 process commercial sources of material.

22 I mean, if you were an AWE that

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1 was a steel mill, the AEC contract is over,
2 everybody leaves, there is, by definition,
3 going to be no radiation protection program.

4 So, virtually none of the AWEs, I
5 can't think of any, that did not do commercial
6 radioactivity work, had any measurements
7 during the residual period other than the
8 FUSRAP survey.

9 So, that's it. Thank you.

10 CHAIRMAN MELIUS: Questions for Jim
11 at least related to Dow?

12 Yes, Josie.

13 MEMBER BEACH: Mine is fairly
14 related.

15 How many open items are there, and
16 you said that was within the Procedure Work
17 Group on TIB-70 now, and of those, how many of
18 them fall or are related to Dow?

19 DR. NETON: I don't think any are
20 related to Dow. The one that would be related
21 to Dow is the one that I talked about where we
22 had an operational air sample and an air

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1 sample during a residual period. That's what
2 we've used at Dow. We've drawn that
3 exponential function and connect those two
4 dots.

5 The open items that I'm aware of
6 is that one percent per day depletion, and
7 there may be - the one times ten to the minus
8 six resuspension factor is also under
9 discussion.

10 It's appropriate, SC&A at least
11 believes, at this point for sites that have
12 been cleaned up to some degree, but not for
13 sites that are - have been left without any
14 cleanup.

15 CHAIRMAN MELIUS: Dick.

16 MEMBER LEMEN: I just - maybe I
17 missed it when you gave the presentation, but
18 this resuspension factor of one times ten to
19 the minus six, did you derive that by
20 following out of the Steward '64 article?

21 Is that where you came up with
22 that?

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1 DR. NETON: I don't know the exact
2 citation, but there is some literature to
3 support that one times ten to the minus six.

4 MEMBER LEMEN: Well, you've
5 mentioned this - in one of the slides, you
6 mention Steward '64. I just wonder if it came
7 from that paper or - I'd like a reference for
8 that one times ten to the minus six if you can
9 provide it.

10 DR. NETON: I can certainly provide
11 it to you. I don't recall off the top of my
12 head as to what the basis of that reference
13 was.

14 MEMBER LEMEN: Okay. Thank you.

15 DR. NETON: John Mauro seems like
16 he might know better than me at this point.

17 DR. MAURO: Excuse me. When we
18 were researching the OTIB and discussing it
19 and we were looking into the ten to the minus
20 six, there is an NRC, a NUREG, one of the work
21 products that they put out, discusses the
22 resuspension factor to use following

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1 decommissioning.

2 So, that's after you've cleaned up
3 the site. I forget the number, but I can get
4 that for you, where they collected data,
5 actually collected some data, have empirical
6 data on what the resuspension factor is.

7 So, when the site has been cleaned
8 up and you remove most of the loose
9 contamination, a resuspension factor seems to
10 be a good number.

11 It's when there's still a lot of
12 heavy contamination, and that's one of the
13 issues we're discussing in our Work Group, ten
14 to the minus five, maybe even ten to the minus
15 four per meter is probably more appropriate
16 when you have a fairly dirty surface.

17 MEMBER LEMEN: So, you don't think
18 one number fits all.

19 DR. MAURO: No, not at all. I
20 think it has - in fact, we just had a Work
21 Group meeting where we discussed this issue at
22 length.

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1 In fact, you have to couple the
2 air - in other words, the rate at which it
3 declines, for example, at one percent per day,
4 you have to have a resuspension factor of
5 about ten to the minus four.

6 In other words, to lose that much
7 per day, you have to have a higher - you could
8 have a -

9 MEMBER LEMEN: No, no.

10 DR. MAURO: Did I just do something
11 backwards? Wait a minute.

12 MEMBER LEMEN: Yes.

13 DR. MAURO: There's a coupling
14 between the resuspension factor and the rate
15 at which you could lose material and you can't
16 uncouple the two.

17 I think that's one of our issues.

18 MEMBER LEMEN: Right.

19 DR. MAURO: I may have said it
20 backwards.

21 MEMBER LEMEN: I think we agree at
22 this point, though, that the one times seven

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1 to the minus six resuspension factor is open
2 for discussion.

3 DR. MAURO: Yes.

4 MEMBER LEMEN: I think that's - we
5 agree that it's good for surfaces that have
6 been cleaned up.

7 There's room for discussion,
8 though, on how we use it for other sites.

9 CHAIRMAN MELIUS: Paul, you had a
10 comment?

11 MEMBER ZIEMER: Right. I'm almost
12 certain it's not out of Alice Stewart's
13 publication. I don't think she would be
14 discussing that, but my recollection is that
15 maybe an NRC Reg Guide recommends that.

16 There's a fair amount of
17 literature on resuspension factors, and Dr.
18 Mauro is quite right. They span several
19 orders of magnitude depending a lot on the
20 environmental situation.

21 Where you have a site that has
22 been cleaned up, you have removed a lot of the

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1 loose stuff that would otherwise be suspended.

2 And that tends to tighten up the range of
3 resuspension factors, but I think it would be
4 worthwhile pinning down that literature for
5 the Board Members.

6 But the ten to the minus six, I
7 think in the Procedures Work Group we kind of
8 agreed - we haven't closed it - but with SC&A
9 that on a clean - a site that's already been
10 cleaned up, that's probably a pretty good
11 number.

12 But on a sort of dirty site, you
13 could have a couple orders of magnitude
14 different from that.

15 DR. MAURO: One of our work
16 products for you folks for the procedures
17 related to the subject, we have an attachment
18 where I tried my best to review the literature
19 on resuspension factors both outdoors and
20 indoors. It's a lot different.

21 And there's a lot of data. You're
22 absolutely right. A lot of data on

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1 resuspension factors, and they cover eight
2 orders of magnitude. That's the spread on
3 resuspension factors.

4 MEMBER LEMEN: Was this discussed
5 in Procedures before I got on the Procedures
6 Review Committee? It must have been.

7 MEMBER ZIEMER: I think it goes
8 back away. Wanda might remember, but -

9 MEMBER LEMEN: Must be before I got
10 on.

11 MEMBER MUNN: Well, yes, and
12 currently. We spent a lot of time in January
13 talking about just exactly this.

14 MEMBER LEMEN: Yes, I remember
15 that. But, I mean, we don't - we didn't give
16 as Members of the Procedure Review Committee,
17 the baseline data that this is based upon.

18 MEMBER ZIEMER: I think we need to
19 find that reference.

20 DR. NETON: Well, I'd like to point
21 out that TIB-70 actually goes through a fairly
22 detailed description of how we arrived at

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1 these values complete with references.

2 MEMBER LEMEN: Okay. Just as an
3 aside, you know, Alice Stewart, she was the
4 one that knew too much, if you've ever read
5 her biography.

6 MEMBER MUNN: That depends on your
7 position.

8 MEMBER ROESSLER: This Steward is
9 spelled differently.

10 MEMBER LEMEN: It's a different
11 Stewart? Both of them are named Alice?

12 MEMBER ROESSLER: Well, I don't
13 know about this one. It just says Steward,
14 but it's spelled with a D at the end instead
15 of a T.

16 I doubt that she would have done -

17 MEMBER LEMEN: Well, you said
18 Alice. That's why I thought you were -

19 MEMBER ZIEMER: No, I thought you
20 said Alice Stewart and -

21 MEMBER LEMEN: I didn't say Alice.

22 CHAIRMAN MELIUS: Yes, you did.

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1 Yes, you did, Dick.

2 MEMBER LEMEN: Well, maybe I made a
3 mistake. I meant Steward.

4 CHAIRMAN MELIUS: Well, some of us
5 couldn't believe that, I mean, not the kind of
6 work you'd connect with Alice Stewart.

7 MEMBER LEMEN: No, if I said Alice
8 Stewart, it was a faux pas.

9 CHAIRMAN MELIUS: She sort of took
10 the opposite tack of ignoring exposure, so to
11 speak. A whole other discussion.

12 MEMBER MUNN: It is a whole other
13 discussion.

14 I think that SC&A's White Paper on
15 this is easily available to look for the
16 Members who are interested in it.

17 CHAIRMAN MELIUS: Let's move on
18 please. We do have the Dow thing and we
19 deserve further discussion on this and some in
20 the Procedures Work Group.

21 Jim, before you go, I have one
22 other further quick question, I hope, which

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1 may be related to Dow also. It's just a
2 question.

3 This use of this applications
4 procedure also, I think, assumes that site
5 activities are sort of static. There may be
6 production work going on. As you said,
7 there's no commercial radiation work going on.

8 DR. NETON: Right.

9 CHAIRMAN MELIUS: And so, there are
10 sort of exceptions to this. One is heavy
11 contamination. We talked about where we'll
12 have a different approach.

13 Another I think comes up with
14 Norton where there's - which we'll talk about
15 later tomorrow where there's ongoing
16 decontamination activity.

17 DR. NETON: Right.

18 CHAIRMAN MELIUS: And then I've
19 also raised the issue and it's come up in the
20 Linde Work Group where you have this, you
21 know, renovation going on within the site.

22 DR. NETON: Correct.

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1 CHAIRMAN MELIUS: Sort of post-
2 initial decontamination and so forth. And so,
3 there's also - and I guess one of the
4 questions I sort of have is, like, what's our
5 criteria for how much - what's unusual
6 activity or situations that would make you go
7 beyond the use of just OTIB-70 in a residual -

8 DR. NETON: Right.

9 CHAIRMAN MELIUS: - contamination
10 period. And I don't know if you have any
11 comments on that or -

12 DR. NETON: Well, I just - these
13 are guidelines. They're just seven possible
14 scenarios.

15 But as you recognize in Linde,
16 there had been an extensive decontamination
17 done on the building. But during the
18 subsequent ten years or so, there were some
19 remodeling efforts going on to disturb that
20 contamination.

21 And, in fact, in that particular
22 scenario, we chose not to use the exponential

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1 decrease, but to keep the contamination level
2 constant until that activity was done. And
3 then we dropped it down with the exponential.

4 So, that's how we chose to deal
5 with that particular scenario, but it is kind
6 of on a case-by-case basis.

7 CHAIRMAN MELIUS: Yes, and I think
8 what we're - and we can discuss this with the
9 individual cases/situations, but also we need
10 to try to develop some consistency in how
11 we're approaching this because these are also
12 time periods when we often don't have very
13 much information on activities.

14 DR. NETON: Exactly, by definition.

15 CHAIRMAN MELIUS: So, it's hard,
16 but we can talk about that in more detail.

17 Let's move on to Dow. I believe
18 we may have some petitioners on the line or
19 listening in. And I think that was a good
20 introduction to some of the other sites that
21 we'll be talking about here.

22 So, what I thought we'd do to sort

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1 of get ourselves oriented back on Dow
2 Chemicals since the last meeting, is have John
3 sort of go through a slightly updated
4 presentation on - that we heard at the last
5 meeting, but that sort of goes through some of
6 the issues that had come up, and also
7 addresses some of the issues that [identifying
8 information redacted], one of the petitioners,
9 had raised also.

10 So, John.

11 DR. MAURO: Thank you. Good
12 afternoon.

13 I brought with me the same set of
14 slides that Bill Thurber used, I guess, back
15 in November and we can go through those.
16 Although, I could use a little help getting
17 this started, or not. I could just tell my
18 story.

19 (Off-record comments.)

20 DR. MAURO: Okay. This is the same
21 set of slides we used originally and I'll try
22 to go through it quickly.

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1 As you may recall, there are a
2 number of work products that NIOSH put out,
3 and this lists them.

4 So, basically this is the array of
5 source documents that NIOSH had developed over
6 time. Because as you know, the program, the
7 work on the subject evolved quite a bit since
8 2007. And similarly, SC&A has put out a
9 number of documents.

10 The most recent one that I think
11 is the most interest here has to do with the
12 document you put out dealing with surrogate
13 data and the degree to which the residual
14 period uses surrogate data.

15 And so, this slide is going to go
16 through the - well, this presentation will go
17 through the use of surrogate data at Dow.

18 And in order to follow this, I'd
19 rather just speak to conceptually first. The
20 way in which the Dow - Dow has been granted
21 SEC from 1957 to 1960. And the main reason is
22 the inability to reconstruct internal doses

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1 from thorium. Okay. That's the key point.

2 However, NIOSH's position is
3 during that time period, it's possible to
4 reconstruct doses from uranium for both
5 external and internal, and from thorium
6 external.

7 Now, for the residual period,
8 which is really the subject of interest here,
9 the position is that doses could be
10 reconstructed.

11 And so, the question is, you know,
12 how is NIOSH planning to do it and how are
13 they going to use surrogate data in order to
14 do that?

15 And the best way to come at the
16 subject is let's first talk a little bit about
17 uranium. And you need to understand there are
18 no data for uranium at Dow during the
19 operations period, '57 to '60, or post-'60.
20 So, this is a situation where surrogate data,
21 you know, is going to be used.

22 Now, how do they do it?

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1 Well, the starting point was,
2 well, what was the dust loading, what might
3 have been the dust loading during the
4 operations period?

5 And the way they came at it was
6 there's a report by Harris and Kingsley, it's
7 about 50 pages, it's a terrific report, it has
8 a tremendous amount of data that was gathered
9 in the mid-1950s through 1958, on uranium-
10 handling facilities that were actually
11 operating at that time with the Health and
12 Safety Laboratory now called the Environmental
13 Measurements Laboratory.

14 Went out to a number of
15 facilities. They went to Fernald,
16 Mallinckrodt, Simonds Saw, Bridgeport Brass,
17 Sylvania, all these different sites. They
18 went out there and collected data, air
19 sampling data, and compiled it and it's all
20 summarized in this report.

21 And this report is the source
22 document upon which TBD-6000 is based. And we

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1 did a very detailed review, went on for quite
2 a bit of time reviewing TBD-6000 and how
3 faithfully and appropriately they captured the
4 data in the source document, translated it
5 into TBD-6000, and now have a tool that, in
6 theory, can be used to do surrogate data work.

7 And we reviewed not only TBD-6000
8 carefully, and I think we've resolved all
9 issues on that, it was quite a bit of review
10 and Paul could attest to that, he chaired that
11 Work Group, but now the question becomes,
12 okay, what did they do though on Dow?

13 Well, what they did was it turns
14 out at Dow in those three years, '57 to '60,
15 they did two types of - you need to know about
16 what happened during operations in order to
17 understand what they did in the residual
18 period.

19 During operations, there were two
20 kinds of uranium activities that took place.
21 There was extrusion work, and rod
22 straightening work.

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1 So, that becomes, okay, now we
2 know the kinds of things that took place and
3 the duration that it took place, and we have
4 lots of information in here on those two
5 subjects, you know. What kind of dust
6 loadings?

7 Turns out that towards the end of
8 the operations period, 1959, they were doing
9 rod straightening work.

10 So, what that means is, okay,
11 let's go look at Harris and Kingsley or TBD-
12 6000 and say what kind of dust loadings were
13 experienced and, you know, because that
14 represents a surrogate data.

15 It was that data that was used to
16 say, okay, here's the kinds of dust loadings
17 you would expect to see during rod
18 straightening in 1959, the end of the
19 operations period at Dow.

20 We're going to use that as our
21 starting point to try to predict what the
22 exposures to uranium might have been post-

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1 1960, starting in 1961.

2 Took the dust loading. The
3 numbers are in here. I'm trying to see the
4 actual numbers. They were fairly high. They
5 were one of the higher - when we look into the
6 data here, different kinds of operations, only
7 rolling operations where you actually roll the
8 uranium, were higher than rod straightening.

9 So, it was at fairly high dust
10 loadings for uranium. And then they said,
11 okay, how do we use that data to predict what
12 might be during the residual period?

