

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

+ + + + +

71st MEETING

+ + + + +

WEDNESDAY
AUGUST 11, 2010

+ + + + +

The meeting convened at 8:15 a.m.,
Mountain Daylight Time, in the Shilo Inn
Suites Hotel, 780 Lindsay Blvd., Idaho Falls,
ID, 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*
MARK GRIFFON, Member
RICHARD LEMEN, Member*
JAMES E. LOCKEY, Member
WANDA I. MUNN, Member
JOHN W. POSTON, SR., Member
ROBERT W. PRESLEY, Member

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PRESENT (CONTINUED):

DAVID B. RICHARDSON, Member
 GENEVIEVE S. ROESSLER, Member
 PHILLIP SCHOFIELD, Member
 PAUL L. ZIEMER, Member
 TED KATZ, Designated Federal Official

REGISTERED AND/OR PUBLIC COMMENT PARTICIPANTS

ADAMS, NANCY, NIOSH Contractor
 BRADFORD, SHANNON, DCAS
 BREYER, LAURIE, DCAS
 BROEHM, JASON, CDC
 BURGOS, ZAIDA, NIOSH Contractor
 CANO, REGINA, DOE
 CORBIN, JONATHAN
 CRAWFORD, CHRIS, DCAS
 CRUZ, RUBEN, CDC
 DARNELL, PETE, DCAS
 FITZGERALD, JOE, SC&A
 GLOVER, SAM, DCAS
 HAND, DONNA, Pinellas Petitioner*
 HOWELL, EMILY, HHS
 HINNEFELD, STU, DCAS
 KOTSCH, JEFF, DOL
 LEWIS, GREG, DOE
 LEWIS, MARK, ATL
 LIN, JENNY, HHS
 LOCKER, ROSALIE, Ames Petitioner*
 MAKHIJANI, ARJUN, SC&A
 MCFEE, MATTHEW, ORAU Team
 MEYER, MARGARET
 NETON, JIM, DCAS
 NICHOLS, HAROLD
 OSTROW, STEVE, SC&A
 PRESLEY, LOUISE
 RABINOWITZ, RANDY, NIOSH Contractor
 RINGEN, KNUT, CPWR
 RUSSELL, MALCOLM
 RUTHERFORD, LaVON, DCAS
 WADE, LEW, DCAS

*Participating via telephone

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

2 8:28 a.m.

3 CHAIRMAN MELIUS: If everyone gets
4 seated, we'll get started.

5 MR. KATZ: So let me check before
6 we get started on the phone. For our Board
7 Members who are connected by phone, Dr. Lemen,
8 Dr. Field, and Mr. Gibson, are you with us
9 already?

10 MEMBER LEMEN: Dr. Lemen is here.

11 MEMBER FIELD: Dr. Field is here.

12 MEMBER GIBSON: Hi, Ted. Mike's
13 here.

14 MR. KATZ: Great. Welcome.

15 And then let me just say,
16 yesterday we had a little difficulty with the
17 phone. We had various difficulties with the
18 phone. One of them, though, was that people
19 listening in weren't muting their phones.

20 So, please, if you're listening to
21 the Board call, we're glad you're with us, but
22 please mute your phone. If you don't have a

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1 mute button on your phone, press *6. That
2 will mute your phone. Then if you wish to
3 address the Board, press *6 again, and it will
4 unmute your phone. Thank you.

5 CHAIRMAN MELIUS: Okay. Any other
6 announcements?

7 (No response.)

8 Then why don't we get started? We
9 will start with Revere Copper.

10 MR. CRAWFORD: My name is Frank
11 Crawford. I have no conflicts at this site.
12 I'm from NIOSH.

13 There's some repetitious material
14 on this slide. I apologize for that, but
15 we'll just go ahead. We received the petition
16 on January 26th, this year.

17 MEMBER POSTON: We can't hear you.

18 MR. CRAWFORD: You can't hear?
19 I'll get a little closer.

20 So we received the petition
21 January 26th, this year. The petitioner's
22 proposed Class Definition was rather narrow,

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1 extruders and shapes specialists who worked in
2 the rod and shape mill at Revere Copper and
3 Brass, Detroit, Michigan, from 1943 through
4 1984. On March 18th, the petition qualified
5 for evaluation with the basis that there was
6 no external or internal monitoring records for
7 the Class.

8 The next point, there's a slight
9 discrepancy with what you will see on the rest
10 of the slide. The DOE, Department of Energy,
11 facility databases indicates July 24th, 1943,
12 through December 31st, 1953, as the covered
13 period for Revere Copper and Brass.

14 When we did our research, we found
15 that there was a single rolling or extrusion,
16 I should say, of thorium done in 1954. So we
17 will be working with the DOE to extend the
18 operational period through the end of 1954.

19 The Class we evaluated at NIOSH
20 was all workers who worked at any building at
21 the Revere Copper and Brass plant in Detroit,
22 Michigan from July 24th, 1943, through

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1 December 31st, 1954, and the residual period
2 from January 1st, 1955, through December 31st,
3 1984.

4 There's also some administrative
5 work that needs to be done on the residual
6 period. The Department of Labor shows that
7 period as beginning January 1st, 1960. So we
8 have a five-year gap that we need to fill, and
9 that has to be done by means of a formal
10 report.

11 In terms of history, Revere Copper
12 and Brass was formed by a merger of, I
13 believe, six other copper companies in 1928.
14 It was located in Detroit, Michigan. They
15 produced pipes, bars, tubes, and sheets and
16 cookware. The Revere name is famous for that,
17 I think.

18 Then, in 1943, during the War,
19 Revere Copper and Brass contracted with the
20 Manhattan Engineering District to extrude
21 uranium billets to produce uranium rods for
22 use in the MED reactors at Hanford and other

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1 facilities. The main production took place
2 during 1943 and 1944 under MED contract.

3 Revere produced over 1,300 tons of
4 uranium rod, and secondarily, they were
5 involved in the war effort in other respects,
6 too. So they made large quantities of
7 cartridge cases and other war materials. So
8 only a small part of the labor force at the
9 plant was involved in the uranium extrusions.

10 We don't have exact numbers. We believe
11 there were about 35 people at any one time
12 working in the uranium extrusion area.

13 The plant, we believe, had about
14 200 people. Information is scarce. The plant
15 no longer exists. It was basically abandoned
16 in 1984, and we've had a lot of trouble
17 finding out just how many people were there at
18 various periods.

19 After the initial production
20 period, there was a period of intermittent
21 research and development work. That was done
22 under contract for the MED and the Atomic

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1 Energy Commission, the AEC.

2 The R&D work was usually done at
3 night and on weekends with a small crew of
4 Revere Copper and Brass workers along with MED
5 AEC scientists and supervisors. The R&D work
6 included extrusion of beryllium, uranium,
7 uranium-thorium alloy, and thorium. The last
8 known extrusion of thorium rod was done on
9 October 19th, 1954.

10 In 1981, a preliminary FUSRAP
11 study was done. The plant at that point was
12 still operational. In fact, when the
13 scientists came in to look it over, extrusion
14 was being done. So they couldn't check all of
15 the equipment. The furnace was in use,
16 although it wasn't the same furnace that was
17 used back in 1943-44 or even in the fifties.
18 So checking it might not have turned up much
19 anyway. I think a larger press was in use
20 also.

21 So they checked what they could,
22 which was the floor areas, the smaller press,

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1 and space in another building where the
2 billets or the extruded rods were sawn into
3 the proper length.

4 At any rate, the survey revealed
5 no evidence of a radiological hazard at that
6 time. They did, however, recommend a follow-
7 up survey because they couldn't get at some of
8 the equipment and they couldn't go up into the
9 rafters because the plant was in use.