13 They assume that that dust loading
14 in the air toward the end - in the 1959 time
15 period, was settling out while they were doing
16 the straightening at that deposition velocity,
17 that .00075 meters per second, which turns out
18 to be the deposition velocity, and we checked
19 this, for a five micron AMAD particle, that's
20 the rate at which it would fall.

21 And they allowed it to accumulate
22 on surfaces for the duration that the rod

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1 straightening took place, which I think was
2 only about a week at the end of the process.

3 Because after each one of these
4 jobs where they did work, they cleaned up. It
5 was part of the contract with Mallinckrodt.

6 So, basically what NIOSH did was
7 say, all right, at the end of the operations
8 period, we could predict how much residual
9 uranium is on the surface at the end of
10 operation.

11 Now, what they then said, okay,
12 let's assume that's the amount that's on
13 surfaces at the beginning of the residual
14 period.

15 Now, in reality, there was
16 cleanup, but credit for cleanup wasn't taken.

17 So, that was sort of like - and when we get
18 to the criteria, you know, the five surrogate
19 data criteria, we'll get to that, but so we'll
20 just assume, well, there wasn't any cleanup,
21 here's the activity that's on the surface,
22 using that approach, and they applied a

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1 resuspension factor of ten to the minus six to
2 get it into the air.

3 So, here it is, January 1st, 1961.

4 This is how they predicted the dust loading,
5 and also the activity on surfaces.

6 The activity on the surfaces is
7 used to predict the radiation field external,
8 because the person is walking around and
9 that's straightforward. We know the numbers
10 they use. It's a straight physics
11 calculation.

12 So, that's your dose rate at time
13 January 1st - maybe I can put this up.

14 (Off-record comments.)

15 DR. MAURO: Oh, there it is. Okay.

16 Good. Thank you.

17 All right. For uranium. So, what
18 happens is, so now they're assuming that that
19 activity on ground and the activity in the air
20 from resuspension stays constant for right
21 through 2006, 2007, whenever the end of the
22 residual period is.

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1 All right. So, that's the
2 surrogate data. I mean, that's basically what
3 they did.

4 In our opinion, not bad. And
5 because, you know, the reality is they did
6 clean up at the end.

7 So, in our opinion, that is a use
8 - that's a different twist, by the way, from
9 OTIB-70, because OTIB-70 doesn't do that.
10 This is a special treatment.

11 So, in effect, the person is going
12 to be experiencing 5.5 dpm per day
13 continuously for the entire time period. It
14 has a geometric standard deviation of five.
15 Pretty big geometric standard deviation.

16 Same thing goes with the external
17 dose rate from the uranium. So, that's how
18 uranium is done.

19 Now, to quickly go through the
20 five criteria, because we're going to do this,
21 then we'll do thorium, and then I'll be done.

22 Okay.

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1 All right. The first criteria is
2 hierarchy of data. Now, for our internal
3 exposure, you always prefer bioassay data.
4 They're not using bioassay data, so there's a
5 problem - not a problem. You would like
6 bioassay data, but instead they use the
7 airborne data. Surrogate airborne data, but
8 they're using it in a way that's pretty
9 conservative because they didn't take credit
10 for cleanup. And they didn't take credit for
11 it declining in time during the time period.

12 So, in our opinion, they don't
13 have - it's not very high in the hierarchy.
14 In the hierarchy of data, you have to start
15 with bioassay, then you go to air sampling and
16 then you just go to some type of process
17 knowledge.

18 So, it's not at the highest level,
19 but they've built into it certain
20 conservatisms that just sort of offset that.

21 Beside hierarchy of data is
22 exclusivity of data. That is when you rely

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1 entirely on surrogate data, you've got to
2 really vet it well.

3 In other words, you've got to make
4 sure you're comfortable if you're going to
5 base it entirely on that.

6 And reality is we vetted it very
7 well in TBD-6000. We looked really carefully
8 at Harris and Kingsley and how they took that
9 data and turned it into TBD-6000. So, we
10 thought that that meets the exclusivity
11 requirement.

12 The next one is time. We want to
13 use data, surrogate data that was collected at
14 about the same time at the facility that
15 you're interested in. Well, this is right on
16 target. `57 to `60 was the time period for
17 Dow operation, and Harris and Kingsley was
18 published in 1958.

19 So, the time when the Harris and
20 Kingsley data were collected is also the time
21 when Dow Madison was doing its thing.

22 The next one is equivalent in

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1 terms of operations. Well, you could see that
2 they actually went right to the rod
3 straightening.

4 In Harris and Kingsley, you zero
5 in. You say, well, there's array upon array
6 of data. They use the rod straightening
7 operation as a pretty high-end operation, and
8 they assumed no ventilation.

9 In Harris and Kingsley, you could
10 go and assume there's ventilation. And that
11 has about a ten to twenty-fold reduction.

12 Because if there was a hood with
13 ventilation, it would substantially drop that
14 dust loading from about 1600 dpm per cubic
15 meter, the numbers are coming back to me, to
16 about 300.

17 So, but they didn't use that. So,
18 it seems to me that they picked the more
19 conservative assumption to be compatible with
20 what might have been going on at Dow at the
21 time.

22 And, finally, plausibility. Okay.

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1 This is always a tough one. And the reason
2 why it's tough is that, well, what do we have
3 here?

4 You have this - everything was
5 modeled, in my mind, pretty well for the 1957
6 to 1960 time period. Stuff falls on the
7 ground, and really it was cleaned up.

8 So, in reality, probably didn't
9 have that much on the ground, on the surfaces
10 in 1961. So, that may be an overestimate.

11 In addition, the fact that you
12 keep it flat the whole time, an overestimate.

13 But one could argue, well, that's a way to
14 compensate for exclusivity of data, hierarchy
15 of data, you know. This is where judgment
16 comes in. If anything, in my opinion, it's
17 probably an overestimate.

18 Is it plausible? I'll leave that
19 to you folks to judge. So, let's move on now
20 to thorium.

21 Okay. Thorium, you need to talk
22 about thorium from - let's move on to thorium.

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1 Thorium. Everything I'm saying is here in
2 summary form, but I find it easy just to talk
3 to you.

4 All right. You've got - what
5 happened in that 1957 to 1960 time period is
6 there were some thorium operations going on
7 that were related to AWE activities, okay,
8 where they were making widgets for use, I
9 believe, in the weapons program.

10 Now, if that turns out to be less
11 than one percent of the - in other words, the
12 thorium that was moving through in that time
13 period, the vast majority was commercial. A
14 very small fraction was related to the weapons
15 complex. It's important to keep that in mind.

16 Okay. It turns out when you look
17 at the data on thorium, thoron and all the
18 other isotopes that were measured at that time
19 period, there are about 30 or so air samples
20 collected for the radionuclides and they're
21 taking - you visualize what the thorium - what
22 they're doing.

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1 They take a pot of molten
2 magnesium with some type of protective cover
3 gas, because you can't allow the magnesium to
4 interact with the air. You'll get an
5 explosion.

6 They would lower thorium, called
7 the master alloy - is Bill Thurber on the
8 line?

9 MR. THURBER: I am.

10 DR. MAURO: If I go to anything
11 wrong, please interrupt because this is - Bill
12 did all the work and I'll just do my best to
13 tell the story.

14 You would lower the master alloy
15 into this molten magnesium. Very dangerous
16 situation. And there's a lot of smoke and
17 dust there. Sometimes there's an explosive
18 situation.

19 And they were collecting thorium
20 air samples to measure for long-lived alphas,
21 thorium, short-lived radionuclides, that would
22 be thoron and its progeny, and also beta which

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1 I think is the radium.

2 So, I sort of grouped it into
3 categories, and it turns out there's data out
4 there for many different aspects of this
5 operation, but not that much data.

6 To the extent that one could argue
7 that, you know, you really can predict the
8 thorium internal exposures from that data
9 because we - they really didn't - their other
10 activities are sort of cleaning out these
11 pots, these big pots where it's dry and
12 generally there will be dust.

13 So, there are a lot of aspects
14 where one could argue, you know, it's really
15 hard to put an upper bound on the thorium
16 exposures during operations because there's
17 certain special activities. People might have
18 their head in the pot sanding it. And so,
19 there's the reason for the AWE designation for
20 '57 to '60.

21 But then someone could ask, well,
22 wait a minute. Do we have enough data to try

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1 to place an upper bound on what might have
2 been the thorium activity in 1961 after all
3 that stopped?

4 Now, remember less than one
5 percent of the thorium dust you're measuring
6 is from AWE activities. In fact, one of our
7 original criticisms was, wait a minute, you
8 can't use that - well, what they did is they
9 took the thorium dust load, the highest values
10 of thorium that they measure during
11 operations, and they assumed that was the
12 level of thorium that's in the air on January
13 1st, 1961, after operations are over, after
14 they stopped AWE activities, and were going to
15 assign that to the beginning of the residual
16 period.

17 Our first criticism of that was,
18 wait a minute, we know less than one percent
19 of that thorium has got to be from AWE.
20 Right? So, why are you using the full amount?
21 Why not multiply by .01?

22 And it was pointed out to us

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1 during the Work Group meetings that, well, if
2 you really can't distinguish what's from what
3 and, in fact, this - we had a lot of
4 discussion you're really not sure what
5 fraction of the airborne dust for thorium is
6 from commercial versus AWE activities, you
7 have to assume it's all. So, I say fine.

8 So, now you have a dust loading,
9 the highest dust loading that they measured
10 during operations with thorium-232 and thoron,
11 also, and have said that we're going to assume
12 that's the airborne dust loading at the
13 beginning of the AWE period.

14 Now, remember there's no more - in
15 theory, I know [identifying information
16 redacted] will probably say that it's possible
17 there might have been some AWE activity going
18 on post, and that's just a different subject.

19 Right now we're operating on the
20 premise that all thorium AWE activities ended
21 during the covered period right through 1960.

22 So, now we're saying, okay, we

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1 have our dust loading for thorium and thoron
2 at January 1st, 1961. And we have our FUSRAP
3 measurements for thorium-232 measured at some
4 times much later. Maybe 2000. I'm not sure
5 exactly of the date, but way out there.

6 And as Jim described exponential
7 connection, now you've got your time variant
8 concentration of thorium in the air, and they
9 assumed that was the same - the thoron went
10 the same way.

11 So, basically there's your - it's
12 really not - that's really not surrogate data
13 in its classic sense, because they used real
14 data, but it is surrogate from the point of
15 view of time.

16 They took data from this time and
17 they used it. So, in a way it's a small S. I
18 called it the surrogate data, but not in a
19 classic sense. That's how they did the
20 internal.

21 Okay. External they did something
22 different. They had two sources of external

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1 exposure. One is there were buildings where
2 the thorium alloy was stored. And they took
3 radiation measurement readings like up close
4 to it. That was actually real data during
5 operations, the thorium operations.

6 They also had data from Bay City,
7 which were doing very similar operations.
8 External, but film badge data.

9 And they said, okay, let's look at
10 these two different sets of information. One
11 are the surveying instrument - survey
12 measurements, and the other from - actually
13 from Dow, and the other was the film badge
14 data from Bay City.

15 The Bay City data ended up with a
16 little bit more - not - they were close. So,
17 they assumed - and I like that. When you get
18 two different approaches that come into the
19 same number and they come in close within
20 about a factor of two, you know you're
21 starting to feel good about your number.

22 So, in effect, there was a pretty

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1 good estimate of the external exposure workers
2 might have experienced during the time they
3 were doing their thorium operations.

4 Whether it was commercial or
5 whether it was weapons, it doesn't matter.
6 There's an exposure rate during the time those
7 activities were taking place.

8 Well, they assumed that that same
9 exposure rate -

10 CHAIRMAN MELIUS: Hey, John, could
11 we try to wrap up?

12 DR. MAURO: I'm almost done. I am
13 going - yes.

14 Well, they assumed that very same
15 exposure rate took place on January 1st, 1961,
16 and they exponentially declined it using the
17 same slope as they did for the thorium-232.

18 You could almost figure out for
19 yourself the degree to which that meets the
20 five criteria for surrogate data. The same
21 arguments you can make as I described before.

22 That concludes my presentation.

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1 Thank you.

2 CHAIRMAN MELIUS: Thank you.

3 Any questions for John?

4 Dave, then Bill.

5 MEMBER RICHARDSON: Just a real
6 quick one.

7 So, you said there's this FUSRAP
8 data from later in time, you know. For the
9 uranium, I mean, I know that they started the
10 surrogate data.

11 Why don't they have a data point
12 there and do a time decay to that?

13 DR. MAURO: I don't know. That's a
14 good question. I don't know the answer to
15 that because normally you would use FUSRAP
16 data if it was there. Maybe you can help out.

17 MR. RUTHERFORD: Actually, at the
18 time when we originally developed that, we did
19 not have TIB-70 and we felt that was bounding,
20 and uranium was our only component we were
21 worried about at that time.

22 So, now we could easily go back

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1 and use that same removal constant that we
2 developed for thorium and put it on uranium,
3 but it's such a small intake anyway.

4 CHAIRMAN MELIUS: Thanks, LaVon.

5 Bill.

6 MEMBER FIELD: Same question.

7 CHAIRMAN MELIUS: Same question.

8 Okay.

9 Anybody else?

10 Okay. Thanks, John. You can sit
11 down. We have the - we may have petitioners
12 on the line. [identifying information
13 redacted] was not - did not believe he could
14 make it, but said he might try.

15 I don't know if there's anybody
16 else. If not, Ted will read - has some - a
17 letter from Dr. McKeel to read into the
18 record.

19 DR. KATZ: So, this letter is dated
20 February 11th, 2011. Dear Dr. Melius and
21 Members of the Advisory Board. I have asked
22 Ted Katz or Josh Kinman to read this letter

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1 into the record on February 23rd during the
2 1:00 to 2:00 p.m. Dow SEC Petition session at
3 the Augusta Board meeting to be my
4 contribution as the Dow Madison SEC-79 co-
5 petitioner. Personal considerations dictate
6 that I cannot be certain I will be available
7 by phone at the allotted time for the Dow SEC
8 presentation on February 23rd.

9 I ask again that the Board
10 carefully consider this and my preceding five
11 formal presentations to the Board why they
12 should approve extending Dow Madison 83.14
13 SEC-79 to cover the residual contamination
14 period from 1961 to October 2007.

15 I ask especially that the Board
16 consider carefully my testimony in the
17 transcripts of the November 12, 2010 SEC
18 Issues Work Group (McKeel Pages 26 to 69 of 83
19 devoted to Dow SEC-79) and the November 16th,
20 2010 Board Santa Fe meeting transcript (McKeel
21 Pages 226 to 243, Dow SEC Petition Pages 184
22 through 243 and 280 through 290. Note the

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1 transcript index pagination is incorrect),
2 parenthetically.

3 I have been assured that
4 unredacted transcripts of all of my remarks
5 have been made available to all Board Members
6 as some of them requested at the November 2010
7 Board meeting.

8 I note the name and identifying
9 information of Southern Illinois Professor
10 [identifying information redacted], who
11 presented her findings on Dow to the Board
12 twice, was redacted (improperly, in my view).

13 That's why the Board needs access to my
14 unredacted documents.

15 I have also attached my complete
16 23-page May 4, 2007 Board presentation as a
17 PDF file. The filename is, and he gives the
18 name.

19 The file includes a PowerPoint
20 portion and text remarks, and was (for the
21 record) requested by me on May 4th, 2007, to
22 be posted to the Dow Madison Docket Number

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1 113. This was not done even through the Board
2 chair indicated on the record it would be.

3 I have also included a copy of
4 pages of the Dow SEC-relevant May 4, 2007
5 Board meeting verbatim transcript that
6 includes the discussion on Dow SEC-79.

7 Understanding the content of this
8 material is crucial to making a fully-informed
9 recommendation on NIOSH's recommendation to
10 deny extending the SEC-79 to cover the
11 residual contamination period.

12 This transcript makes abundantly
13 clear both the scientific arguments preferred
14 by the primary petitioner and co-petitioner.

15 The transcript also documents the
16 powerful case made by four members of the
17 Illinois Congressional delegation and the
18 Board reaction to approve the SEC-79 extension
19 to the residual period that day.

20 The transcript also illuminates
21 the legal issue arguments that were part of
22 the deliberations.

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1 It is important to note that on
2 May 4th, 2007, both DFO Dr. Lewis Wade (Page
3 80, Lines 1 through 2) and Chairman Dr. Paul
4 Ziemer (Page 106, Lines 16 through 18) stated
5 on the record that they found my arguments and
6 evidence that day to be "very compelling."

7 As a brief summary, the
8 petitioners maintain that an SEC should be
9 approved for Dow Madison to cover the uranium
10 and thorium residual periods for the following
11 major reasons: One, we strongly disagree with
12 SC&A that the Board surrogate data criteria
13 have been fulfilled by NIOSH with respect to
14 accepting a minute, brief time and job
15 delimited set of film badge readings to gauge
16 external exposures.

17 We contend the Bay City, Missouri
18 highly-selected and non-representative FB data
19 set is so small and limited it has no
20 statistical power to define or bound external
21 doses during the residual period at Dow
22 Madison. The use of these data by NIOSH and

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1 the SC&A's endorsement thereof is, in the
2 petitioner's view, scientifically
3 indefensible.

4 Two, TIB-70 that is being
5 discussed at the February 23rd through 5th,
6 2011 Board meeting, is itself surrogate data
7 that is not sufficient to assign residual
8 period doses at Dow Madison.

9 It cannot bound doses during
10 removal of the tons of magnesium-thorium
11 sludge or during multiple Madison site owner-
12 instigated cleanups during the residual
13 period.

14 There were a number of cleanups of
15 magnesium alloys and magnesium-thorium sludge
16 for which NIOSH has not calculated internal
17 and external exposures during the residual
18 period.

19 Three, SC&A and Bill Thurber have
20 identified building numbers at Dow Madison, in
21 Illinois that do not and never did exist at
22 that site. His data is obviously surrogate

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1 and refers to another site.

2 The co-petitioner and Dow site
3 experts and workers have repeatedly challenged
4 the authenticity of much of the monitoring
5 data, a small fraction of the whole, that
6 NIOSH and SC&A claim was obtained at the
7 Illinois Dow Madison site. SC&A acknowledges
8 that a large majority of Dow data is
9 surrogate. (See Item 6.)

10 Four, NIOSH (via DOL) refused on several
11 occasions to use Section 7384w EEOICPA
12 subpoena power to inspect the 10,000 Dow
13 Madison records the SEC-79 co-petitioner and
14 Robert Stephan were told existed at Dow
15 Midland, Michigan headquarters.

16 Five, The Dow petitioners
17 criticize NIOSH for preferentially accepting
18 testimony from Rocky Flats personnel who deny
19 that records exist that substantiate the sworn
20 affidavit testimony of many eyewitness Dow,
21 Illinois workers that (a) the Madison site
22 shipped truckloads of HK-31 magnesium-thorium

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1 alloy plates, the specific alloy used in
2 nuclear weapons, by truck to Rocky Flats DOE
3 facility where Dow Chemical was prime
4 contractor from 1951 to `75, and that (b) in
5 turn, RF workers came to the Illinois Madison
6 site and operated the extrusion presses to
7 process metal the press operators believe was
8 a form of thorium and/or uranium. The details
9 of these short runs were deliberately kept
10 secret from Dow Madison workers.

11 Six, Dow Madison lacks any site
12 film badge or urine bioassay data for uranium
13 or thorium for any portion of the covered or
14 residual contamination periods. No one
15 disputes this fact.

16 And seven, the co-petitioner's
17 FOIA for all correspondence between NIOSH and
18 DOL leading up to the issuance of 83.14's SEC-
19 79 was delayed for more than a year and was so
20 heavily redacted that the petitioners believe
21 this amounted to unwarranted censorship of
22 contextual material about the Dow residual

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1 period that the co-petitioner had a right to
2 have turned over to him in a less-heavily
3 redacted form of the responsive documents.

4 The level of redaction was extreme
5 and destroyed the informational content of the
6 redacted email messages especially, to
7 understand why the SEC-79 class only covered
8 1957 to 1960 and not the residual period as
9 well.

10 Respectfully submitted, Daniel W.
11 McKeel, Jr. And there are two enclosures.

12 CHAIRMAN MELIUS: And I think all
13 the material that Dr. McKeel refers to has
14 been provided to the Board ahead of time. So,
15 we have that information.

16 And I think some of what he refers
17 to is the issue of other possible covered
18 operations at the site. I think DOL has
19 reviewed that and determined that there's not
20 enough evidence for that.

21 And I think if new information
22 becomes available, it would be, you know,

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1 should be handled appropriately. I think we
2 did that.

3 So, any Board Members have any
4 further questions or comments on the - okay.

5 The Work Group, Surrogate Data
6 Work Group had met and had reviewed this
7 before the last Board meeting. We did not
8 have all of our Members there. So, we didn't
9 do a formal vote on it. So, that is open.

10 I think in general the - I was
11 satisfied. I believe Paul also. I can't
12 remember who attended the meeting. So, I
13 apologize - the Work Group, but that the
14 methods being proposed were appropriate and we
15 were comfortable going forward. Remember,
16 this is coverage just to the residual period
17 at Dow.

18 I would also add that we have sort
19 of delayed this consideration for a
20 considerable amount of time in order for
21 [identifying information redacted] and the
22 petitioners to get information.

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1 There was a problem with them
2 getting information, delays in getting
3 information. They have requested - part of
4 the reason for the delay in us considering
5 this has been to give them adequate time to
6 obtain information.

7 And, frankly, adequate time for
8 DOL to consider the information that was
9 presented to DOL regarding the covered period
10 and the operations at the facility that should
11 be considered.

12 So, we already asked if the
13 petitioners were online. Do you -

14 (Off-record comments.)

15 CHAIRMAN MELIUS: Okay. Board
16 Members have comments/questions?

17 If not, I guess we would consider
18 a motion. The active recommendation we have
19 from NIOSH is that it's basically to turn down
20 the SEC for this time period based on their
21 evaluation, including their updated
22 evaluation.

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1 Wanda.

2 MEMBER MUNN: I move that we accept
3 the NIOSH recommendation with regard to this
4 SEC Petition.

5 CHAIRMAN MELIUS: Do we have a
6 second to that?

7 MEMBER PRESLEY: I'll second.

8 CHAIRMAN MELIUS: Bob. Okay.

9 Any further discussion?

10 MEMBER ANDERSON: Just for
11 clarification, the operational period is
12 already in the SEC.

13 CHAIRMAN MELIUS: Yes, the
14 operational period is -

15 MEMBER ANDERSON: So, we couldn't
16 reconstruct doses for that.

17 CHAIRMAN MELIUS: Correct.

18 MEMBER ANDERSON: Okay. So, it's
19 really this is -

20 CHAIRMAN MELIUS: This is the
21 residual period, yes.

22 MEMBER ANDERSON: - a straight

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1 forward surrogate.

2 CHAIRMAN MELIUS: Yes. And, in
3 fact, if I remember right, the original
4 operational period was an 83.14.

5 MEMBER ANDERSON: Yes.

6 CHAIRMAN MELIUS: Correct. Yes.

7 MEMBER ANDERSON: Okay.

8 CHAIRMAN MELIUS: And then it was
9 modified by at least - I think it was -

10 MEMBER ANDERSON: Yes.

11 CHAIRMAN MELIUS: Do you want to
12 explain, LaVon?

13 MR. RUTHERFORD: It was originally
14 an 83.14 and [identifying information
15 redacted] talked to the Board and talked
16 through Larry Elliott about including the
17 residual period in our discussion.

18 Originally, we would only for an
19 83.14, include the period that we would
20 recommend a Class. However, in this case, we
21 ended up going back and going ahead and
22 evaluating our feasibility for reconstructing

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1 dose for the residual period.

2 So, it's a question and I'm not
3 sure if - it would be tied to SEC-79, I
4 believe, but it's an 83.14.

5 CHAIRMAN MELIUS: David.

6 MEMBER RICHARDSON: Could I ask -
7 the SEC Petition Evaluation Report isn't in
8 the package that we have for the Dow right
9 now. And it's not on the back table either.

10 I'd like to have a chance to read
11 that once more before -

12 CHAIRMAN MELIUS: Okay.

13 MEMBER RICHARDSON: And I don't -
14 unfortunately, I don't have access to the O:
15 drive. So, if it could be -

16 CHAIRMAN MELIUS: It should be on
17 the website.

18 (Off-record comments.)

19 DR. NETON: If you look at the DCAS
20 website under SECs and scroll down to Dow
21 Madison, one of those documents in there will
22 be the Evaluation Report.

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1 CHAIRMAN MELIUS: Anybody else have
2 any request for documents?

3 Okay. We will - I want to try to
4 set a time for this so that we do that.
5 You'll have access tonight, David?

6 MEMBER RICHARDSON: Yes.

7 CHAIRMAN MELIUS: Okay. So, why
8 don't we schedule our next consideration at
9 roughly 10:30, our Board Work Session that's
10 tomorrow morning. We'll take it up again.

11 (Off-record comments.)

12 MEMBER RICHARDSON: If somebody
13 actually could provide it, it's not obvious on
14 the website.

15 (Off-record comments.)

16 CHAIRMAN MELIUS: Can someone,
17 maybe LaVon or someone, can you just, you
18 know, download that document, email it to the
19 Board so that way people have it and we're not
20 struggling to - things can be difficult to
21 find on the website. It's getting better, but
22 not that.

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1 Actually, Ted reminded me actually
2 since we had an active motion on being
3 consideration, I think, David, you should
4 offer your - offer a motion to table if you
5 want to postpone.

6 MEMBER RICHARDSON: That could be
7 entertaining. I make a motion to table.

8 CHAIRMAN MELIUS: Second to that?

9 MEMBER MUNN: Second.

10 CHAIRMAN MELIUS: Okay. From
11 Wanda.

12 MEMBER ZIEMER: Point of order, I
13 believe you could specify tabling to a certain
14 time just to - it's obviously not debatable.
15 So, I'm not debating the motion. I'm just
16 suggesting -

17 CHAIRMAN MELIUS: Yes. Fine.

18 MEMBER RICHARDSON: I leave it to
19 you to make recommendation what time you would
20 like that to be.

21 CHAIRMAN MELIUS: Until 10:30
22 tomorrow morning.

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1 MEMBER RICHARDSON: 10:30.

2 CHAIRMAN MELIUS: The Board work
3 time.

4 And we had a second to that from
5 Wanda?

6 MEMBER MUNN: Yes.

7 CHAIRMAN MELIUS: Okay. All in
8 favor.

9 (Chorus of ayes.)

10 CHAIRMAN MELIUS: Opposed. Okay.
11 Tomorrow morning. Very good.

12 We now have a Board work session
13 today, and to that end we have one piece of
14 Board correspondence if I can find it here,
15 that I told the person that we would consider
16 it during this time period. Because the
17 person that sent us the letter was from the
18 West Coast and didn't want to have to get up
19 at five o'clock on a Friday morning when we
20 had correspondence listed as one of the
21 potential items for our thing.

22 That was the letter from the

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1 Alliance of Nuclear Worker Advocacy Groups
2 concerning the issue with plutonium oxide,
3 high-fired plutonium oxide and the issue about
4 the ICRP.

5 I think people recall that. If
6 not, I can - it's a relatively short letter
7 and I can briefly summarize it.

8 MEMBER ZIEMER: When was it sent
9 out?

10 CHAIRMAN MELIUS: It was - when did
11 you send it out?

12 MR. KATZ: In December.

13 CHAIRMAN MELIUS: And I'll ask Stu
14 or Jim Neton to be able to respond. I gave
15 them a heads up last week that we would be
16 talking about it.

17 Okay. Now, let me just briefly -
18 and I'll paraphrase this a little bit. A few
19 months ago, the United States Transuranium and
20 Uranium Registries released its report titled
21 "USTUR Case 202: Evaluation of a Proposed
22 Revision to ICRP HRTM for Refractory Plutonium

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1 Oxide, Plutonium-fired Aerosol.

2 The USTUR concludes, "It is
3 necessary to modify both the structure of the
4 alveolar-interstitial region of the Human
5 Respiratory Tract Model (HRTM) and the assumed
6 characteristic rates and the particle
7 transport to the bronchioles and thoracic
8 lymph nodes." This means that NIOSH must
9 revise OTIB-0049.

10 Thousands of claims are affected
11 by OTIB-0049 and these claims will need to be
12 reopened once it's revised and updated.
13 Unfortunately, it's estimated that it will
14 take ICRP two years to revise its methodology.

15 In the meantime, NIOSH will
16 continue to use an outdated scientific
17 procedure to reconstruct dose for workers
18 exposed to high-fired plutonium oxide and thus
19 possibly underestimating the dose for exposure
20 to this material.

21 It's unacceptable that claimants
22 will need to wait a minimum of two years for

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1 NIOSH to revise its methodology before they
2 can come into compliance with ICRP's methods
3 as mandated by EEOICPA.

4 ANWAG foresees three possible
5 outcomes. Number one, NIOSH will continue to
6 reconstruct dose for workers using the current
7 OTIB-49; number two, NIOSH will put a hold on
8 reconstructing dose for workers exposed to
9 high-fired plutonium oxide until ICRP releases
10 its revision to their procedure and NIOSH then
11 has an opportunity to revise its model; number
12 three, NIOSH agrees that it's unable to
13 reconstruct dose with reasonable accuracy for
14 all workers who may have been exposed to high-
15 fired oxide and immediately initiates an 83.14
16 petition.

17 ANWAG urges the Advisory Board to
18 discuss this issue during the February 2011
19 Board meeting. Moreover, we strongly
20 recommend that NIOSH consider initiating an
21 83.14 petition for all workers exposed to
22 high-fired plutonium oxide without delay.

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1 Thank you for your time and
2 consideration. Signed by Scott Yundt on
3 behalf of the ANWAG members.

4 So, Jim or Stu, do you want to
5 respond on the status?

6 MR. HINNEFELD: Yes, this is Stu.
7 I'll give it a try. And then Jim can correct
8 anything I say that's wrong.

9 In this instance, we're a little
10 bit ahead of the game. What the ICRP
11 announcement is, is that they are going to
12 consider the existing respiratory models for
13 this very insoluble class of plutonium, which
14 their models did not address before. And
15 that's essentially what we've done in OTIB-49
16 - is that the number?

17 We identified - or in discussions,
18 it's not us on our own, it's in discussions
19 with the Board and SC&A, this issue of very
20 insoluble plutonium at a number of plutonium
21 facilities was already identified and raised
22 and is the basis for OTIB-49.

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1 And, in fact, ICRP asked us for
2 the data we used in developing our approach,
3 for them to evaluate as they reconsidered
4 their respiratory tract model.

5 So, we feel like right now we're
6 in a pretty good shape and we have done a
7 bounding estimate, an estimate that will not
8 underestimate people's doses by using
9 essentially the most insoluble instance that
10 we came across of this data, and using that in
11 OTIB-49.

12 Now, at some point I assume ICRP
13 will publish a new respiratory model which
14 will include this component for Super S, which
15 we think we've addressed.

16 At that time, then, we'll have
17 something to compare whether it's their
18 recommendation versus ours, to determine
19 whether or not we feel like we had suitably
20 bounded it in view of the ICRP's
21 recommendation.

22 So, we think that right now we're

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1 ahead of the game because ICRP is now starting
2 to use the data that we used when we fashioned
3 OTIB-49.

4 Now, this letter was addressed to
5 the Advisory Board and not to us. We have not
6 fashioned this response back to ANWAG yet.