10 That survey, the follow-up survey,
11 was never done because by the time they got
12 back in 1984 the presses were gone, the
13 furnace was gone, and some of the buildings
14 had already been partly dismantled.

15 We checked many sources, as usual,
16 for information. This is not a very rich site
17 in terms of records although there are some.
18 I won't go through these individually, but
19 we'll see listed on the next two slides the
20 different areas we looked.

21 This I found, unfortunately, has
22 one discrepancy in it. There were, in fact,

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1 eight claims submitted for the site so far.
2 Seven did meet the Class Definition. However,
3 only six had a PoC greater than 50 percent.
4 There was one otherwise SEC-qualified claim
5 that had a PoC of less than 50 percent. The
6 remaining claim was a non-scheduled cancer
7 with most of the work done in the residual
8 period, and it also had a PoC of less than 50
9 percent.

10 There was at the site, as I had
11 mentioned earlier, no internal or external
12 dosimetry. So, of course, none of these cases
13 involved that.

14 This is a little bit of a
15 restatement of the history. Beginning on July
16 24th, 1943, Revere Copper and Brass began
17 extruding natural uranium billets into rod
18 shapes for the reactors at Hanford, Savannah
19 River, and Oak Ridge.

20 During 1943 and 1944, Revere
21 processed over 1300 tons of uranium billets.
22 After the production period ended in 1944,

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1 Revere did R&D extrusions for the MED and AEC,
2 using a variety of metals and alloys,
3 including uranium and thorium.

4 The R&D operations were
5 characterized by small amounts of material
6 with the work done under the supervision of
7 Argonne National Laboratory scientists at
8 nights and on weekends. The last known R&D
9 operation occurred on October 19th, 1954 on a
10 pure thorium billet.

11 We'll look at potential radiation
12 exposures during the Class period. For
13 internal sources of exposure, we have uranium
14 and thorium and some of their daughter
15 products that may have been inhaled or
16 ingested by workers at Revere Copper and
17 Brass.

18 Now the material handled was the
19 metal uranium or thorium. So the daughter
20 products were a very small component compared
21 to, say, working with ores and other material.

22 Residual airborne radioactive

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1 contaminants may have been present at low
2 levels during the residual period. We do have
3 some air sample data, some smear samples from
4 the R&D period and the production period,
5 which gives us an idea of just what kind of
6 exposures we're talking about, and they were
7 substantial, especially during the uranium
8 period in 1943 and 1944.

9 For external sources of exposure,
10 we have photon and beta exposure from uranium
11 and thorium source materials and small amounts
12 of surface contamination present between the
13 production periods. Neutrons were not a
14 significant source of external exposure to
15 Revere Copper and Brass personnel.

16 We do have witness statements that
17 indicated that the R&D extrusions, which, as I
18 say, were done at nights and weekends for the
19 most part, involving only a few of the plant's
20 normal personnel. They would bring the
21 material in, extrude it, clean up, and take
22 the material away with them, all in the course

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1 of a shift.

2 There is no bioassay data for the
3 Class period in terms of personnel and area
4 monitoring data. There are limited air sample
5 data during the production period, especially.

6 There's also some air sample data during the
7 thorium extrusions later.

8 There is no film badge or pocket
9 dosimeter information. There were no area
10 radiation surveys. We do have some smear
11 samples and contact readings. The 1981
12 measurements were basically background. Very
13 small elevated levels were found, but nothing
14 much.

15 During the evaluation process, we
16 need a two-prong test, established by EEOICPA.

17 The first question, is it feasible to
18 estimate the level of radiation doses of
19 individual members of the Class with
20 sufficient accuracy? If the answer to that is
21 no, then we need to answer the second
22 question. Is there a reasonable likelihood

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1 that such radiation dose may have endangered
2 the health of members of the Class?

3 NIOSH found that the available
4 monitoring records, process descriptions, and
5 source term data are not adequate to complete
6 dose reconstructions with sufficient accuracy
7 for the evaluated Class of employees during
8 the production period.

9 As you will see later on the next
10 slide, I believe, we felt we could do uranium
11 exposure reconstructions based on TBD-6000,
12 but the problem for this site is that we can't
13 really bound the thorium period. We don't
14 have any nice, neat documents that say that
15 thorium was done only on these dates or only
16 during these periods. So we found that, given
17 the uncertainty in the thorium source term, in
18 particular, that it wasn't really feasible to
19 do dose reconstructions for this area. So the
20 conclusion, then, the data are insufficient to
21 estimate internal exposures due to thorium and
22 its progeny during the production period.

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1 Then we looked at the residual
2 period for internal dose. During the residual
3 period, the estimated ingestion intakes for
4 uranium and thorium can be derived from
5 deposition and resuspension factors defined in
6 TBD-6000 and TBD-6001 and depleted according
7 to TIB-70. In this case, we actually have
8 thorium dust readings and we have uranium dust
9 readings during the production, and we have an
10 endpoint in 1981.

11 I'm going to switch now and go
12 back to the operational period. For external
13 dose, we felt that external doses cannot be
14 estimated with sufficient accuracy during the
15 operations period, again, because of the
16 uncertainty of the thorium source term.

17 During the residual period, the
18 external exposures can be bounded by using the
19 results of surface contamination measurements
20 during the production period and the 1981
21 FUSRAP measurements.

22 On our table here, a feasibility

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1 summary, you will see that while we thought
2 uranium exposures could feasibly be
3 reconstructed, we felt it was not feasible to
4 reconstruct internal dose as a whole because
5 of the thorium component or external dose as a
6 whole because of the thorium component,
7 primarily. During the residual period, our
8 finding is that it is feasible to reconstruct
9 dose for internal and external dose.

10 Our recommendation: for the period
11 July 24th, 1943, through December 31st, 1954,
12 NIOSH finds that radiation dose estimates
13 cannot be adequately reconstructed for
14 compensation purposes. So we found
15 feasibility of reconstruction was a no, and
16 there was health endangerment, especially
17 since we already paid a number of claims.

18 Thank you.

19 CHAIRMAN MELIUS: Thank you,
20 Frank.

21 Questions?

22 (No response.)

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1 I have one, a sort of procedural
2 one with this one. Normally, we have not
3 recommended a Class that goes beyond the
4 covered period for an SEC. We've done less
5 than the covered period, based on information.

6 We have not gone over the covered period.

7 So my question is, and I don't
8 know if you can answer this, how is this
9 handled procedurally? We make a
10 recommendation to the Secretary. Are we
11 expecting the covered Class to change time
12 wise?

13 MR. HINNEFELD: Stu Hinnefeld
14 here. We do expect the covered Class to
15 change, and the reason we believe it will
16 change is that it's set; it changes from what
17 it was originally, based on our research. The
18 original designation for this site was the
19 covered period was 1943 through the fifties.
20 That's what it said.

21 CHAIRMAN MELIUS: Oh, okay.

22 MR. HINNEFELD: Our research said

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1 we think we have found the last activity,
2 which occurred in 1954, and we sent that
3 letter to DOE and DOL. They agreed. And I
4 believe there's a typo on their web page and
5 that's why it says 1953.

6 CHAIRMAN MELIUS: Oh, okay.

7 MR. HINNEFELD: I believe that's
8 why that says that, because it was changed
9 because of our work.

10 CHAIRMAN MELIUS: Yes. Okay.

11 MR. RUTHERFORD: The covered
12 period indicated defined as years 1942 through
13 1954. That is interpreted, should be
14 interpreted by us as 12/31/54. Therefore,
15 what we have proposed is within the covered
16 period. Okay?