7 CHAIRMAN MELIUS: Well, what I
8 would approach, wanted to hear from NIOSH,
9 wanted to hear from Board Members, at least
10 the Board would draft a response back saying
11 this has been discussed, but I didn't want to
12 draft the response until we had a chance to
13 discuss it.

14 David.

15 MEMBER RICHARDSON: Could I ask as
16 a follow-up, it sounded like the letter was
17 raising two issues.

18 There was one about the nature of
19 the intake in the Super S, and there was the
20 other about the types of compartments and
21 compartmental models that are under
22 consideration.

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1 So, are you saying that you've
2 used the current ICRP model, but introduced
3 kind of a Super S category?

4 Because I thought they were -
5 well, I thought they were raising issues about
6 transport, for example. The kinetics of these
7 intakes to things like the lymph nodes and
8 whether those need to be revised as well.

9 MR. HINNEFELD: I believe that's
10 what we addressed in OTIB-49.

11 MEMBER RICHARDSON: Yes. So,
12 you've both modified kind of the compartmental
13 model as well as the categories.

14 MR. HINNEFELD: Well, we modified -
15 we essentially came up with an approach to
16 adjust the ICRP model to account for this
17 different transport that seems to occur in
18 these very insoluble cases.

19 It's not like we've developed - I
20 don't think we developed any new compartments
21 for the lung model or anything like that.

22 MEMBER RICHARDSON: But you're

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1 saying for Super S, there is the greater
2 potential it's going to reside, it's going to
3 move into the lymph nodes. And so you -

4 MR. HINNEFELD: Yes, there's this
5 longer residence time and that - those all
6 contribute to the respiratory tract model and
7 into the thoracic lymph.

8 And so, that's what's addressed by
9 our TIB-49 approach.

10 MEMBER RICHARDSON: Okay.

11 MR. HINNEFELD: Like I said, we
12 feel like we've used the data available to
13 adjust our approach appropriately to bound
14 these doses.

15 We did not, for instance, write
16 another model with new components and
17 different transport things particularly. We
18 found a modifying factor, you know, in order
19 to multiply those doses that we think fits
20 with the empirical data that was provided to
21 us largely by the TRG Registry, the
22 Transuranic Registry.

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1 So, that's what we have done
2 rather than build other compartments and
3 transport constants.

4 MEMBER RICHARDSON: Okay.

5 CHAIRMAN MELIUS: Okay. Sorry. I
6 got distracted a little bit.

7 Anybody else have questions?
8 Comments?

9 MEMBER POSTON: I have a comment.

10 CHAIRMAN MELIUS: Yes, John.

11 MEMBER POSTON: Well, as many of us
12 know, this is not a new problem.

13 CHAIRMAN MELIUS: Yes.

14 MEMBER POSTON: It's been around
15 for quite a while, but I do want to say I'm
16 glad to see that NIOSH is ahead of the game
17 because it - there's no - no one as far as I'm
18 aware, has made a comparison to see exactly
19 what changes these new models make in the
20 ultimate dose that is calculated.

21 Early on when the Human
22 Respiratory Tract Model was proposed, we made

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1 a study at Texas A&M and found out there is,
2 you know, insignificant differences when you
3 run all the way to dose.

4 So, I'm not sure that this is a
5 big - use a slang term, this is a big deal,
6 but I'm glad to see that NIOSH has got their
7 hands around it.

8 CHAIRMAN MELIUS: Jim or Stu, you
9 have comments on that? I think you've looked
10 at that issue.

11 DR. NETON: Yes. Well, Stu is
12 correct. And what we did was we took the
13 empirical data that were out there.

14 And in particular, this one case
15 called HAN-1 was the most insoluble case that
16 we ran across. And we used that data to
17 establish the clearance time from the lung for
18 this Super S material, and that's what we're
19 using.

20 But we didn't develop any
21 particular models because we felt it wasn't
22 within our purview to develop ICRP models.

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1 We develop an approach using
2 empirical data to estimate what the claimant's
3 dosimetry would be.

4 But it does make a difference in
5 the long-term dose, because the clearance time
6 is much longer.

7 CHAIRMAN MELIUS: Paul.

8 MEMBER ZIEMER: Well, it certainly
9 appears to me that ANWAG's conclusions here
10 are actually incorrect that it appears that
11 they're saying that ICRP has already made the
12 change, and we haven't, when, in fact, sort of
13 the reverse is true as I -

14 CHAIRMAN MELIUS: Yes, I mean, the
15 way I read the letter, I don't think they were
16 completely aware of what happened with OTIB-
17 49.

18 MEMBER ZIEMER: Right.

19 CHAIRMAN MELIUS: I think they were
20 really saying that, well, if you recognize
21 this as a problem and you haven't addressed it
22 yet, then why should we have to, you know, why

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1 should we wait for two years? What's that?

2 MEMBER ZIEMER: Right.

3 CHAIRMAN MELIUS: And I think the
4 response is that it's been addressed. It's
5 been addressed as well we could without - in
6 short of modifying the model. And it's now up
7 to ICRP in their process to look at that data,
8 look at other data and then make a
9 determination.

10 But I think in the meanwhile, we
11 feel that we have a conservative, claimant-
12 friendly approach for addressing it at least
13 based on what information we have available to
14 us now and going forward.

15 I think that's the essence of
16 that. I mean, I think it's a legitimate
17 issue, but at least for now we have it
18 addressed.

19 Any other comments or questions?
20 I'll draft up a written response we'll be able
21 to review and talk about.

22 And there's a public comment

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1 period later. People may want to - from the
2 group, may want to clarify or add additional
3 information if we misunderstood, and that will
4 give them an opportunity to do so, do that.

5 Okay. Thank you. One of the
6 other issues that I sent out to people on, I
7 think, Monday or so was a - which I was
8 supposed to do, was a draft charge to our
9 Scientific Issues Work Group.

10 I don't know if people have had a
11 chance to look at that, if you want to talk
12 about it now, if you prefer to wait. You've
13 been reminded to - again, it's not a long
14 response - long charge. And I think it pretty
15 much flows out of Jim Neton's slides and our
16 discussions of the last meeting.

17 Why don't I read it, and then we
18 can postpone -

19 MEMBER MUNN: Let's do it.

20 CHAIRMAN MELIUS: Yes. Good.

21 Scientific Issues Work Group, this
22 Work Group is responsible for reviewing the

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1 status of a number of risk model issues that
2 have been identified as important for the
3 EEOICPA program. These include the possible
4 incorporation of nuclear worker
5 epidemiological studies, IREP risk models,
6 dose and dose rate effectiveness factor
7 adjustment, adjustment for the interaction
8 with smoking for certain cancers, grouping of
9 rare and miscellaneous cancers, age-at-
10 exposure analysis and interaction between
11 radiation and other workplace exposures.

12 The Work Group will review the
13 status of NIOSH's current work on these issues
14 and report back to the full Board with
15 recommendations.

16 The Work Group will also report on
17 any new risk model issues that they believe
18 that the Board should consider for
19 recommendation to NIOSH.

20 The list of issues came from -
21 actually from what Jim Neton presented to us
22 at the last Board call.

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1 Exception 1 which was brought up
2 in the discussion, was the issue on smoking
3 that I think one or two of the Board Members
4 had raised. I think that, and I think it
5 would, you know, again provide a focus for it.

6 And then I think if there are
7 other issues that the group believes are
8 important and should be addressed, they can
9 make a recommendation. And we can then
10 discuss with NIOSH how to go forward on those
11 issues.

12 MEMBER ZIEMER: You want a motion?

13 CHAIRMAN MELIUS: I want a motion,
14 yes, I guess.

15 MEMBER ZIEMER: Mr. Chairman, I
16 move that we accept the proposed writing as
17 the charge to a Work Group on scientific
18 issues.

19 MEMBER LEMEN: I'll second that.

20 CHAIRMAN MELIUS: Any further
21 discussion?

22 All in favor say "aye."

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1 (Chorus of ayes.)

2 CHAIRMAN MELIUS: Opposed.

3 Abstained.

4 I will, by tomorrow, do
5 assignments of people to the group. I think
6 that we are going to make this a - this has
7 got more than a quorum of Board Members
8 interested in participating, which is in some
9 ways good.

10 And so what I'm going to suggest
11 is that we sort of, you know, push our limit
12 in terms of numbers on there.

13 So, I will put as many people on
14 there as possible as participants and as
15 alternates and so that I think we can cover
16 everybody pretty much that was interested in
17 doing it.

18 It's good. I think it's timely
19 and valuable to do this going forward, but
20 thank you all for your interest.

21 Usually it's, you know, calling
22 somebody up and saying, would you mind, you

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1 know, negotiating. Now, it's the opposite.

2 MEMBER CLAWSON: Jim, I don't want
3 to be on that.

4 CHAIRMAN MELIUS: Too late.

5 (Laughter.)

6 CHAIRMAN MELIUS: Okay. Thank you.

7 Do you have anything we need to
8 talk about today? I'm just going to start
9 doing -

10 MR. KATZ: Not today.

11 CHAIRMAN MELIUS: Not today. Okay.

12 I'd like to start to go through
13 the - we have until three o'clock, and I would
14 like to go through Subcommittee and Work Group
15 reports. At least get started on that.

16 Mark's not here yet. So, the Dose
17 Reconstruction Subcommittee, we'll put off on
18 their report until tomorrow.

19 Do you have the famous list? And
20 I guess we start with Mark and Wanda. So,
21 Mark's not here. So, it's Wanda's Procedures
22 Subcommittee. And to be fair to her and fair

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1 to the other Board Members, Wanda did send
2 out, I believe, over the weekend or last
3 couple of days some new summaries of the
4 procedures review that they're been working on
5 for our review.

6 And I don't know if people have
7 had a chance to look at those to give
8 feedback, so we can postpone Wanda if people
9 would like more time to look at those.

10 I don't think it's always fair to
11 Wanda to make her go first, but she's always
12 very willing.

13 Are you ready, Wanda?

14 MEMBER MUNN: I don't mind doing
15 that. Although, I had not prepared my
16 presentation. I thought this was going to be
17 on Friday.

18 Nevertheless, my first statement
19 is to apologize to you for the format of the
20 material that you received from me most
21 recently.

22 I sent you copies of the four two-

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1 page reports which we labored over
2 extensively. What I'm talking about is the
3 summaries of the procedure reviews that we
4 have done to date.

5 You may recall, I hope, from
6 earlier Board meetings, that you had already
7 approved our pilot effort in that regard, and
8 the wording for the prologue to accompany what
9 we hope to be a website for these two-page
10 summaries that anyone can access on our NIOSH
11 website, our OCAS website in time.

12 But the format that you received
13 it in was edit format. I am sorry. I didn't
14 know that it had been uploaded in edit format.

15 I hope you are all familiar with Word and can
16 very quickly move that to final so that you
17 can read it without all the ugly red marks on
18 it.

19 We have spent what may almost be a
20 disproportionate amount of Procedures time for
21 the last couple of meetings dealing with these
22 to make sure that we get them right, because

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1 SC&A is going to be producing them at a pretty
2 good clip for us.

3 And it was our desire to make sure
4 that everyone was very clear about what these
5 types of small two-page reports were actually
6 going to do and how easy they were to read.

7 We've talked about it before. If
8 you have any questions about what our kind of
9 rules of thumb are if it's not already clear
10 to you, please let me know.

11 Otherwise, we have also been
12 working very hard on getting our database to
13 be up and slick as we want it to be.

14 It's been operating for us for
15 quite some time. And as you know, we tried
16 very hard to get completely paperless with
17 what we are doing in Procedures simply because
18 there is so much infinite detail.

19 We address each and every one of
20 the findings that's before us. And when we
21 have as many as, in some cases, 17 to 20
22 findings on one procedure, then it can be

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1 quite tedious.

2 But we do, in fact, have had just
3 this last week and a half - just last week,
4 I'm sorry, I'm not sure which day, our
5 database folks met with all of the necessary
6 principals in information technology and have
7 worked out the real desires that we have for
8 what we need to see on that database to make
9 it smooth.

10 So far as I know, I have not
11 attempted to utilize the database since that
12 time. Don't know whether it's actually had
13 the benefit of that meeting yet or not, but we
14 do plan to meet next month. And we're hoping
15 by that time, that we will have the kind of
16 capability that we've been almost there, but
17 not quite achieving in the past.

18 We continue to have an extensive
19 list of active procedures. Most of our
20 procedures have now been addressed at least
21 once by all of the parties involved.

22 We can, if you so wish, provide

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1 you with a summary of where we are with
2 respect to open items, items in progress, et
3 cetera. But all in all, I think we're making
4 better progress than we were for a while.

5 We just received from SC&A,
6 another 12 summaries of procedure reviews.
7 We've discussed at our last meeting that the
8 process we followed up to this point, has been
9 too time consuming and too tedious.

10 We're going to have to change the
11 way we're doing it, but it is our hope that
12 these new 12 procedures that we have will be
13 much closer to the format and to the language
14 that we've now established very clearly. And,
15 therefore, will not take the amount of
16 concentrated effort that the preceding group
17 has.

18 If you have any questions or if
19 any other Member of the Subcommittee has
20 comments, I'll be - this is a good time to
21 chime in.

22 CHAIRMAN MELIUS: I have - it's

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1 actually not a question for you, Wanda, but
2 for Ted that I think it came up at our last
3 meeting, was trying to get a better way of
4 organizing and accessing some of the documents
5 related to the Procedures Work Group reviews,
6 as well as to the SEC and Site Profile reviews
7 where there are like White Papers that are
8 done or reviews that aren't easily - easy to
9 find or access off the O: drive. In some
10 cases, documents that probably should be
11 available to petitioners also.

12 And I don't know if you're making
13 progress on that or where that stands to that
14 and -

15 MR. KATZ: I'm not surprised.

16 MEMBER MUNN: No, that's - this is
17 in complete concert with what the meeting with
18 the information technology folks were about is
19 easier access for everybody to all of the
20 information with the exception of some of the
21 in-house-only papers, but most of them will be
22 available.

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1 MR. KATZ: Right. So, there's two
2 parts to this equation. There's the setting
3 up things on the NIOSH website to accommodate
4 these other documents that aren't on the
5 public website - well, there's two pieces,
6 actually.

7 There's the public website and
8 there's the Board, availability to the Board,
9 because some of these things aren't public
10 documents.

11 And then the other side of it is
12 getting all the materials that haven't been PA
13 cleared, PA cleared, because major documents
14 like TBD reviews and so on, I mean, we've had
15 a practice of clearing those SC&A reviews.

16 But when it comes to these White
17 Papers and so on, those generally get cleared
18 if a member of the public wants to see them as
19 opposed to automatically doing that. And
20 that's just because of workload. It's a
21 workload problem otherwise.

22 So, at this point, SC&A's staff

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1 are cleaning up covering PA clearances for
2 sort of the more major documents that should
3 be PA cleared that can then be put on the
4 website.

5 We haven't gone into looking at
6 the White Paper question as to which White
7 Papers and how to do that in a manageable
8 fashion, because there's a lot of White Papers
9 associated with Work Groups. So, that's where
10 that part stands.

11 And then in relation to setting up
12 the website, I've had conversations with DCAS
13 about this and I think they've made some
14 progress in terms of the internal O: drive, if
15 you want to call it that, materials for these.

16 I haven't touched base with them
17 recently. So, I can't tell you where we are
18 exactly with continuing that with the O:
19 drive, and then also how do we fill in on the
20 public website with the materials that are PA
21 cleared and can be put up there.

22 So, I haven't touched base with

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1 them. Frankly, it's just been - I've had a
2 lot of things to deal with and haven't thought
3 about it, but I'll get to it right after this
4 meeting.

5 MEMBER MUNN: But the real
6 technical meeting that took place last week
7 was supposed to resolve about 90 percent of
8 what you're saying here, but we in Procedures
9 will not know that until we meet again next
10 month.

11 CHAIRMAN MELIUS: Yes, and I'm just
12 urging whoever is involved in this, I won't
13 name names, but that we sort of keep this
14 moving along because it - one is when we try
15 to go back and discuss procedure reviews and
16 so forth, it's just very hard for even Board
17 Members to get to find some of the documents
18 and so forth.

19 And then there appears to be an
20 increasing use of White Papers or background
21 papers. And I think the Linde Work Group has
22 done a very good job, for example, making

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1 those available to petitioners and so forth,
2 but they're not as readily available to people
3 sort of outside the process who are then as,
4 i.e., Board Members trying to look in to get
5 ready for a vote.

6 And then I notice on Chapman, we
7 had a few sort of background reports that were
8 presented to the Work Group that were useful.

9 But, again, it's sort of not clear where all
10 this is going, you know, these documents go
11 and so forth.

12 And so, I just think we need to
13 sort of keep after the issue. That's all.

14 MEMBER MUNN: One final thing. It
15 was our expectation as a Subcommittee, that
16 the Board would have an opportunity to approve
17 the four documents and prologue that I sent
18 out for review so that they can be PA cleared
19 and can be put up on a website.

20 But in light of the fact that
21 people may not have had an opportunity to look
22 at my incorrectly formatted uploads, you may

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1 want to postpone that until our Friday
2 meeting.

3 If everyone has had an opportunity
4 to look at it and is willing to do so, I will
5 put that before you now. Otherwise, I'll
6 postpone it.

7 CHAIRMAN MELIUS: Without being
8 presumptuous or judging my fellow Board
9 Members, I say we put it off until Friday.

10 MEMBER MUNN: Very good.

11 CHAIRMAN MELIUS: I'll confess I
12 haven't looked at them.

13 MEMBER ANDERSON: All you got to do
14 is get rid of the track changes.

15 (Laughter.)

16 MEMBER MUNN: That's all you have
17 to do.

18 CHAIRMAN MELIUS: Thank you. So,
19 we'll come back to this Friday if everyone can
20 please look at those between now and Friday.

21 We'll try to go through a couple
22 Work Groups. We have worked for a while. And

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1 since Ted didn't give us a break, I will give
2 us a break.

3 So, let's plan on breaking it like
4 ten of 3:00 for ten minutes. Because then
5 we'll come back in and we have a petition
6 schedule.

7 So, we'll try to go to about ten
8 of 3:00, take a ten-minute break and then come
9 back.

10 For those of you that - the Work
11 Group chairs as we sort of go through the list
12 here, those that - can you also, please, you
13 know, reference also any sort of deliverables
14 that are outstanding and so forth?

15 We got an updated list from Ted.
16 It's not completely up to date, because I know
17 there's been some Work Group meetings since
18 that time. And there's little delays in NIOSH
19 putting it together. It's not easy to do.

20 So, if you could please sort of,
21 you know, highlight things that are maybe
22 problematic or update whatever as you're

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1 giving your reports, and we'll start with
2 Josie and Brookhaven.

3 MEMBER BEACH: Okay. So,
4 Brookhaven held its last Work Group meeting on
5 January 21st.

6 We have two outstanding or two
7 SEC-related issues. One is internal data, and
8 the other is the neutron monitoring issue.
9 The next Work Group meeting is scheduled for
10 May 3rd.

11 I just got an email or the Work
12 Group just got an email from Grady today, and
13 he has responded to responses for three of the
14 items within the internal data. So, that is
15 available.

16 And I looked on the O: drive.
17 There's one line from him that I believe it
18 was April - correct me if I'm wrong - 11th.
19 We should see the rest of the action items by
20 mid-April. So, in time for our May meeting.

21 CHAIRMAN MELIUS: Okay. Good. I
22 think the Chapman Work Group we will end

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1 without objection, I hope.

2 Okay. DOE Security Work Group may
3 get revived. We'll have to come up with a new
4 name for it, but do that.

5 Fernald, Brad.

6 MEMBER CLAWSON: Our last meeting
7 was the beginning of this month. We've got
8 several issues that we're giving in a
9 presentation tomorrow before the Board. We'll
10 go into more detail on that.

11 CHAIRMAN MELIUS: Hanford, Arjun,
12 remind me.

13 DR. MAKHIJANI: We have the task of
14 reviewing the balance of the SEC period, and
15 that review is underway. We should have an
16 internal draft of that completed in about two
17 or three weeks.

18 And then a report to the Work
19 Group probably through DOE review and so on by
20 mid-April.

21 CHAIRMAN MELIUS: So, those of you
22 on the Hanford group, we will try to schedule

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1 a meeting - plan on scheduling a meeting
2 towards the end of April in preparation for
3 our May meeting, but something in that time
4 frame.

5 MEMBER CLAWSON: Jim?

6 CHAIRMAN MELIUS: Yes, Brad.

7 MEMBER CLAWSON: Also being on the
8 Hanford Work Group just to make sure that the
9 rest of the Hanford Work Group was aware that
10 SC&A and NIOSH did some data capture just last
11 month at Hanford and we're processing that
12 information at this time.

13 CHAIRMAN MELIUS: Yes, and thanks
14 to NIOSH, I mean, Sam Glover has, I think,
15 done a very good job of sort of coordinating
16 with us on issues and so forth.

17 Phil, Idaho.

18 MEMBER SCHOFIELD: Hopefully by
19 mid-May there will be enough information.
20 Pete says he's got some just about done. So
21 it fits very well on the priority list for
22 NIOSH, it may be June before it gets released.

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1 CHAIRMAN MELIUS: Stu or Jim, do
2 you have comments on - it's not an SEC, but
3 it's a big site and it's a lot of work to do.

4 I'm worried that it gets postponed
5 and that's -

6 MR. HINNEFELD: Certainly we're
7 interested in the Board's input in priorities.
8 We don't tend to set these, you know. But
9 the fact that since there is no SEC Petition
10 Act open at this site, has essentially moved
11 it down. There are so many open SEC sites.

12 CHAIRMAN MELIUS: And this one got
13 delayed probably because of the combination
14 with Argonne West and so forth.

15 Phil, you're on again. K-25.

16 MEMBER SCHOFIELD: Hopefully we'll
17 have a meeting. We did Paducah the other day
18 and hopefully we will be able to cover the
19 stuff we did then and K-25 in May.

20 CHAIRMAN MELIUS: Okay. Questions?

21 Okay. Lawrence Berkeley, Paul.

22 MEMBER ZIEMER: The Lawrence

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1 Berkeley group has not met yet. We have other
2 priorities that have pushed this aside.

3 CHAIRMAN MELIUS: And, again,
4 Lawrence Berkeley is sort of a Site Profile -
5 issues in trying to clean up some of the Site
6 Profiles. We have already done an SEC on
7 those.

8 Linde, Gen, I think we'll hear -

9 MEMBER ROESSLER: We'll talk
10 tomorrow.

11 CHAIRMAN MELIUS: Tomorrow, yes,
12 but we'll spend a few minutes on that.

13 MEMBER ROESSLER: Okay.

14 CHAIRMAN MELIUS: Okay. Mark's not
15 here. So, we'll come back to LANL.

16 Josie, Mound.

17 MEMBER BEACH: Okay. Mound last
18 met in July. July 27th of 2010. At this
19 time, we have four SEC issues remaining. The
20 first one is neutron issue. There's three
21 components of that. I won't go into all those
22 details, but NIOSH has promised a paper due on

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1 March 18th, for the neutron issue.

2 We've got tritium issue. The
3 paper is due from NIOSH on April 4th. The
4 third is adequacy and completeness of internal
5 data. NIOSH has promised that paper to us by
6 April 4th. And we have the D&D issue. The
7 paper for that is due on March 25th.

8 So, it looks like we should be
9 able to plan a meeting. I'm thinking the end
10 of April, mid part of May, depending on the
11 bulk of that.

12 And it sounds like the Work Group,
13 I talked to Stu earlier, we need to revisit
14 some radon SEC issues. So, we'll be probably
15 taking that up in our next Work Group meeting
16 also.

17 CHAIRMAN MELIUS: Do you want to
18 describe that a little bit so the other Board
19 Members -

20 MEMBER BEACH: On the radon,
21 there's a question of - and, Stu, correct me
22 if - in fact, you're getting up. Go for it.

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1 (Laughter.)

2 MEMBER BEACH: Between the
3 buildings R and SW and the way the Class was
4 initiated.

5 MR. HINNEFELD: Right. Well, R and
6 SW buildings are essentially attached. It's
7 sort of like one building with two
8 designations.

9 And the radon issue at Mound was
10 found in one room in the SW building. And of
11 course there's no way to really say it was
12 confined to that one room or who was in that
13 one room.

14 And so, at the time of the
15 designation, it was our understanding that
16 everyone in the R and SW buildings were on the
17 tritium bioassay program. And, therefore, by
18 defining the Class as people on the tritium
19 bioassay program, you have encompassed that
20 group as well. You've probably got some
21 others as well.

22 So, in the meantime, we have

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1 learned that only a portion of the R building
2 required participation in the tritium bioassay
3 program, not the entire R building.

4 Now, during the discussion of
5 this issue with the Work Group, the question
6 came up about, well, you found the radon
7 exposure in this one building in SW, and it
8 was largely by accident - we didn't find it.
9 Mound found it largely by accident because a
10 person working in that building happened to
11 have an in vivo count. And that's how they
12 found out they had an issue.

13 But, you know, what we know about
14 the aerial extent of radon, could it have
15 leaked not only into that room, not only into
16 that one little area of SW, but elsewhere
17 through other avenues into the R building and
18 so on?

19 And as that discussion came up for
20 the Work Group, we said, well, it really
21 doesn't matter because everybody in R and SW
22 is going to be in the Class anyway.

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1 Well, since we've now found out
2 that not everybody in R was in the tritium
3 bioassay program and there is not in the
4 Class, that question of the extent, the aerial
5 extent of the radon exposure now becomes
6 relevant again. And so, we think that's the
7 issue that has to go back.

8 MEMBER BEACH: Thank you.

9 CHAIRMAN MELIUS: And I just add
10 there's been confusion at sort of DOL and sort
11 of implementing this and it - I think we
12 recognize that at the time we did the Class,
13 it was a difficult Class Definition to
14 implement.

15 And so, hopefully with the Work
16 Group and with DOL we'll be able to - NIOSH
17 will be able to get it addressed and so forth.

18 MEMBER SCHOFIELD: Jim, I need to
19 make one correction. My caffeine is getting
20 low. That was December 1st, the meeting. The
21 Paducah meeting was.

22 CHAIRMAN MELIUS: Okay.

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1 MEMBER SCHOFIELD: Okay. Not
2 enough caffeine in me.

3 CHAIRMAN MELIUS: Okay. Well,
4 speaking of caffeine since it's almost ten of,
5 why don't we take a break. Come back
6 promptly at three o'clock. We'll start with
7 the Wah Chang petition.

8 (Whereupon, the proceedings went
9 off the record at 2:48 p.m. and went back on
10 the record at 3:02 p.m.)

11 CHAIRMAN MELIUS: Okay. If
12 everyone - get everyone's attention. We'll
13 get started and the first item - next item up
14 on our agenda is the Wah Chang SEC Petition
15 and Jim Neton's going to present the
16 Evaluation Report. Jim.

17 DR. NETON: Okay. I'm here to talk
18 about an SEC Petition Evaluation Report for
19 Wah Chang.

20 A little background. AEC
21 operations at Wah Chang started in 1956.
22 Although, these operations are not covered. I

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1 don't want to confuse you, but they did a lot
2 of work - Wah Chang did a lot of work for the
3 AEC in the metals business, rare earths and
4 such, such as zirconium, hafnium, niobium,
5 that sort of thing.

6 And so, those operations were not
7 covered, but we'll get into some covered
8 operations later.

9 The second bullet here does say
10 they produced zirconium and other metals for
11 defense and nuclear technology applications.

12 In 1967, Wah Chang was purchased
13 by Teledyne and became known as Teledyne Wah
14 Chang TWCA.

15 And in '71, Wah Chang was
16 contracted by Union Carbide Y-12 to melt
17 depleted uranium metal. And that is the basis
18 of why it's a covered facility under this
19 program.

20 The contract called for the
21 melting of up to 50,000 pounds of depleted
22 uranium.

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1 And as I said, based on that
2 contract with Union Carbide, the facility is
3 covered under EEOICPA between January 1st,
4 1971, and December 31st, 1972. It's a two-
5 year period.

6 There is a residual contamination
7 period that extends through October 31st,
8 2009.

9 Petition overview. Petition was
10 received as an 83.13 on June 9th, 2010. Was
11 qualified August 16th that same year. And the
12 Evaluation Report was approved and issued back
13 in December at the end of last year.

14 Petitioner proposed that the Class
15 be all employees who worked in all buildings
16 at the Wah Chang facility from January `71
17 through January of `79. Specifically January
18 11th of `79.

19 The NIOSH-evaluated Class was all
20 employees who worked in any building at the
21 facility for the operational period from
22 January 1st, `71, through December 31st, `72,

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1 and the residual period from January 1st, '73,
2 through October 31st, 2009.

3 The basis for the petition was
4 that petitioner presented an affidavit that
5 there was no internal monitoring data at Wah
6 Chang. And, in fact, through some pretty
7 extensive searches of the internet and our own
8 databases and such, we found almost no
9 information, which I'll talk about in a little
10 bit. There's some minimal bioassay data and a
11 few air samples.

12 Just a brief description of some
13 of the sources that were surveyed and reviewed
14 for this Evaluation Report. Battelle-TBD-
15 6000, which is the Site Profile for AWEs that
16 worked with uranium, was used in this
17 evaluation.

18 We also looked through the ORAU
19 Team Technical Bulletins and Procedures. The
20 Site Research Database, there's something on
21 the order of a couple hundred documents
22 related to Wah Chang. Unfortunately, none of

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1 which really were very particularly
2 informative about the processes and the
3 monitoring programs that occurred there.

4 We did conduct interviews with
5 four former Wah Chang employees, and two State
6 of Oregon workers who were, you know, they had
7 - Wah Chang had a license with the State to
8 process some of the radioactive materials, and
9 we interviewed a couple of those folks. And
10 we also reviewed the case files in the Claims
11 Tracking System.

12 There aren't many cases in our
13 possession from Wah Chang. You can see on
14 this slide that there are only five that we
15 received thus far. And all five of those meet
16 the Class Definition.

17 We have completed dose
18 reconstructions for four of those cases thus
19 far. And none of those cases had any internal
20 or external dosimetry associated with them.

21 So, what were the potential
22 exposures during the contract period?

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1 Remember, that was the 1971 and '72 period
2 when they melted - Wah Chang melted depleted
3 uranium for Y-12.

4 There was uranium, thorium and
5 various progeny present during commercial
6 metal extraction processes.

7 As I mentioned, Wah Chang was in
8 the business of making commercial metals that
9 were used in what I consider somewhat exotic
10 applications in the defense and the space
11 business.

12 As a starting product, they used
13 zircon sand and this ore called euxenite ore,
14 that contained natural uranium and thorium
15 series elements.

16 So, these ores were - although
17 they were being used for their non-radioactive
18 components, they were naturally radioactive as
19 mined from the ground.

20 Over a 30-year period, Wah Chang
21 processed over 200 million kilograms of this
22 zircon sand. So, it was a fairly large

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1 operation.

2 I didn't mention, but I think
3 there was somewhere on the order of about 36
4 buildings that encompassed Wah Chang
5 operations, and somewhere in the vicinity of
6 400 to 450 employees, just to give you a
7 general idea about the size of the facility.

8 Euxenite ore is interesting
9 because it sort of has the periodic table of
10 the rare earth elements in it and it's also
11 fairly radioactive.