17 So whenever the Department of
18 Labor or whenever the Department of Energy
19 facility database indicates a year, in that
20 year we always assume the end of that year.
21 Therefore, 12/31/54 is correct.

22 CHAIRMAN MELIUS: Okay.

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1 MR. HINNEFELD: Just so everybody
2 feels good about this, we are on line. We
3 have looked at the actual website. We are
4 looking at it right now. It does say 1954.
5 It doesn't say December 31st, but it says
6 1954.

7 CHAIRMAN MELIUS: Okay. We
8 believe you. At first I was going to say I
9 was sorry I asked. Now I'm glad I asked.

10 (Laughter.)

11 CHAIRMAN MELIUS: Bob?

12 MEMBER PRESLEY: One of the things
13 I am thinking about is in 1943 to 1944 the
14 fact that you all say that they did 13,000
15 pounds, that was depleted uranium, and between
16 1943 and 1944, I have a real problem with
17 being able to say that, yes, there was 13,000
18 pounds of extra depleted uranium that we
19 didn't have going through the Calutron
20 operations or something.

21 MR. CRAWFORD: That was actually
22 1,300 tons.

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1 MEMBER PRESLEY: Okay, 1,300 tons.

2 MR. CRAWFORD: And that was
3 natural uranium.

4 MR. HINNEFELD: It was natural
5 uranium. It wasn't depleted; it was natural.

6 MEMBER PRESLEY: Okay.

7 DR. GLOVER: I can speak to this.
8 Bob, they actually entered the original
9 extrusion for Hanford. This is Sam Glover.

10 That was the original stuff that
11 went to Hanford. They participated in putting
12 that metal together for Hanford. So that's
13 what that metal was used for. That was the
14 original feed for the reactor.

15 MEMBER PRESLEY: When did we start
16 doing that?

17 DR. GLOVER: 1943.

18 MEMBER PRESLEY: Okay.

19 CHAIRMAN MELIUS: Paul?

20 MEMBER ZIEMER: This is a minor
21 point, but if this were to be an SEC facility,
22 or a Class, rather, and you were doing partial

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1 dose reconstructions, and I don't believe it
2 was mentioned in the presentation, but I think
3 your report did mention medical x-rays. I
4 believe there was evidence that they did have
5 medical x-rays at this facility.

6 MR. CRAWFORD: That's correct.

7 MEMBER ZIEMER: And we can assume,
8 then, that you will reconstruct dose in the
9 normal way.

10 You had no information on the
11 types of x-ray equipment, but that's often the
12 case. So we're safe to assume that you will
13 be able to reconstruct medical exposure, is
14 that correct?

15 MR. CRAWFORD: That is correct.
16 And in the dose reconstructions that have
17 already been done, we have, in fact, included
18 medical exposures.

19 MEMBER ZIEMER: That did remind me
20 of my second question. I had forgotten there
21 was a second question.

22 (Laughter.)

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1 And that is, you have done six or
2 seven dose reconstructions already. Can
3 somebody outline briefly how those were done
4 since we're unable to reconstruct dose
5 according to this report?

6 MR. CRAWFORD: I think I can leap
7 in on that. They were done using the methods
8 of TBD-6000 and 6001. We would have had a
9 hard time reconstructing the thorium dose, but
10 the uranium dose was much easier to deal with.
11 That's why we were able to basically find
12 PoCs greater than 50 percent for six of the
13 eight cases.

14 CHAIRMAN MELIUS: Wanda and then
15 Phil.

16 MEMBER MUNN: My question has to
17 do with the thorium. Only one of the billets
18 that were listed in the report was done in the
19 1940s. Everything else was done in the
20 fifties.

21 I guess the question in my mind is
22 -- wasn't thorium already definitely

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1 considered S and M? Was it not being tracked?

2 I guess, were there no records at all about
3 internal shipments? You show information
4 about external shipments, but one wonders, how
5 did the thorium arrive there and from where?
6 I am guessing, by the absence of information
7 here, that you have no knowledge at all, no
8 record of the thorium coming into the plant.

9 MR. CRAWFORD: I can't answer that
10 definitively. We know when certain extrusions
11 occurred that involved thorium. We are not
12 completely confident that we know all of the
13 extrusions that were done that involved
14 thorium. In other words, where we have
15 evidence, we have it, but when we don't have
16 it, there is another kind of problem involved.

17 MEMBER MUNN: Yes, and the
18 question, I guess, I'm really getting into is
19 do we have no records about when thorium and
20 how much thorium came into the plant?

21 MR. CRAWFORD: We have rough
22 records. They will mention, in some cases,

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1 how many billets came in or how many segments
2 of extruded rod were shipped.

3 Uranium they kept very close
4 records, but, for some reason, since the
5 thorium was an R&D measure, apparently, the
6 records are either lost or someplace that
7 would not normally be associated with Revere,
8 and we haven't found them yet.

9 MEMBER MUNN: Or the AEC just
10 hadn't decided thorium was going to be treated
11 like S and M yet, right?

12 DR. GLOVER: There's that. We
13 don't have the records. But for the Hanford
14 time, Hanford began using thorium as a poison
15 on the outside reactors --

16 MEMBER MUNN: Right.

17 DR. GLOVER: -- very early.

18 MEMBER MUNN: Right.

19 DR. GLOVER: So there was a
20 definitive use for the material. So we know
21 Hanford wasn't doing extrusion of it at that
22 point. So there very well could be a very

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1 strong linkage here that we just haven't been
2 able to find the records on.

3 MEMBER MUNN: Okay. Thanks.

4 CHAIRMAN MELIUS: Phil?

5 MEMBER SCHOFIELD: But the fact
6 that there is no bioassay in the residual
7 period --

8 MR. KATZ: Phil, can you speak
9 into the microphone, please?

10 MEMBER SCHOFIELD: Okay.

11 There is no bioassay during the
12 residual period. I would like to know, were
13 the smear samples taken before the
14 destruction, like on the beams above the
15 stuff. Or there could potentially be
16 contaminants up there, dust that was
17 contaminated. Do you have any record of smear
18 samples being taken before the removal of the
19 equipment?

20 MR. CRAWFORD: Certainly not in
21 the rafters because the preliminary study
22 recommended a follow-up study, which was never

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1 done. So the smear samples that were taken
2 were of the floor area near the extrusion
3 presses and in another building where there
4 was a lab where the billets were cut. Those
5 are the only smear samples we have. There's
6 some contact readings also, but certainly not
7 in the rafters.

8 CHAIRMAN MELIUS: Any of the Board
9 Members on the phone have questions?

10 MEMBER GIBSON: This is Mike. No,
11 Jim.

12 CHAIRMAN MELIUS: Okay.

13 MEMBER LEMEN: This is Dick. No.

14 MEMBER FIELD: This is Bill. I
15 just had a quick question. For the residual
16 period, how confident are you that the dust
17 measurements are adequate to reconstruct the
18 dose? How many dust measurements were
19 available at the facility? You said they're
20 fairly representative of the dust maps of the
21 building.

22 MR. CRAWFORD: I don't have the

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1 exact number, but we have quite a few dust
2 samples during the production and the R&D
3 period. We don't have a White Paper out on
4 this at this point, but our intent is to use
5 the highest dust samples at the beginning of
6 the residual period and then deplete them
7 according to the methods of TIB-70 during the
8 entire residual period right out through 1981.

9 So the early part of the residual
10 period will probably have considerable dose
11 attached to it and the later parts much less.

12 And I am talking about internal dose
13 primarily.

14 MEMBER FIELD: Okay. Thank you.

15 CHAIRMAN MELIUS: Thank you.

16 Other questions?

17 Is the petitioner on the line and
18 would like to speak?

19 (No response.)