12 Some of the only survey data we
13 were able to find from the facility had some
14 survey readings of barrels of this ore that
15 read as high as 35 mR per hour, which is not
16 insignificant for a natural product.

17 Unfortunately, the processing
18 specifics and the actual, you know, production
19 quantities are unknown to us as far as how
20 much the throughput was at times.

21 And as you can imagine when
22 they're processing these ores, there becomes

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1 at some point a concentrate. When they
2 extract out the desired material, the metals,
3 you were left with concentrates that have
4 presumably varying degrees of enrichment of
5 these natural radioactive products that we
6 have no way of ascertaining their dose rates
7 or their potential internal exposure values.

8 So, at the same time, though, in
9 1971 and '72, as an ongoing operation, the
10 depleted uranium metal from Union Carbide was
11 processed.

12 This material was processed in one
13 building called the S-6 facility. And the
14 metal was melted in a fairly exotic, at least
15 in my mind, operation called an electron beam
16 furnace.

17 The furnace was operated under a
18 vacuum and they would melt the metal with a
19 high current electron beam. It would drip
20 into these copper crucibles and they would
21 remold it for processing back to Y-12.

22 And in this process, presumably,

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1 the depleted uranium was purified to some
2 extent.

3 Because it was operated under a
4 vacuum, we don't believe that there was very
5 much potential for exposure during this
6 particular process.

7 So, in 1971 and '72 you had two
8 concurrent operations going on. You had the
9 melting of depleted uranium for Y-12, and you
10 had this background, these other 35 or 37
11 buildings processing zircon sand, euxenite ore
12 and making metals like zirconium and hafnium
13 and niobium.

14 Which, interestingly, I learned -
15 it's amazing what you learn on this job. It
16 was also called columbium in the metals
17 processing business.

18 Never officially adopted on the
19 periodic table, but it's - if you do a
20 literature search on it, you'll find a lot of
21 references to columbium which is also - which
22 is equivalent to niobium, just as an aside.

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1 Okay. So, the potential radiation
2 exposures during the contract period then
3 would be obviously to the photon and beta
4 exposures from the uranium and thorium
5 containing residues, and also photon beta
6 exposures from the depleted uranium during the
7 melting.

8 Presumably, there's also some
9 alpha exposures there during the zirconium
10 process as well.

11 So, the potential radiation
12 exposures during the residual period then is
13 only the radiation associated with the
14 depleted uranium melting operations are
15 covered.

16 All the slag and all the residue
17 from the zirconium and hafnium processes are
18 not considered in the residual period. So, we
19 only have to worry about the melting that
20 occurred in this S-6 building.

21 We have encountered documents that
22 indicate the electron beam furnace was

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1 disassembled and decontaminated after uranium
2 operations. That being said, though, in 1977
3 there was a report that indicated that even
4 though the area had been cleaned, there was -
5 approximately five pounds of depleted uranium
6 metal was estimated to remain in the
7 inaccessible area of the furnace.

8 That is they tried to clean the
9 furnace out. They couldn't. And they
10 estimate there was about five pounds left in
11 there, which, to our knowledge, no one ever
12 entered to try to go back in and clean it up.
13 So, it was pretty much a non-exposure source
14 term, at least in our opinion.

15 So, based on this, what are our
16 approaches to dose reconstruction?

17 We propose that we can use TBD-
18 6000 to estimate the internal/external
19 exposures to uranium melted in the beam
20 furnace during the operational period. That
21 TBD covers melting operations dealing with
22 metals.

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1 And we did have some air samples
2 taken during the uranium melting operations -
3 well, let me stop there.

4 The TBD-6000 would be used - even
5 though we don't believe that there was much
6 exposure outside the furnace because it
7 operated under a vacuum, we would still use
8 the TBD-6000 to estimate what the exposures
9 were of the workers that were in the S-6
10 building.

11 There were some air samples taken
12 during the uranium melting operations.
13 Unfortunately, we can't use those to quantify
14 exposures because they don't really tell us
15 much about where they were taken and why and
16 sort of, you know, were they process air
17 samples, general area samples, that sort of
18 thing.

19 So, we didn't believe they were
20 particularly useful for dose reconstruction
21 purposes during the covered period.

22 But during the residual period as

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1 I mentioned earlier, we could use those
2 samples as a starting point to bound uranium
3 intakes during the residual period, and that's
4 what we intend to do.

5 But our main conclusion, though,
6 is that the internal and external exposures
7 associated with the uranium and thorium
8 residues from the commercial operations can't
9 be estimated.

10 I mentioned that we just - we
11 don't have any real process information or
12 feel for what the levels of exposures were on
13 these operations. And so, we can't bound it.

14 The two-prong test is presented
15 here, and I won't go over it again, but I
16 think you all know what that is.

17 And so, our feasibility dose
18 reconstruction is that the process and source
19 term information provide insufficient
20 information to estimate doses associated with
21 zirconium extraction and other non-AEC
22 processes with sufficient accuracy for workers

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1 at Wah Chang.

2 The summary slide is that during
3 the covered period, that is January `71
4 through December `72, dose reconstruction is
5 feasible for the uranium operations.

6 This slide is a little bit
7 misleading. When I say "uranium operations,"
8 I'm talking about the depleted uranium
9 operations conducted for Y-12.

10 We cannot reconstruct dose for
11 thorium from the commercial operations, nor
12 can we reconstruct dose from the uranium from
13 the commercial operations. That should be
14 made clearer on this slide.

15 We do believe we can reconstruct
16 the external dose from uranium from the DU
17 operations, but we cannot reconstruct external
18 dose from the commercial operations.

19 And neutron exposures are not
20 applicable. And we would use a standard TIB-9
21 approach to reconstruction of occupational
22 medical x-ray exposures here.

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1 As far as the residual period goes
2 from January `73 through October 2009, we
3 believe that we could reconstruct - remember,
4 we only have to reconstruct the dose
5 associated with the depleted uranium
6 operations.

7 And we believe we can use TBD-6000
8 approaches to reconstruct that dose. And
9 likewise we would use a model based on the
10 five pounds of uranium that were there to
11 estimate the doses associated with exposure to
12 the uranium beta-gamma component.

13 So, as far as health endangerment,
14 the evidence reviewed indicates that some
15 workers may have accumulated chronic exposures
16 during that work. And we are specifying that
17 health may have been endangered for those
18 workers who were employed for a number of work
19 days aggregating at least 250 days.

20 And the proposed Class here is all
21 - and this should say Atomic Weapons
22 Employees, there's a little phrase left out

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1 there - who worked in any building at the Wah
2 Chang facility in Albany, Oregon for the
3 operational period from January 1st, '71,
4 through December '72 and for a number of work
5 days aggregating 250 days. And it can be
6 aggregated with other employment or in
7 combination with other work days.

8 And this final slide is our
9 recommendation for the Class. That's it.

10 CHAIRMAN MELIUS: Okay. Questions
11 for Jim?

12 Yes, Josie.

13 MEMBER BEACH: This is a bit of a
14 complicated site with the different
15 activities.

16 In the Evaluation Report, it
17 talked about deconning it down, and then did
18 they disband the furnace or -

19 DR. NETON: Yes, I think the
20 furnace was inactive after that period. I
21 recall vaguely they mentioned something about
22 being not locked away in a closet, but put

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1 aside. It was not used for other operations,
2 to my knowledge.

3 MEMBER BEACH: It said the material
4 was disposed of, they believed, at Hanford.
5 And I was wondering if they shipped the
6 furnace and everything.

7 DR. NETON: No, I don't think the
8 furnace was shipped.

9 MEMBER BEACH: It's not very clear.

10 DR. NETON: At least to our
11 understanding, the furnace remained there, but
12 it had this - potentially up to five pounds of
13 depleted uranium inside the inaccessible areas
14 of the furnace.

15 MEMBER BEACH: So, the waste that
16 they - the smeared and decon, that went
17 offsite.

18 DR. NETON: Correct.

19 MEMBER BEACH: And was that done
20 initially? Because I know this says as of
21 March of 1977, but then it said it was done
22 within two months. So, I was just curious.

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1 DR. NETON: No, no. I think it was
2 done right after the operation was over.

3 MEMBER BEACH: Okay. Thanks.

4 CHAIRMAN MELIUS: So, my question
5 is somewhat related.

6 To what extent were operations
7 confined to that one area?

8 DR. NETON: To my knowledge - well,
9 to our knowledge, all the operations occurred
10 in this S-6 building. And there was probably,
11 worker interviews indicated, maybe seven to
12 ten people working in that area. But as
13 usual, we don't know who entered the building
14 at what times and where.

15 CHAIRMAN MELIUS: Okay. So, you
16 evaluated personnel records and other
17 information to establish that?

18 DR. NETON: Well, we're not adding
19 the Class because of the depleted uranium
20 operations though. We're adding the Class
21 because of all these commercial activities
22 that occurred in the other 36 or 40 buildings.

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1 That's the basis for the Class.

2 CHAIRMAN MELIUS: Okay.

3 DR. NETON: You know, they
4 processed this 200 million pounds of ore over
5 30 years and it had up to 35 mR per hour dose
6 rates, that sort of thing.

7 We have no way of establishing an
8 upper bound for those intakes or external
9 exposures.

10 CHAIRMAN MELIUS: Paul.

11 MEMBER ZIEMER: Dr. Neton, in your
12 records search, you didn't specifically
13 mention it, so I will ask, did you seek to get
14 records directly from Teledyne on this
15 facility?

16 DR. NETON: I don't know the answer
17 to that. I may have to phone a friend.

18 MEMBER ZIEMER: I notice you have
19 the usual databases, but what about Teledyne
20 itself, is what I'm asking.

21 DR. NETON: LaVon, do you recall?
22 I don't know that we went to Teledyne or not.

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1 MR. RUTHERFORD: I don't recall.
2 I'm sure the database covered in the matrix in
3 the back will say it.

4 DR. NETON: Yes, there's a matrix
5 in the back that gives you places that we -
6 the sites that we solicited for information.

7 MR. RUTHERFORD: Yes, the primary
8 site was contacted for documentation,
9 Teledyne, and we received no documents from
10 them.

11 It's in the first page of the data
12 capture matrix in the back on Page 45.

13 MEMBER ZIEMER: Oh, okay. Yes, I
14 see it now. Thanks.

15 CHAIRMAN MELIUS: It was sort of
16 hidden.

17 Other questions?

18 Can you just clarify that last
19 statement to me? I just want to make sure
20 it's clear on the record for the - because
21 your reconstruction feasibility and
22 infeasibility is based on uranium and thorium.

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1 DR. NETON: Right. It's based on
2 the uranium and thorium associated with the
3 commercial operations to manufacture metals
4 for the Department of Defense and other
5 agencies, not for the AEC contract.

6 CHAIRMAN MELIUS: Right, because
7 you feel you could do the AEC contract.

8 DR. NETON: Right.

9 CHAIRMAN MELIUS: Okay.

10 DR. NETON: We feel we can
11 reconstruct the uranium from the melting
12 operations of the depleted uranium in the
13 electron beam furnace, which is the only
14 covered activity at this site.

15 CHAIRMAN MELIUS: However, it's not
16 feasible to distinguish the workers or the
17 exposures that might have occurred from the
18 commercial and the AEC-related -

19 DR. NETON: Well, it's not - it's
20 not - we can't distinguish who worked with
21 this or the ores themselves. I mean, these
22 were commercial activities that were ongoing.

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1 MR. HINNEFELD: This is Stu
2 Hinnefeld.

3 A key aspect here is that the law
4 requires us to reconstruct all exposures at
5 the site during the covered period for an AWE.

6 So, these other commercial
7 exposures would have to be reconstructed
8 during the operational period, and that's what
9 we can't reconstruct.

10 CHAIRMAN MELIUS: And the site is
11 designated as being the entire facility, not
12 just -

13 MR. HINNEFELD: Yes, it's
14 designated as Wah Chang. It's not a specific
15 building.

16 CHAIRMAN MELIUS: I just wanted to
17 get that on the record.

18 DR. NETON: Right. That's a key
19 point.

20 CHAIRMAN MELIUS: Yes.

21 DR. NETON: It's not just the S-6
22 building, it's the entire site is a designated

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1 - is a covered facility.

2 CHAIRMAN MELIUS: Right.

3 Any other -

4 MEMBER RICHARDSON: I'm sorry.

5 Could you clarify one more time the law
6 requires you to reconstruct all radiation -

7 DR. NETON: All dose exposure.

8 MEMBER RICHARDSON: It's different
9 than when we were - because before we had this
10 issue of could you distinguish the component
11 of dose.

12 DR. NETON: No, that's in the
13 residual period.

14 MEMBER ZIEMER: That's for the
15 residual period.

16 DR. NETON: If it's within a
17 covered period, we are required to reconstruct
18 all radiation exposure at the covered
19 facility, period.

20 Whether it's from commercial
21 operations, from radiography sources that are
22 unrelated to AEC, doesn't matter. We'll

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1 reconstruct everything that we can identify
2 during the covered period.

3 This would not be the first site
4 to be added this way, by the way. There's a
5 number of other ones that have been brought in
6 this way.

7 CHAIRMAN MELIUS: Okay. No more
8 questions for Jim. I don't believe that the
9 petitioners wanted to speak, but I just wanted
10 to offer the opportunity if they're on the
11 line, to say something if they wish to
12 comment. They're not required to.

13 MEMBER RICHARDSON: Could I ask -

14 CHAIRMAN MELIUS: Sure.

15 MEMBER RICHARDSON: Again, this is
16 further for my clarification.

17 For the residual period, you're
18 proposing to use TBD-6000?

19 DR. NETON: Correct.

20 MEMBER RICHARDSON: How does that -
21 or help me know, sir, how it relates to an
22 electron beam furnace.

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1 DR. NETON: There's not an electron
2 beam furnace in TBD-6000, but there is
3 something to do with processing of ores, I
4 mean, of the uranium.

5 I'm not sure exactly which process
6 in TBD-6000 we've selected now. Caught me off
7 guard.

8 MEMBER RICHARDSON: Yes, because it
9 sort of seemed to me -

10 DR. NETON: Yes, and I don't recall
11 it - I don't know if it was the melting of
12 ore. We have to go back and check the
13 Evaluation Report, but we did believe that the
14 furnace itself was fairly self-contained.

15 I mean, the - also, I left out a
16 pretty important point is there were some
17 bioassay samples taken for that melting
18 operation. They were handwritten, you know,
19 but there were ten people that were monitored
20 listed as before, and ten samples listed as
21 after.

22 And my recollection is that the

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1 after samples were all lower than the before
2 samples. And I believe that they were less
3 than value, something less than a micro - I
4 forget what the value was, but - so, we do
5 have some bioassay samples, but we've opted to
6 use the TBD-6000 approach.

7 And I don't recall which operation
8 we would use to do that, but these would be
9 only applied to non-presumptive cancers for
10 those who don't qualify for the Class.

11 CHAIRMAN MELIUS: Paul.

12 MEMBER ZIEMER: No, I don't think -
13 I was going to make the comment that Jim just
14 ended with.

15 The TBD-6000 only comes into play
16 if someone had a non -

17 DR. NETON: Non-presumptive cancer.

18 MEMBER ZIEMER: - presumptive
19 cancer.

20 CHAIRMAN MELIUS: Any further
21 questions or comments?

22 If not, the Chair would entertain

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1 a motion.

2 MEMBER PRESLEY: So moved.

3 CHAIRMAN MELIUS: Whew. That's
4 faster than a sound wave.

5 Do I have a second to that?

6 MEMBER SCHOFIELD: Seconded.

7 CHAIRMAN MELIUS: Okay. Any
8 further discussion? The so-move is to accept
9 the NIOSH Evaluation Report and add the Class
10 to the SEC.

11 No further discussion, then, Ted,
12 do you want to -

13 (Off-record comments.)

14 MEMBER ZIEMER: Just a point of
15 information. I think the motion as it stands,
16 adds the Class for the active period and
17 denies the Class for - there's two parts to
18 it, I believe, if we accept the - I just want
19 to make sure everybody is aware of that.

20 MEMBER RICHARDSON: Right. That's
21 where I got confused about TBD-6000, because I
22 thought that they had said before the residual

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1 period from 1972 through '79, they were
2 proposing that they could use TBD-6000.

3 DR. NETON: Oh, I'm sorry. I
4 misunderstood your question then. I thought
5 you were talking about the covered period
6 where we would use TBD-6000.

7 After the covered period, we were
8 going to use the air - there was some air
9 sample data that was taken during the covered
10 period that we couldn't use for a covered
11 period, because we didn't know exactly, you
12 know, how well it was representative of the
13 workers, but we felt that it was sufficient to
14 use for bounding the starting point of the
15 residual period.

16 So, we would use - I think there
17 was like five air samples that were taken
18 during the covered period. And we used one of
19 those to establish the starting point for air
20 concentrations in the residual period.

21 Sorry. I was - it was TIB-70
22 approach.

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1 CHAIRMAN MELIUS: Just to - go
2 ahead, LaVon.

3 MR. RUTHERFORD: I'm sorry. I want
4 to clarify one other thing too.

5 The reason that air sampling
6 didn't work for the operational period was it
7 didn't address the other commercial activities
8 that were going on, on the site. That's why
9 we didn't use it during -

10 MEMBER RICHARDSON: I got you.

11 MR. RUTHERFORD: Okay.

12 CHAIRMAN MELIUS: If we get much
13 more clarification here, we'll be totally
14 confused. But just to clarify on the motion,
15 I think we ought to be specific in our motions
16 because we have not always included the entire
17 Evaluation Report in our motions in terms of
18 accepting everything there.

19 We, I think, most commonly have
20 just concentrated on the part of the
21 Evaluation Report that recommends a Class be
22 added to the SEC.

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1 Sometimes we've gone on and - for
2 example, there may be Site Profile issues that
3 may not be SEC. You might accept the SEC for
4 the period that's not recommended in the
5 report.

6 So, it's in some cases, we've not
7 - really don't have all the adequate
8 information to be able to address. And even
9 NIOSH may be uncertain about it particularly
10 during the SEC period, as to what will be
11 available and not.

12 We know for the most part it's
13 not, but they may use whatever information may
14 be available.

15 That's not always explicit in the
16 reports, and we have to be a little bit
17 careful about accepting a full report. At
18 least we are specifying what we're doing when
19 we're doing that.

20 Henry.

21 MEMBER ANDERSON: Yes, I mean,
22 could they re-file for the residual period?

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1 I mean, the way it is now, the
2 proposed Class doesn't include the residual
3 period. It may have been evaluated, but it
4 isn't -

5 CHAIRMAN MELIUS: It includes part
6 of the residual period. And I think NIOSH has
7 the prerogative of doing the entire period.
8 They modified the proposed Class Definition,
9 petitioner's definition by adding the entire
10 residual period to do their evaluation.

11 I don't think that ever precludes
12 that an outside petitioner for, you know,
13 either re-petitioning or a new petitioner
14 petitioning for consideration based on new
15 information.

16 So, I don't think we're precluding
17 anything by what we do. I think they would
18 have to present new information that - and so,
19 I think the only risk we run is that in this
20 case it's they filed through January 11th,
21 '79.

22 I'm not sure why that date was

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1 picked. Do you know, LaVon, or anybody?

2 MR. RUTHERFORD: Well, the
3 petitioner associated with - the claim
4 associated with that petitioner. So, they
5 filed for that.

6 However, when we qualified the
7 petition, we qualified it based on the basis,
8 you know, the basis provided by the
9 petitioner. And our qualification will extend
10 to however long we feel that that basis is
11 supported until the evaluation is complete.

12 CHAIRMAN MELIUS: Right. So, it's
13 a little bit difficult to decide. I think at
14 the same time they speak in favor of sort of
15 doing the full time period and so forth, I
16 don't think we - I think we ought to try and
17 avoid not having reached a conclusion on some
18 of these periods, which we've tended to do in
19 the past.

20 We sort of leave some of these
21 issues, you know, hanging out there and
22 unresolved.

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1 And in the cases of a large site,
2 I think that's probably appropriate because
3 those often are fairly complicated Site
4 Profile issues and so forth.

5 On the other hand, if Board
6 Members feel they haven't had a chance to
7 review all of the issues for the residual
8 period in this case or SEC issues or Site
9 Profile issues, then I think they should say
10 so as we're considering this motion.

11 But I think we'll accept Paul's
12 comments as a friendly amendment to Bob's
13 original motion, which would be to accept the
14 full Evaluation Report. So, I think that's
15 what's on the table with a second.

16 So, anybody have further comments?

17 Okay. Ted, now go ahead.

18 MR. KATZ: Thank you.

19 MEMBER RICHARDSON: Before
20 accepting the full Evaluation Report, Section
21 5.2.2.3, which is about neutrons, is missing.

22 So, if we're going to accept it, I would just

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1 wonder if there is a draft of this that does
2 have - so, it's Page 23. It says neutrons
3 were not, and then it ends without the text.
4 It's like an orphan sentence out there.

5 MEMBER BEACH: I think my copy has
6 the full definition if anybody wants to use
7 it.

8 MEMBER RICHARDSON: Okay. I accept
9 Josie's copy.

10 MEMBER BEACH: Did you want to look
11 at it?

12 MR. RUTHERFORD: Yes, Dr.
13 Richardson, I'm not sure why that sentence is
14 left out. It's obvious that we were intending
15 to - what the statement is intended to say,
16 that there is - we're not expected to be a
17 source of exposure for the covered period or
18 residual period.

19 We'll get the corrected - if the
20 actual final report does not have that, the
21 report will be corrected and we'll get that to
22 the Board.

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1 MEMBER RICHARDSON: Josie took it.
2 She has it.

3 MEMBER BEACH: I think it's in
4 there, unless I'm missing something.

5 (Off-record comments.)

6 DR. NETON: I think what happens
7 sometimes is when these are converted to PDF
8 files, some funny things happen and we don't
9 proofread every word.

10 CHAIRMAN MELIUS: Don't say that,
11 Jim. Unless you can specify what funny things
12 happen, that makes us nervous.

13 DR. NETON: Well, I do know when I
14 got my copy of the PDF, one of the tables was
15 half truncated. And they went back and remade
16 it and the table came out.

17 So, I don't know why that occurs,
18 but it's a fact of the PDF process, in my
19 opinion.

20 MS. HOWELL: Could you restate the
21 motion before you vote on it, please?

22 CHAIRMAN MELIUS: Paul.

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1 MEMBER ZIEMER: I believe the
2 motion is to accept the NIOSH recommendation
3 for an SEC Class for the - I'm saying "active
4 period," but that's not the right terminology
5 for the -

6 CHAIRMAN MELIUS: Operational.

7 MEMBER ZIEMER: Operational period
8 and to deny an SEC Class for the residual
9 period, I believe, is what the effect is.

10 MEMBER PRESLEY: That's correct.

11 MEMBER LEMEN: The operational
12 period being January 1, `71, through December
13 31st, `72.

14 MEMBER ZIEMER: Right. And we will
15 get the exact wording, I think, tomorrow
16 morning.

17 CHAIRMAN MELIUS: Tomorrow there
18 will be a letter, yes.

19 MEMBER LEMEN: Can you give the
20 dates on the second one?

21 CHAIRMAN MELIUS: The second one is
22 from January 1st, 1973, through October 31st,

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1 2009.

2 MEMBER LEMEN: Thank you.

3 CHAIRMAN MELIUS: Is everybody
4 ready for a vote? Okay.

5 MR. KATZ: Okay. And for the
6 record before I get started, we have two Board
7 Members who are absent for this. I'll collect
8 their votes after.

9 Dr. Anderson.

10 MEMBER ANDERSON: Yes.

11 MR. KATZ: Ms. Beach.

12 MEMBER BEACH: Yes.

13 MR. KATZ: Mr. Clawson.

14 MEMBER CLAWSON: Yes.

15 MR. KATZ: Dr. Field.

16 MEMBER FIELD: Yes.

17 MR. KATZ: Mr. Gibson.

18 MEMBER GIBSON: Yes.

19 MR. KATZ: Dr. Lemen.

20 MEMBER LEMEN: Yes.

21 MR. KATZ: Dr. Melius.

22 CHAIRMAN MELIUS: Yes.

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1 MR. KATZ: Ms. Munn.

2 MEMBER MUNN: Yes.

3 MR. KATZ: Dr. Poston.

4 MEMBER POSTON: Yes.

5 MR. KATZ: Mr. Presley.

6 MEMBER PRESLEY: Yes.

7 MR. KATZ: Dr. Richardson.

8 MEMBER RICHARDSON: Yes.

9 MR. KATZ: Dr. Roessler.

10 MEMBER ROESSLER: Yes.

11 MR. KATZ: Mr. Schofield.

12 MEMBER SCHOFIELD: Yes.

13 MR. KATZ: Dr. Ziemer.

14 MEMBER ZIEMER: Yes.

15 MR. KATZ: So, it's unanimous among
16 attendees. 14 in favor. Two votes to
17 collect. The motion passes.

18 CHAIRMAN MELIUS: Okay. We're now
19 scheduled for a - after a short break, a
20 closed Board session on conflict of interest
21 issues.

22 So, I guess I'll ask everybody to

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1 leave, except for Board Members and the people
2 involved. I see Chris is here.

3 And others who will be staying in
4 the room, I'm not sure who's allowed. We're
5 originally scheduled for four o'clock. Do you
6 want to take the full time period or how do
7 you feel?

8 Because we will then be coming
9 back at, I believe, 6:30 this evening for the
10 public comment session.

11 If we want to break for 15
12 minutes, say start five minutes early - ten
13 minutes. Okay. We'll try to start at ten of
14 4:00, 3:50.

15 For those of you who did not know
16 that - well, two of our Board Members seem to
17 have discovered the cookies and brownies
18 outside.

19 (Whereupon, the proceedings went
20 off the record at 3:39 p.m. for a closed
21 session and went back on the record at 6:32
22 p.m.)

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1 CHAIRMAN MELIUS: Okay. If we get
2 seated, we'll get started. Board Members can
3 - and we have two people signed up, and then
4 we've got a few more people, I believe, on the
5 phone.

6 So, those of you on the phone we
7 should be able to get to, I believe. And,
8 Ted, do you want to give the intro?

9 MR. KATZ: Yes. Thank you.

10 So, welcome everyone who's come
11 for the public session. Let me just note what
12 the ground rules are about transcripts and the
13 existence of transcripts for anyone who might
14 not know.

15 All of the Board sessions are
16 transcribed verbatim. So, people who are
17 giving public comments, all of your comments
18 will be captured in those transcripts.

19 Those transcripts are then posted
20 on the NIOSH website where they're available
21 to the public. So, everything you say will be
22 available verbatim to anyone who would like to

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1 read it in the public.

2 And the exception to that is if
3 you talk about another person, information
4 divulged about another person will be kept
5 private. So, that will be redacted from the
6 transcript to protect that person's privacy.

7 That's sort of the thumbnail of
8 what the rules are. The rules are also -
9 should be on the back table. And they're also
10 on the NIOSH website. Under the Board's
11 section of the NIOSH website, it will give you
12 a full explanation of what's called the
13 redaction policy for the transcripts. And
14 that covers it.

15 CHAIRMAN MELIUS: Okay. And the
16 first person signed up is someone we've heard
17 from before. Donna Hand.

18 Do you want to introduce yourself
19 and -

20 MS. HAND: Thank you again. Thank
21 you for the time to be able to voice some
22 concerns that the claimants have.

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1 My name is Donna Hand. I first
2 became a worker advocate for Pinellas Plant.
3 I also authorize/represent some of the
4 claimants.

5 Now, I am also in Savannah River,
6 Oak Ridge, Los Alamos, Rocky Flats and Nevada
7 Test Site.

8 So, I have pretty well expanded my
9 sites to where I know about this program from
10 when you do the initial interview all the way
11 to the closing interview, dose reconstruction,
12 goes over to Department of Labor, Probability
13 of Causation, requesting a review, the whole
14 bit.

15 Having said that, we need to
16 address some very much concerns that go across
17 the board. Particularly, the radiation dose
18 for the workers.

19 They were told that they were
20 getting the radiation dose of a coworker for
21 the unmonitored workers. However, I have been
22 finding out that the unmonitored dose is going

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1 to be the coworker dose of other workers such
2 as the janitors. All janitors get a hundred
3 millirem.

4 It doesn't matter if they're in a
5 radiation area where you get 550 millirems.
6 You're still going to get a hundred millirem.

7 It doesn't matter if a Technical
8 Basis Document shows that the missed dose is
9 240 millirems. You're still going to get a
10 hundred millirem.

11 This hundred millirem is going to
12 be at a constant distribution. A hundred
13 millirem at a constant distribution that's not
14 of the 95th percentile or 99th percentile,
15 there's a lot of uncertainties there.

16 And the IREP program has at the
17 very bottom of the left-hand corner,
18 uncertainty distribution. In there, it shows
19 log-normal 11.

20 If you manually put these numbers
21 in, it will tell you that this uncertainty
22 distribution log-normal 11 has no effect on

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1 the calculation.

2 So, therefore, you did not include
3 the uncertainty, because your constant wasn't
4 at the worst-case application or assumption,
5 the 95h percentile, and then your program
6 didn't include it as well. So, these workers
7 are being deprived of the uncertainty.

8 If you go back and you have a
9 rework, a rework is whenever these cases are
10 sent back for some reason. Sometimes it's
11 employment, sometimes it's a new illness.

12 Again, there's no additional facts
13 given about these sites. But, yet, every
14 single one of these reworks are reduced
15 because they're told they're taking the 50th
16 percentile now.

17 Again, you're taking the 50
18 percentile. What about the uncertainty?
19 You're required through the federal
20 regulations to include the uncertainty.
21 That's not it.

22 Specifically at Pinellas Plant,

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1 you're talking about internal dose. The
2 internal dose, the only thing that they will
3 capture is the tritium.

4 You forget that there is krypton,
5 cobalt, nickel, uranium and radioactive-
6 generating devices. These people were cut on
7 these radioactive-generating devices.

8 I had one worker, he tested the
9 tubes. Every unit, he would test three of
10 them in Building 200. He only gets a hundred
11 millirem a year.

12 He's actually physically testing
13 these tubes. 50 units a week, if not more,
14 three per unit, but he only gets a hundred
15 millirems.

16 It doesn't seem scientifically
17 valid, and it definitely isn't reasonable.
18 His internal dose is a hundred from the
19 tritium.

20 They just now started doing the
21 metal tritides. Pinellas Plant has four metal
22 tritides.

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1 The tritium doses are there. They
2 said they can do it, but it only comes out to
3 be one millirem.

4 I have a case where a claimant, he
5 actually sanded the tubes. He's sitting down
6 at a desk, he sands the tubes, he checks them
7 for leaks, and then he has to clean it with
8 solvents, sands it again, puts a number on it,
9 does the whole bit.

10 He had tongue cancer, lip cancer
11 thyroid cancer. He only got a hundred
12 millirems a year. It doesn't make sense,
13 again, when the dosimetry dose says we missed
14 240.

15 You have pictures in front of you.
16 That claimant had laryngeal cancer. He
17 actually worked in the vacuum area with the
18 tube and the exhaust with 1018, which is
19 designated by your Technical Basis Document as
20 being radioactive materials unconfined. He
21 only got a hundred millirems per year external
22 dose.

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1 As you can see by the picture, he
2 got cuts and wounds while he was working
3 there. He also when he opened it, where did
4 it go to and what protection did he have?