20 Any other questions?

21 (No response.)

22 Do I hear a motion to move

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1 forward?

2 PARTICIPANT: You can hardly be
3 heard.

4 CHAIRMAN MELIUS: Okay. I'm
5 sorry.

6 Do we have a motion? Yes, David?

7 MEMBER RICHARDSON: I just have
8 one comment about this SEC Petition Evaluation
9 Report. I thought it was one of the best that
10 I've read. So just to the authors of the
11 document, I thought it was really well-done
12 and it is a nice model for others.

13 CHAIRMAN MELIUS: Yes, I will
14 concur with that. Also, the summary in front
15 was more extensive and more useful and a lot
16 of good factual information. I thought it was
17 helpful in understanding the site.

18 Are we ready to make a decision?
19 Brad?

20 MEMBER CLAWSON: I guess I make a
21 motion that we accept this.

22 CHAIRMAN MELIUS: Do I hear a

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1 second?

2 MEMBER ANDERSON: I second it.

3 CHAIRMAN MELIUS: Okay, Henry.

4 Further discussion?

5 (No response.)

6 If not, Ted, do you want to call
7 the roll?

8 Yes, I'm sorry. Gen?

9 MEMBER ROESSLER: We have actually
10 two separate time periods. I assume we're
11 talking about just the first one?

12 CHAIRMAN MELIUS: Yes, the SEC is
13 just the first one.

14 MR. KATZ: Okay, I will just do
15 this alphabetically.

16 Dr. Anderson?

17 MEMBER ANDERSON: Yes.

18 MR. KATZ: Ms. Beach?

19 MEMBER BEACH: Yes.

20 MR. KATZ: Mr. Clawson?

21 MEMBER CLAWSON: Yes.

22 MR. KATZ: Dr. Field?

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1 MEMBER FIELD: Yes.

2 MR. KATZ: Mr. Gibson?

3 MEMBER GIBSON: Yes.

4 MR. KATZ: Mr. Griffon?

5 MEMBER GRIFFON: Yes.

6 MR. KATZ: Dr. Lemen?

7 MEMBER LEMEN: Yes.

8 MR. KATZ: Dr. Lockey?

9 MEMBER LOCKEY: Yes.

10 MR. KATZ: Mr. Melius?

11 CHAIRMAN MELIUS: Yes.

12 MR. KATZ: Ms. Munn?

13 MEMBER MUNN: Yes.

14 MR. KATZ: Dr. Poston?

15 MEMBER POSTON: Yes.

16 MR. KATZ: Mr. Presley?

17 MEMBER PRESLEY: Yes.

18 MR. KATZ: Dr. Richardson?

19 MEMBER RICHARDSON: Yes.

20 MR. KATZ: Dr. Roessler?

21 MEMBER ROESSLER: Yes.

22 MR. KATZ: Mr. Schofield?

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1 MEMBER SCHOFIELD: Yes.

2 MR. KATZ: And Dr. Ziemer?

3 MEMBER ZIEMER: Yes.

4 MR. KATZ: All in favor, it's
5 unanimous. The motion passes.

6 CHAIRMAN MELIUS: And we will have
7 a letter to review. Actually, I've already
8 composed it. We'll get it reviewed and
9 someone will find some typos. We will get a
10 better copy for everyone, for the dangling
11 participle review, too.

12 We're next scheduled for Ames.
13 We, I think, are expecting the petitioners to
14 be on the line. So I'm not sure we want to
15 start unless -- are the petitioners for Ames
16 on the telephone? I don't want to start until
17 they are or until the scheduled time.

18 MS. LOCKER: Yes.

19 CHAIRMAN MELIUS: Okay. Thank
20 you.

21 Okay. LaVon Rutherford will
22 present the Ames.

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1 MR. RUTHERFORD: Thank you, Dr.
2 Melius. I'm LaVon Rutherford. I'm going to
3 present our evaluation of the Ames Laboratory
4 petition.

5 We received this petition on
6 February 12th of 2010. As you can tell, the
7 petitioner-proposed Class included a wide
8 variety of different positions. So I am not
9 going to read every one of them. But it was
10 for a period of 1955 through 1960, and it also
11 excluded our existing Class of SEC 75.

12 I do have a typo here. September
13 22nd, 2009, is not when we qualified the
14 petition. March 26th of 2010, which we
15 couldn't have qualified this petition before
16 we got it. So we qualified the petition on
17 March 26th of 2010.

18 Our Class evaluated is all workers
19 who worked in any DOE facility at Ames from
20 January 1, 1955, through December 31 of 1960.

21 A little background on the Ames
22 site. It is a DOE National Laboratory. It is

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1 located in Ames, Iowa. It's on the Iowa State
2 University campus. The Ames project played a
3 key role in the production of strategic
4 nuclear material for the Manhattan Project and
5 the Atomic Energy Commission.

6 If you know, Ames was contracted
7 in 1942 to develop a method for mass producing
8 uranium metal, which they started in 1942 and
9 continued through 1945. They were also
10 contracted to develop a process for mass
11 producing thorium metal in 1943. That
12 operation continued until 1953. In addition,
13 they did research activities with uranium,
14 thorium, plutonium, and fission products, and
15 that occurred from 1942 through 1960.

16 The buildings where the
17 radiological occurred consisted of the
18 metallurgy building, the chemistry building,
19 Annex 1, Annex 2, and the research building.

20 The chemistry building is where
21 the process actually started in 1942. That's
22 where they developed the process for producing

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1 uranium metal. They refined that process, and
2 they also developed the initial process for
3 thorium.

4 They moved the process to Annex 1,
5 is where the actual mass production really
6 occurred. Annex 1, the work mainly started in
7 late 1942, early 1943, and continued until
8 1945 on the uranium metal production.

9 The thorium production started in
10 1943 at Annex 1. It shifted to the metallurgy
11 building in 1949, and Annex 1, pretty much
12 operations stopped in Annex 1 in 1949 and the
13 facility was demolished. So we will not
14 discuss that much further.

15 Annex 2 was used for scrap uranium
16 recovery. That work began in 1944. The one
17 building was constructed in 1944 and stopped
18 in 1949, I believe 1949.

19 And the research building was
20 actually built in 1951, occupied in 1951.
21 Research activities included a 150-kV
22 accelerator, Hot Canyon, some glovebox work.

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1 Did a lot of research with uranium, thorium,
2 and so on.

3 The metallurgy building, again, in
4 addition to the thorium operations being
5 transferred there in 1949, when the facility
6 was built, they also did research activities
7 with special alloys.

8 Our typical data capture, this is
9 very consistent with Revere, where we looked
10 for sources of information. We looked at Site
11 Profiles, interviews with former employees --
12 we did do interviews at Ames -- existing
13 claimant files, we looked at documentation
14 provided by the petition, our Site Research
15 Database, and their data captures.

16 Most of this is pretty typical of
17 our data captures today. We have, I think,
18 got a pretty mature process now in the data
19 captures. We did go back to Ames Laboratory
20 looking for additional work by the Department
21 of Public Health and can see a number of
22 places where data capture efforts occurred. I

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1 am not going to read them all.

2 Okay, that's for claims. Ames
3 claims submitted to NIOSH are 157. Claims
4 that meet the current Class being evaluated is
5 58. Of those 58 claims, we have completed
6 dose reconstruction for 36.

7 The claims containing internal
8 dosimetry, of the claims that fit into the
9 Class, none of those claims had internal
10 dosimetry. And as for external dosimetry, 15
11 of the 36 contain external dosimetry.

12 Our potential radiation exposures
13 during the Class period, I went over the
14 operations, the production operations. As you
15 know, those operations pretty much ceased in
16 1953. So the thorium/uranium production
17 operations had stopped. So the actual
18 internal exposure from that would have been
19 residual uranium and thorium left over from
20 production. We also had airborne contaminants
21 generated from working in the Hot Cave and the
22 research building.

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1 It is unclear from documentation
2 that we have and interviews what all the
3 isotopes that they dealt with within the
4 research building, but based on the
5 documentation we do have, we do know that over
6 the time period from the beginning of the
7 research building, they did work with mixed
8 fission products, thorium, uranium, and
9 plutonium.

10 External sources of exposure. We
11 have a small amount of beta and gamma external
12 exposure from residual uranium and thorium,
13 gamma neutron exposure from work in the Hot
14 Canyon, and the 150-kV accelerator.

15 Okay, personal and area monitoring
16 data. Internal monitoring data there from
17 1955 through the 1960 period, there's no
18 urinalysis or air sample data for the period
19 evaluated. That's not totally correct.

20 There was an accident that
21 occurred in the research building, the Hot
22 Canyon, in 1957, a thorium spill. There were

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1 two urine samples taken of workers in 1957 for
2 that thorium spill, but that is the only
3 internal monitoring data we have.

4 External monitoring data. We do
5 have a large amount of external monitoring
6 data for the period. We have over 500
7 individual workers were monitored, film badge
8 data. That includes beta, gamma, and neutron
9 readings. There is a table in the Evaluation
10 Report that actually lays out the number of
11 readings, film badge readings, we have over
12 that period. It also includes the neutron
13 dosimetry readings.

14 Our two-pronged test, is it
15 feasible to estimate the level of radiation
16 dose with sufficient accuracy? And then is
17 there a reasonable likelihood that such
18 radiation dose may have endangered the Class?

19 We found that the available
20 monitoring records process description of
21 source term data are not adequate to calculate
22 the internal dose with sufficient accuracy for

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1 the period of 1955 through 1960. We have no
2 personal monitoring data and air monitoring
3 data for the work inside the research
4 building.

5 I did leave out a little bit on
6 the research building. We do know that
7 there's a Hot Canyon. The Hot Canyon, which
8 consisted of gloveboxes, a lot of glovebox
9 work, initially, we had thought that all of
10 this work was done in an enclosed area, but
11 there is a Hot Cave as well. The Hot Cave
12 exactly, it has a lot of shielding, thick
13 shielding. It has remote manipulators, and so
14 on. It looks to be designed, obviously
15 designed for minimizing the external exposure.

16 However, it is open at the top. We have
17 pictures of this, of the opening at the top.

18 We know they dealt with mixed
19 fission products. We know they dealt with
20 other items of potential internal exposure.
21 We also have pictures of workers working in
22 the area without respiratory protection. And

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1 we do have indications of incidents, as I
2 mentioned, the thorium incident that occurred
3 in 1957 inside that research building.

4 So our feasibility summary is that
5 we felt that we can do the uranium and thorium
6 for the residual exposures from the early
7 production work that was left over. However we
8 cannot reconstruct the internal dose for other
9 radionuclides specifically from the research
10 building itself.

11 We felt that we could reconstruct
12 all beta-gamma neutrons, and we can also do
13 the occupational medical x-ray. Beta and
14 gamma, we have, as indicated, a lot of film
15 badge data to support the external exposure
16 reconstruction.

17 Our recommended Class is January
18 1, 1955 through December 31, 1960, and our
19 feasibility is a no. That means that we have
20 to do the health endangerment, and we said,
21 yes, there is a health endangerment.

22 Here's our recommended Class.

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1 It's all employees, DOE, from January 1, 1955
2 through December 31, 1960. There's more
3 information there, but I'm not going to read
4 it all.

5 A little bit about our Class
6 Definition determination. As you look through
7 the Evaluation Report, you will notice that we
8 felt that reconstruction of dose for all the
9 facilities with the exception of the research
10 building was feasible. The research building,
11 really, we initially felt that we could limit
12 the Class to only the research building. We
13 had an approach for doing dose reconstruction
14 for ambient. We felt that we had all the
15 other facilities outlined.

16 However, we sent that Class
17 Definition along to the Department of Labor to
18 determine if it would be feasible for the
19 Department of Labor to administer a Class with
20 just the research building. The Department of
21 Labor did respond to us that they could not
22 place individuals within specific buildings at

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1 the Ames Laboratory. Therefore, based on that
2 response from the Department of Labor, we
3 expanded our Class to all employees.

4 Additionally, the determination
5 that the research building, the infeasibility
6 in the research building did not arise until
7 late in our evaluation. We initially had
8 documentation that kind of supported that all
9 the activities were done in gloveboxes and so
10 on. However we did uncover some photographs,
11 as I had mentioned, and we also had some other
12 documentation that indicated that the work
13 inside that Hot Cave actually had the
14 potential of generating an airborne that would
15 expose workers outside of it.

16 So we actually did not complete an
17 evaluation of the post-1960 period. We
18 stopped the evaluation in 1960 at this time,
19 and we plan to continue our evaluation of the
20 1961-62 period.

21 We do have some internal
22 monitoring data at the research building in

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1 1961, in the early years, but we have not done
2 a complete, thorough evaluation to determine
3 the proper end date of this evaluation.

4 However, the fact that the Board
5 meeting was coming up, we knew we had an
6 infeasibility for this period, and we knew
7 that this is the period that the petitioner
8 had put forth. We felt we could move forward
9 with this portion of the evaluation, recommend
10 this Class, get this through the Board. Then
11 if we determine at a later date that
12 additional years should be added, we will do
13 an 83.14 on that to add additional years onto
14 this Class.

15 And that's pretty much it.

16 CHAIRMAN MELIUS: Go ahead. Yes,
17 John?

18 MEMBER POSTON: Bomber, I need
19 some clarification.

20 MR. RUTHERFORD: Okay.

21 MEMBER POSTON: If I look at 14,
22 slide 14, and then go to slide 15, I would

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1 have expected to find the Xs in a different
2 place. You went so fast that I wasn't --

3 MR. RUTHERFORD: I'm sorry.

4 MEMBER POSTON: -- tuned in or
5 something. Because slide 14 says you can't do
6 it. Slide 15, I would have expected the Xs
7 for the internal dose to be on the right-hand
8 column, not the left-hand column.

9 MR. RUTHERFORD: Well, overall --

10 MEMBER POSTON: So I need an
11 explanation.

12 MR. RUTHERFORD: Sure. Overall,
13 we cannot reconstruct all of the internal dose
14 for the period. However, we can reconstruct
15 the portion of the residual portion of uranium
16 and thorium. So I indicated, even though we
17 can't reconstruct the entire internal dose,
18 there are portions of the internal dose that
19 can be reconstructed. That's why those two
20 are different.

21 Does that answer the question?

22 MEMBER POSTON: Well, it helped.

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1 CHAIRMAN MELIUS: Henry?

2 MEMBER ANDERSON: Yes, I am just
3 curious --

4 MR. KATZ: Henry, I think you'll
5 have to get closer to the microphone. The
6 folks on the phone are going to have a hard
7 time hearing.

8 MEMBER ANDERSON: Okay. On slide
9 9, you say that there were 36 dose
10 reconstructions for those that met the Class
11 Definition that have been completed. Then it
12 looks like none of those had internal
13 dosimetry and only 15 of those had external
14 dosimetry. So at least a number of those must
15 have had no dosimetry at all.