5 The cuts and wounds is not
6 considered in the internal dose because there
7 wasn't a health physicist that did a report.
8 So, therefore, we're not going to consider
9 this.

10 I heard today that during the
11 covered time period, all radiation dose is
12 supposed to be considered. You had issued a
13 Technical Basis Guideline for wounds.
14 However, your contractors and subcontractors
15 are not using this.

16 These are some issues that are
17 going across the board at every single site.
18 These workers are not having the law applied
19 to them. They're having whatever the
20 professional judgment of the dose
21 reconstruction person thinks it is.

22 The RTGs which was done at

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1 Pinellas and also at Kansas City, the only
2 information they have on that one is what they
3 learned over the internet. They did not talk
4 to the workers that actually worked with the
5 RTGs.

6 Pinellas Plant had two. One was
7 warm, you could touch it. And you had to
8 physically touch it to make sure it was still
9 active. The other one was so hot that they
10 had to wear asbestos gloves to touch it.

11 But yet because they're
12 encapsulated, according to NIOSH, there's no
13 radiation dose. So, don't worry about it.

14 We know that they leaked because
15 they had to reopen some of these and then
16 encapsulate them again. This is not accounted
17 for.

18 The Pinellas Plant documentation
19 also says there was a temporary plant started
20 in September of 1956. Site Profile agrees
21 there was. But whenever you do a dose
22 reconstruction, we're only going to begin in

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1 1957. We're not getting add those sources
2 there.

3 You have here you submitted a list
4 of Special Exposure Cohorts. Pinellas Plant
5 filed a petition for a Special Exposure Cohort
6 the end of 2008, beginning of 2009.

7 We were told at that time, that
8 they could do the uranium dose. We were told
9 that they could do the metal tritide dose.
10 So, therefore, we didn't qualify. So, they
11 would not evaluate it. That's as far as it
12 got.

13 There seems to be a disparity
14 whenever Oak Ridge does an evaluation
15 determining if you qualify, and then they do
16 an evaluation if you do qualify. That needs
17 to be straightened out. If they qualify
18 underneath the statute, then you do the
19 evaluation.

20 You also have here where Pinellas
21 Plant is going to have their Technical Basis
22 Document revision done. It's supposed to come

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1 out on March the 25th.

2 When was the last time that a
3 Working Group meeting met? I went to one of
4 those Work Group meetings. They were talking
5 about uranium and he kept on saying the glass
6 - it was just in glass.

7 No, uranium was so much there, it
8 was of considerable concern for the EPA in
9 1997. Now, in 1997, it was a concern for
10 environmental protection. What about the dose
11 to the workers?

12 Krypton was found outside the
13 facility in the air monitors. How much was
14 inside? Zero krypton dose.

15 Again, we need to define to the
16 people in layman terms what coworker data is,
17 because there seems to be a confusion between
18 the Oak Ridge people that are taking the
19 close-out interview, the Oak Ridge calculators
20 that are calculating radiation dose, and what
21 NIOSH has told everybody that coworker data
22 is. It's a large discrepancy, it's ambiguous

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1 and it's definitely arbitrary.

2 Also, because they're a janitor or
3 they're a secretary does not mean that they
4 did not receive more dose than what you're
5 saying.

6 I have a secretary. She worked in
7 the classified area called Heather, which is
8 still classified today. That's all I can tell
9 you.

10 However, the wall that her back
11 was against documented 40 millirems per month
12 coming through that wall. They had to move
13 the badges. But they're saying that because
14 that's backscatter, we're not going to include
15 that in the dose.

16 Now, this person for years, had
17 her desk right there by where it's coming
18 through the wall. I do not know if you know
19 too much about Pinellas Plant, but it's a
20 warehouse.

21 They had cubicles. And so,
22 there's only two or three rooms that were

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1 sealed. And even those were not sealed
2 completely.

3 So, because they had tritium dust
4 up above 108, they would come up there and
5 vacuum.

6 The decontamination, the
7 decommissioning period, you still haven't got
8 documentation from that. The radiation dose
9 Site Profile ends at 1992. This facility
10 lasted until 1997. There's not information
11 there.

12 There's a lot of discrepancies
13 between this site, Pinellas Plant, and other
14 sites. When you look, okay, we've got this,
15 this, this, this and this. Pinellas Plant,
16 no, we don't. You didn't address that.

17 It should be standard if we're
18 going to address the co-monitored here, we get
19 co-monitored here. We know for each site what
20 the co-monitored is, where we're basing our
21 data. Do we have air samples?

22 You do not say, okay, yes or no.

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1 Each site should say do we have air samples?

2 Yes. Do we not have air samples? No.

3 So, then we know what data we're
4 using and it makes it very simple for
5 everybody.

6 CHAIRMAN MELIUS: Can you wrap up
7 soon?

8 MS. HAND: Yes.

9 CHAIRMAN MELIUS: You've been over
10 ten minutes.

11 MS. HAND: Overall is that from the
12 closeout interview whenever they're asked is
13 there anything else and we tell them, yes,
14 there is because you did not address it, they
15 were denied and we had to go over to
16 Department of Labor.

17 Department of Labor we say, okay,
18 we want a review. They're saying, no, you
19 don't get a review. A review according to the
20 regulation, goes back to NIOSH and the
21 independent party. We're denied that.

22 So, when you guys do the dose

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1 reconstruction, there is no way for us to have
2 a due process to question that dose reprocess.

3 Thank you.

4 CHAIRMAN MELIUS: Thank you.

5 Next person signed up is a Chris
6 McKenney, I believe.

7 MR. MCKENNEY: Good evening ladies
8 and gentlemen of the Board. My name is Chris
9 McKenney. I'm presently an employee at the
10 Savannah River site.

11 My father was also an employee
12 there. He had 30 years plus employment. He's
13 deceased now. He throughout his career,
14 worked at the Argonne Lab at Chicago with the
15 Chicago projects. He worked at New York
16 Shipyard where reactors were built. And he
17 also came to Savannah River and established
18 the reactors there.

19 He, unfortunately, passed away
20 having two primary cancers. We filed an
21 Energy Employees Compensation claim. And even
22 with two primary cancers, both metastatic

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1 eventually, his case was denied. He had a PoC
2 of 47 percent.

3 I'm here today to ask you to
4 consider an SEC for the Savannah River Site as
5 it appears to be the only major site in the
6 DOE templates that doesn't have one at this
7 time.

8 The site here never unionized the
9 operating personnel. That was the first to -
10 I think most of the other sites did have
11 unions for the operating personnel, but we
12 have never done that.

13 The dose reconstructions that we
14 were given from NIOSH through ORAU and Oak
15 Ridge don't, in my opinion, reflect the true
16 conditions with regards especially to an
17 incident at the K reactor in the '70s where a
18 source rod melted down in the process room.

19 Pretty much the whole site in the
20 mitigation of that accident was nearly burned
21 out for the year, and his records show no
22 increase over the previous years or subsequent

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1 years.

2 It seems presently that the SRS
3 cases as far as NIOSH acceptance and denials,
4 are 70 percent denied and 30 percent approved.

5 That's the lowest rate of any site in the
6 complex.

7 I'm here purely to ask that you
8 consider an SEC for this site as I think it
9 would level the playing field for the workers
10 past and present. Thank you.

11 CHAIRMAN MELIUS: Thank you very
12 much. I'm not sure, but we will be providing
13 an update. There's the SEC Petition valuation
14 for the site, and there will be an update on
15 that tomorrow afternoon just before the public
16 comment period.

17 It's listed on the agenda. So,
18 you're obviously welcome to come back for that
19 if that would be helpful.

20 Okay. We have some people on the
21 phone we want to get to. I know Terrie
22 Barrie, I believe, wanted to make a comment.

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1 Terrie, are you on?

2 MS. BARRIE: Yes, Doctor, I am.

3 CHAIRMAN MELIUS: Thank you.

4 MS. BARRIE: And thank you for
5 allowing the people who can't travel to the
6 nice, warm Georgia, to call in our comments.

7 I'll be brief. I wanted to just
8 mention that I'm very happy with the progress
9 of the ten-year reviews that Dr. Howard
10 initiated last year. It's pretty much on
11 target and I appreciate all the hard work for
12 the people who were involved with it.

13 I have read through the report.
14 And I haven't studied them, but I've read
15 them. And I notice that both the reports
16 address the issue of whether NIOSH considers
17 workers' testimony.

18 And, you know, from the times that
19 I've listened to public comments and the
20 Advisory Board Meetings, this is a real
21 important issue.

22 These workers may not have worked

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1 in the dosimetry program, but they were the
2 hands-on people and, to me, their
3 recollections need to be seriously considered.

4 This is particularly important
5 throughout these blast plants. I understand
6 that SC&A is performing an audit on whether
7 public comment for the Rocky Flats plant were
8 included into the NIOSH TBDs and Technical
9 Bulletins. And I'm looking forward to that
10 report.

11 But I also want to raise that I
12 have also in the past year or so, raised some
13 serious concern - what I think are serious
14 concerns about some of the Site Profile
15 information.

16 And I, as a matter of fact, like
17 last year I mentioned that Building 440 and
18 460 may have had radiation exposure. And I
19 have not been answered on that issue.

20 And recently I went, you know, to
21 the Board and to NIOSH and mentioned a couple
22 of other issues that I garnered from the

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1 emails I had FOIAed.

2 And I get the impression that, you
3 know, because Rocky Flats has already had an
4 SEC Petition approved for a very small number
5 of years, that no one is going to worry about
6 these issues.

7 And I would just like to be
8 assured that the issues that I have raised,
9 you know, with the thorium and the tritium,
10 that they will be addressed and in a short
11 amount of time.

12 I think a year for Building 440
13 and 460, I've been quite patient with, and I
14 would like to see these issues resolved.

15 Thank you for your time and for
16 allowing me again to call in.

17 CHAIRMAN MELIUS: Thank you,
18 Terrie, and we'll follow up. Sometimes when
19 comments come in to the Board and to NIOSH, I
20 think we may make the assumption that the
21 other party is responding and doing that. And
22 we'll make sure we coordinate and get back to

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1 you.

2 And I think we also need to, you
3 know, reconstitute our Rocky Flats Work Group
4 because there are a number of Site Profile
5 issues in addition to the ones that you raised
6 that I think we need to follow up on.

7 So, we will also get that going
8 again very shortly.

9 MS. BARRIE: Thank you. I
10 appreciate that, Doctor.

11 CHAIRMAN MELIUS: I may have the
12 pronunciation wrong, but there's also a Faye
13 Vlieger or something like that?

14 MS. VLIEGER: My name is Faye
15 Vlieger. I'm a member of ANWAG and also a
16 member of the Advisory Committee for Cold War
17 Patriots.

18 I am also an authorized
19 representative for claimants here in the
20 northwest for the Hanford site, and some of
21 the sites in California.

22 The reason I'm - and I thank you

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1 so much for taking my call. As I sit here in
2 Washington State, I only dream of Georgia.

3 Earlier today the session came
4 about that the Board - pardon me. During
5 earlier discussion, Dr. Hinnefeld stated that
6 NIOSH was already ahead of their game with the
7 model on OTIB-49 and that they've already
8 submitted data from the ICRP which apparently
9 makes NIOSH's model more claimant-friendly
10 than an ICRP. However, the ICRP needs to -
11 stated that NIOSH needs to revise their model.

12 Wouldn't NIOSH still need to
13 revise their method if the Transuranium
14 Working Group had said that they looked at
15 NIOSH's model and said that it needed to be
16 changed because of the other findings?

17 Again, what it looks like to me is
18 that NIOSH may say that they have incorporated
19 - that they are more forward thinking and it
20 incorporated this in it, but they couldn't
21 have incorporated it if the report didn't
22 exist when they did their incorporation.

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1 So, if this is truly the case that
2 they have incorporated it, there needs to be
3 some paper trail to prove it. Otherwise, we
4 have that recommendation left out there from
5 the Transuranium Working Group that the model
6 needs to be updated and changed.

7 And we previously - ANWAG sent a
8 letter dated October 10th, 2011, addressing
9 these issues. And we didn't receive a
10 response from it. And we're just wondering
11 about our recommendations in that letter from
12 October 10th, 2011, to this same topic.

13 CHAIRMAN MELIUS: Who was the
14 letter to?

15 MS. VLIEGER: Just a second. I can
16 read to you the docket. 194. Docket Number
17 194.

18 CHAIRMAN MELIUS: So, that went to
19 NIOSH then?

20 MS. VLIEGER: Yes.

21 CHAIRMAN MELIUS: Okay. That's why
22 I ask because the letter you sent to the Board

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1 was the January - I believe January 11th. And
2 that's why -

3 MS. VLIEGER: Yes, that's the new
4 letter.

5 CHAIRMAN MELIUS: Okay.

6 MS. VLIEGER: And then just a
7 moment to let you know that when the Board
8 meets in August and we discuss the Hanford
9 SEC, I am very concerned that while we're
10 going through our decommission and remediation
11 of the various buildings at Hanford, that the
12 Board and NIOSH are taking into consideration
13 these findings and samples under Building 324
14 right now where they found ten times the human
15 lethal dose within working range under a
16 building that was supposed to have drain and
17 drain field systems.

18 They found soil contamination.
19 Therefore, there was a ruptured pipe in a well
20 that nobody knew about and it was draining
21 into the soil.

22 I want to make sure that these are

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1 considered during the SEC Petition, because
2 nobody wanted to assume they're vulnerable to
3 waste.

4 People up against walls in the
5 basement, the HVAC workers and the planners
6 and all the people that would go into the
7 basement in 324, they weren't monitored,
8 because they were told there was no need to be
9 monitored.

10 The glove boxes were upstairs and
11 isolated and supposedly draining and draining
12 situations where there could not possibly be a
13 leak into the wall or into the soil, but they
14 were never monitored.

15 So, I just want to make sure that
16 the remediation findings for the Hanford site
17 are being considered by NIOSH in a real-time
18 method.

19 CHAIRMAN MELIUS: And I can just
20 add to that that the Work Group on the Hanford
21 SEC will be reconvening. We're waiting for a
22 report from SC&A and we expect to get it, I

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1 think, towards middle of April sometime.

2 And so, we will be meeting again
3 and we'll update and we'll let the people
4 involved, including the petitioners, know
5 about that meeting and provide further
6 information to you.

7 MS. VLIEGER: Do you know if any of
8 the realtime information and realtime assays
9 from this stuff that they're digging up -

10 CHAIRMAN MELIUS: I couldn't
11 understand that.

12 MR. KATZ: She asked do we know if
13 NIOSH is taking -

14 CHAIRMAN MELIUS: Everybody is
15 talking. I'm having trouble understanding -

16 MR. KATZ: She's asked do we know
17 if NIOSH is taking into account this realtime
18 information that's coming in related to this,
19 for example, contamination that she just
20 described.

21 CHAIRMAN MELIUS: Yes, I don't
22 think we can answer that on the phone or

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1 directly, but we will follow up with you and
2 try to get more details.

3 MS. VLIEGER: Okay. I know that
4 the union has been in contact with the Board
5 Members trying to get an answer to this
6 question, too.

7 CHAIRMAN MELIUS: Okay. Thank you.

8 MS. VLIEGER: And that concludes my
9 statements. And, once again, thank you so
10 much for letting me do this over the phone.

11 CHAIRMAN MELIUS: Okay. Thank you.

12 Anybody else in the audience here
13 wish to make public comments? We don't have
14 anybody else signed up, but - okay.

15 And then does anybody else on the
16 phone wish to make public comments?

17 There is another public comment
18 session tomorrow evening. I don't hear
19 anybody. Then, we'll close the session and we
20 reconvene tomorrow morning at 8:15. Thank
21 you.

22 (Whereupon, the meeting was

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1 adjourned at 6:58 p.m.)

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