16 So how were the doses
17 reconstructed for those individuals?

18 MR. RUTHERFORD: Well, there is a
19 Technical Basis Document for the Ames
20 Laboratory. At the time, it was felt that --
21 indications that there were no releases from
22 the research building and, therefore, the

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1 internal exposures, there were no internal
2 exposures given from the research building.
3 The internal exposures that were given based
4 on the Technical Basis Document were
5 associated with the resuspension or the
6 residual period for thorium and uranium.

7 Also there was an ambient internal
8 given based on the -- what they did was we did
9 know the actual activity concentrations that
10 they were permitted to use inside the Hot
11 Canyon. We used that along with filter
12 efficiency and a release fraction to come up
13 with an ambient release outside of the
14 facility that we gave to all workers. So
15 that's how they did the internal.

16 It was only after our additional
17 evaluation during this period that we actually
18 identified the potential internal exposures
19 that weren't recognized.

20 MEMBER ANDERSON: So all 36 of
21 those that have been denied?

22 MR. RUTHERFORD: I don't have the

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1 number with me. How many of those claims
2 were greater than 50 percent, I should have
3 looked. I should actually have done that. I
4 am sure some of those were above 50 percent
5 and some were below.

6 What will happen if the Class is
7 added is, obviously, all the presumptive
8 cancers, whether they were denied or whether
9 they are greater than 50 percent or not, all
10 the presumptive cancers will go back to the
11 Department of Labor for adjudication that way
12 and would be compensated. The non-presumptive
13 cancers, we will have to look at revising the
14 Site Profile. However, we will not be adding
15 additional internal dose for the research
16 building because we can't reconstruct that.

17 MEMBER ANDERSON: Okay. Thank
18 you.

19 CHAIRMAN MELIUS: Wanda?

20 MEMBER MUNN: It's really
21 disappointing to think that we cannot bound
22 that potential airborne source term given the

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1 fact that I had the impression, perhaps
2 incorrectly, that we had a fairly good handle
3 on the source terms that were actually being
4 handled.

5 But when we say that we have no
6 idea what might have come out of the top Hot
7 Cave and where it might have gone, it is very
8 hard to grasp that reality, given that we have
9 some source term information.

10 MR. RUTHERFORD: And I understand
11 what you are saying. And believe me, as I had
12 mentioned, our evaluation turned late in the
13 game, when we came across additional
14 documentation and photographs.

15 What we have is what permitted
16 quantities were allowed inside these, which,
17 obviously, the dose reconstruction approach in
18 the Technical Basis Document was to use that
19 permitted quantities as a maximum amount,
20 assume the filter efficiency on it, and the
21 release. However, there is no filter on the
22 Hot Cave. That was the problem. The Hot Cave

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1 was the one that turned everything.

2 And also the other difficulty is
3 with most radiation monitoring programs, even
4 though you have these glove bags, and so on,
5 you typically will have air monitoring data
6 that will support that we are not having a
7 release and that they are doing their job. We
8 have nothing. We have no air monitoring data
9 at all for the research building.

10 MEMBER MUNN: So the amount of the
11 other radionuclides of which we speak are of
12 such quantity that it would be impossible to
13 bound them, is what you're telling me?

14 MR. RUTHERFORD: You know, we can
15 bound -- I think we came up with a reasonable,
16 I say a reasonable approach for the ambient
17 levels. The difficulty you get, when workers
18 are working in specific areas, you've got to
19 come up with an airborne model, a release
20 model with however they are manipulating the
21 things that they are manipulating inside that
22 Hot Cave; what's that exposure to those

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1 workers right there?

2 And we don't know that we have all
3 the quantities as well. I think, if I
4 remember correctly, we did have four or five
5 of the isotopes that had quantity limitations,
6 but we don't have everything.

7 So I don't know if I am answering
8 you.

9 MEMBER MUNN: I think as best we
10 can. Thanks.

11 CHAIRMAN MELIUS: Brad?

12 MEMBER CLAWSON: Actually, LaVon,
13 I kind of feel relieved that we are not
14 running around chasing our tail, and we are
15 taking a look at this from a standpoint of we
16 don't know everything that went in there. We
17 don't know all, instead of making models, and
18 so forth.

19 But my question is is what we are
20 voting on today -- I'm like Mr. Poston, that
21 I'm not understanding the residual period.
22 When is the residual period going to be?

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1 Because I am trying to understand what we are
2 looking at and voting on.

3 MR. RUTHERFORD: Yes. I think I
4 understand what the difficulty there is.
5 There is no residual period. It's a DOE
6 facility today.

7 So when I say residual in this
8 sense, this is potential residual exposure
9 from the uranium and thorium production work
10 that occurred prior to the Class being
11 evaluated. So the work that occurred, the
12 uranium and thorium work, the thorium work
13 stopped in 1953. There were no more uranium
14 and thorium production work. There was
15 research activity. There was no more uranium
16 and thorium production work after 1953.

17 So what I am saying we can
18 reconstruct during the Class period evaluated
19 of 1955 through 1960 is this residual uranium
20 and thorium. And what we will do is that will
21 be exposures we would give to the non-
22 presumptive cancer claims during that period.

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1 Does that make more sense?

2 MEMBER CLAWSON: Yes. Thank you.

3 CHAIRMAN MELIUS: I have a
4 question. I'm trying to understand the
5 recommended Class. So the Department of Labor
6 does not have information that would put
7 people into the research building?

8 MR. RUTHERFORD: That's correct.

9 CHAIRMAN MELIUS: But they do have
10 information on all the people that would
11 have -- or we think on all people working at
12 Department of Energy facilities?

13 MR. RUTHERFORD: I know where
14 you're going with that. I actually
15 corresponded with the Department of Labor to
16 understand if they had any difficulty with
17 putting individuals -- the separation between
18 the Iowa State University employees and DOE,
19 and they said they have had no problem doing
20 that. In fact, yes, I have had that
21 correspondence with them.

22 CHAIRMAN MELIUS: Okay.

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1 MR. RUTHERFORD: And to give you a
2 feel, there are some indications, we have
3 documentation that indicates the number of
4 employees for Ames Laboratory in 1959, for
5 example, was, I believe, 571. I've got notes
6 on it. It's somewhere in the 500s. That
7 included the graduate students that were
8 working on projects at the time.

9 CHAIRMAN MELIUS: Dr. Ziemer?

10 MEMBER ZIEMER: This may be a
11 legal question. Do graduate students need to
12 be on pay status, graduate students who were
13 working on this project? And I think one
14 could at least anticipate there could be some
15 who are there, but not on pay status. Would
16 they be covered or not? They would not be
17 employees. I understand that. But if they
18 are working on the project, I wonder if --

19 MR. RUTHERFORD: I'm going to have
20 to defer to counsel.

21 MEMBER ZIEMER: Do they have to be
22 paid to be eligible?

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1 MR. HINNEFELD: Well, I'll just
2 state that we don't make those decisions.

3 MEMBER ZIEMER: Oh, I understand,
4 yes.

5 MR. HINNEFELD: It goes to the
6 Department of Labor, and Jeff just told me he
7 doesn't know. And he is the only one here --

8 MEMBER ZIEMER: Well, I understand
9 it's Energy employees --

10 MR. HINNEFELD: Right.

11 MEMBER BEACH: -- compensation
12 program, but in a place like Ames, and other
13 such academic facilities, it is very common to
14 have people working on projects who are not on
15 pay status.

16 MR. HINNEFELD: Right.

17 MEMBER ZIEMER: In fact, that's
18 one reason you do things in universities
19 because you have slave labor.

20 (Laughter.)

21 MR. HINNEFELD: Yes.

22 MEMBER ZIEMER: Right.

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1 MR. HINNEFELD: Yes, yes. Most of
2 us have done that.

3 MEMBER ZIEMER: Right. Been
4 there, done that, right.

5 MR. HINNEFELD: Right.

6 MEMBER ZIEMER: So I'm just
7 wondering, if there is such an SEC Class,
8 would graduate students who worked on these
9 projects but were at the university on their
10 own dime be covered?

11 MR. HINNEFELD: I understand the
12 question. I don't think there's anybody in
13 the room who can answer it.

14 MEMBER ZIEMER: Right. So I'll
15 leave it as sort of a rhetorical question at
16 the moment.

17 MR. KATZ: Paul, I believe, and I
18 may not be exactly accurate, but I believe
19 that research student, it's time-based. And
20 even if they're not on the payroll for DOE, I
21 believe if they worked 24 months or more, then
22 they're treated as a DOE employee. I'm not

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1 positive about that, but I think that's how
2 that is handled.

3 MEMBER CLAWSON: Ted, this is
4 Brad. I thought that we got into this with
5 Rochester, and they said no. Well, it was
6 just the question we got into because most of
7 these facilities were running into this, and
8 especially with all of your background and
9 stuff, it is an issue, but --

10 MEMBER ZIEMER: Well, I think I
11 raised the question at Rochester as well, and
12 the answer has always been evasive or
13 ambiguous.

14 MEMBER CLAWSON: Right.

15 MEMBER ZIEMER: And maybe it will
16 remain that, but I think it is sort of a
17 fairness concern because in the case of
18 graduate students they are often working
19 without pay, and they are really not very
20 different from employees, although I
21 understood that this is a program for, quote,
22 "Energy employees." So maybe they're not

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1 covered.

2 CHAIRMAN MELIUS: Well, what I was
3 going to suggest, since the question comes up
4 repeatedly, and we all try to figure it out,
5 and so forth, is ask for some clarification
6 from -- really it's Department of Labor.

7 So, Jeff, if you could, maybe at
8 the next meeting, your presentation, include
9 some clarification on that? That way, we will
10 at least know how the Department of Labor
11 interprets it in terms of claims.

12 Thanks, Jeff.

13 Yes, David?

14 MEMBER RICHARDSON: I am going to
15 have to ask a question that steps back a
16 little bit.

17 CHAIRMAN MELIUS: Can you speak
18 directly into the microphone, please?

19 MEMBER RICHARDSON: I'm still
20 having difficulty understanding the Class
21 Definition I think here in terms of it may
22 just be that sort of -- I think my uncertainty

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1 is about the bounds in terms of time here.

2 The dates, the proposed dates, are
3 1955 to 1960, and there's a description of a
4 lot of AEC-related work commencing in 1942,
5 moving forward, and then potentially
6 continuing after those dates?

7 MR. RUTHERFORD: Let me clarify a
8 couple of things. I actually had it in my
9 notes to present that portion of it.

10 We actually have an SEC Class
11 right now from 1942 through 1954. So it
12 covers pretty much all workers; it is all
13 workers -- it is an older Class Definition --
14 at the Ames facility. So those are already
15 covered under an existing SEC Class, so are
16 not included in this Class Definition.

17 MEMBER RICHARDSON: So is that
18 SEC-00075 or is that a different SEC?

19 MR. RUTHERFORD: That's SEC-00038.
20 That's SEC-00038 included up to the end of
21 1954. SEC-00075, which I failed to mention as
22 well, was another Class that we added at Ames,

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1 Iowa. It was 1955 through 1970, but it was
2 specific plant maintenance workers associated
3 with the renovations of the chemistry building
4 and the metallurgy building.

5 And I did indicate in my
6 presentation that we are continuing to
7 evaluate the post-1960 period because we did
8 not complete a thorough evaluation to
9 determine the proper end date of this Class
10 that we are recommending. If we determine
11 that our end date of 1960 is not appropriate,
12 we will move forward with an 83.14 to add
13 additional years.

14 I anticipate that I will have an
15 update on that at the next Board meeting, if
16 we do move forward with the Class.

17 CHAIRMAN MELIUS: Board Members on
18 the -- I'm sorry. Gen, first, and then we'll
19 do the phone.

20 MEMBER ROESSLER: I would like to
21 follow up on Wanda's question. That's the
22 activities in the Hot Cave.

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1 You indicate that you had
2 interviews, and I am wondering who you
3 interviewed. It seems, quite commonly, you
4 will interview custodians and workers. It
5 seems to me that if you interviewed the health
6 physicists there at the time that you would
7 get a better idea about the documentation for
8 these sort of things. I am just wondering if
9 you remember who the interviews were with.

10 MR. RUTHERFORD: One of the
11 interviews was with the health physicists that
12 operated very close to that period. We did
13 ask about additional documentation, and the
14 interviews are in the Board's folder, by the
15 way. But we did ask about the documentation
16 on an internal monitoring program. Because
17 the difficulty we have is not only, again, the
18 work inside the Hot Cave itself, but we have
19 no verification of air samples that were taken
20 to ensure that there were no releases.

21 So if I came to you and said that
22 we are assuming that there were no releases

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1 because of, for example, the gloveboxes that
2 they used and so on, and we assume that there
3 were no releases because there was no
4 documentation that said there was, well that
5 wouldn't be true in itself because we already
6 indicated the discussion of the thorium spill
7 that occurred in 1957.

8 So we have no verification of air
9 samples. We did talk to the health physicists
10 about monitoring data, and we could not get
11 any help from the health physicists on
12 additional monitoring data during that period.

13 CHAIRMAN MELIUS: Now Board
14 Members on the phone, have any questions?
15 Start with Bill Field.

16 MEMBER FIELD: I think most of my
17 questions have been answered by previous
18 questions. But I do want to thank Paul for
19 bringing up the issues of potential students
20 that were working at the facility. Being an
21 academic, I am very sensitive to this, and I
22 appreciate bringing that up. I think it is a

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1 question that certainly needs to be followed.

2 CHAIRMAN MELIUS: Thank you.

3 Dr. Lemen?

4 MEMBER LEMEN: All my questions
5 have been answered.

6 CHAIRMAN MELIUS: Okay, and Mike
7 Gibson?

8 MEMBER GIBSON: Not at this time,
9 Jim.

10 CHAIRMAN MELIUS: Okay. Thank
11 you.

12 Now we would like to hear from --
13 Dr. Ziemer has one more question.

14 MEMBER ZIEMER: You did indicate,
15 LaVon, that you had interviewed the various
16 HPs, I think more than one.

17 MR. RUTHERFORD: Actually, we have
18 four or five interviews in there.

19 MEMBER ZIEMER: But were you able
20 to confirm that they did not have constant air
21 monitors in that -- vicinity of that cave?

22 MR. RUTHERFORD: No.

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1 MEMBER ZIEMER: I'm sort of
2 familiar with the Ames program after about
3 1960. In fact, they had a very not only
4 competent health physicist, but very good
5 monitoring program because universities become
6 aware of what each other does and sort of
7 compare notes.

8 MR. RUTHERFORD: Sure.

9 MEMBER ZIEMER: But prior to 1960,
10 I don't have any knowledge of their program,
11 but it seems a little surprising to me that
12 they would be operating a hot cell without
13 constant air monitors in the vicinity. But
14 were you able to confirm that they had none,
15 or they just don't have the records?

16 MR. RUTHERFORD: Honestly, we
17 couldn't confirm whether they did or did not.

18 There was indications from some workers that
19 they thought there were. You know, the one
20 thing was, you know, we had air monitoring
21 data in 1953 for the thorium production work
22 at the very end of the thorium work. So you

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1 would have assumed that the air monitoring
2 program would have continued on after the
3 production work.

4 However, we have seen at national
5 labs and other facilities that the air
6 monitoring programs, the routine air
7 monitoring program is not always prevalent.
8 So we haven't come up with anything during
9 that period at all.

10 CHAIRMAN MELIUS: Thank you.

11 We would now like to hear from the
12 petitioners, if they would like to say
13 anything.

14 MS. LOCKER: I don't have anything
15 to add.

16 CHAIRMAN MELIUS: Okay. Thank
17 you.

18 How does the Board wish to
19 proceed?

20 MEMBER CLAWSON: I move that we
21 accept this.

22 CHAIRMAN MELIUS: Do I have a

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1 second for that? Okay, Bob.

2 Any further discussion on that?

3 (No response.)

4 If not, Ted?

5 MR. KATZ: Well, Dr. Ziemer?

6 MEMBER ZIEMER: I'll vote yes.

7 MR. KATZ: Mr. Schofield?

8 MEMBER SCHOFIELD: Yes.

9 MR. KATZ: Dr. Roessler?

10 MEMBER ROESSLER: Yes.

11 MR. KATZ: Dr. Richardson?

12 MEMBER RICHARDSON: Yes.

13 MR. KATZ: Mr. Presley?

14 MEMBER PRESLEY: Yes.

15 MR. KATZ: Dr. Poston?

16 MEMBER POSTON: Yes.

17 MR. KATZ: Ms. Munn?

18 MEMBER MUNN: Yes.

19 MR. KATZ: Dr. Melius?

20 CHAIRMAN MELIUS: Yes.

21 MR. KATZ: Dr. Lockey?

22 MEMBER LOCKEY: Yes.

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1 MR. KATZ: Mr. Lemen?

2 MEMBER LEMEN: Yes.

3 MR. KATZ: Mr. Griffon?

4 MEMBER GRIFFON: Yes.

5 MR. KATZ: Mr. Gibson?

6 MEMBER GIBSON: Yes.

7 MR. KATZ: Dr. Field?

8 MEMBER FIELD: Yes.

9 MR. KATZ: Mr. Clawson?

10 MEMBER CLAWSON: Yes.

11 MR. KATZ: Ms. Beach?

12 MEMBER BEACH: Yes.

13 MR. KATZ: And Dr. Anderson?

14 MEMBER ANDERSON: Yes.

15 MR. KATZ: That's unanimous, all
16 in favor. The motion passes.

17 CHAIRMAN MELIUS: Okay. Thank
18 you.

19 We are running ahead of time.
20 LaVon volunteered, said he wanted to make his
21 boss happy.

22 (Laughter.)

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1 MR. HINNEFELD: He told me
2 yesterday.

3 CHAIRMAN MELIUS: Yes. So we are
4 going to move up the SEC petition update, and,
5 rather than Stu presenting, we will have LaVon
6 presenting.

7 MR. RUTHERFORD: It must be
8 performance evaluation period.

9 (Laughter.)

10 All right, SEC status of upcoming
11 SEC petitions, and I am not Stu Hinnefeld. I
12 am LaVon Rutherford.

13 We do this at every Board meeting
14 to provide the Board an update on existing
15 SEC petitions and the status of those
16 petitions. This is done to help the Board
17 prepare Work Group meetings and also prepare
18 for upcoming Board meetings, to determine how
19 much workload we are going to have.

20 Petitions received to date, we
21 have 177 petitions.

22 You know it's kind of a continuous

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1 theme here. I'm going to have to start QA-ing
2 my slides.

3 I did have one issue with this
4 slide. We had petitions in qualification
5 process is five. However, petitions qualified
6 for evaluation is 104. In the process of
7 preparing my presentation, I left Ames out of
8 this pretty much. So we have four evaluations
9 in progress, and actual evaluations completed
10 is 100. Then there are 18 for recommendation.

11 Existing petitions that we had
12 that are in the evaluation process, the Linde
13 Ceramics plant, SEC-00154. We had hoped to
14 have this one completed a Board meeting or two
15 ago. However, the issue came up with the
16 Linde petition, SEC-00107, associated with the
17 tunnels and reconstructing the exposures for
18 those tunnels. We have held up issuing this
19 Evaluation Report until we come to some
20 agreement on that. We anticipate that will be
21 very soon, and hope to present SEC-00154 at
22 the next Board meeting.

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1 Hanford, this is actually a Class
2 for the 1987 through 1989 period. There were
3 some questions brought up concerning the
4 bioassay monitoring during that period. We
5 qualified this petition. We anticipate this
6 petition evaluation will be complete in
7 September.

8 Simonds Saw and Steel, we had
9 hoped to have this evaluation actually
10 completed in time for this Board meeting.
11 However, we did identify a large amount of
12 documentation on Simonds Saw and Steel at the
13 NARA College Park facility. We are in the
14 process of capturing that information. We
15 will hope to have this complete, this
16 evaluation complete, in September.

17 The Sandia National Lab, we
18 actually had extended this evaluation while
19 Sandia National Lab was loading their --
20 actually, they were going through a process of
21 capturing their internal or their monitoring
22 data. Until that process is complete, we

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1 would not complete our evaluation. We
2 anticipate that to be complete in December and
3 will present that at the Board meeting
4 immediately following.

5 We also have sites undergoing
6 qualification at this time. I think if you
7 heard Pete Darnell's update on the INL, we
8 have an Idaho National Laboratory petition
9 that we are in the qualification phase. We
10 are working with the petitioner to get that
11 one qualified.

12 Norton Company actually just
13 recently qualified. This is for the residual
14 period at Norton. If you remember, we did
15 recommend a Class for Norton, and the Board
16 concurred with that recommendation. So we
17 have a Class already for Norton for the
18 operational period. Now we have a petition
19 for the residual period.

20 Wah Chang, this is a short
21 operational period, I believe 1971 to 1973
22 time period, very close to that. I can't be

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1 sure. It's going through qualification.

2 Grand Junction Operations Office
3 and Vitro Manufacturing. These are all
4 facilities that we have petitions in-house
5 that we are working through qualification.

6 As I have mentioned at previous
7 couple of Board meetings, we have been
8 evaluating our approach or how we identify
9 Classes from the beginning of the SEC rule or
10 when we first added SECs to date. We are in
11 the final stages of that evaluation, and we
12 anticipate that that will be complete at the
13 end of this month.

14 From that, we do anticipate there
15 will be some change or we will be going forth
16 with some recommendations to change existing
17 Classes. We will move that. In order to do
18 that, we will do 83.14s to make those changes.

19 And that's about it.

20 CHAIRMAN MELIUS: Questions for
21 LaVon?

22 (No response.)

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1 I have one, which is your Class
2 Assessment Report.

3 MR. RUTHERFORD: Yes.

4 CHAIRMAN MELIUS: When you say
5 that will be issued in August, I should put it
6 on the agenda for our fall -- in October?

7 MR. RUTHERFORD: Yes.

8 CHAIRMAN MELIUS: Because I think
9 it would be helpful for us to sort of see
10 where you're going and so forth.

11 MR. RUTHERFORD: I think, also, if
12 I remember correctly, on the agenda, isn't
13 there supposed to be a BWXT update as well?

14 CHAIRMAN MELIUS: Yes.

15 MR. RUTHERFORD: Okay. I had
16 forgotten about that.

17 We have been corresponding with
18 BWXT for the 1985 through 2001 time period.
19 Actually, one of our health physicists had a
20 conference call with three of the health
21 physicists at the facility. We are moving
22 forward there. We anticipate we will have a

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1 path forward and either be moving forward with
2 an additional Class recommendation or we will
3 have a final update to the Board at the next
4 Board meeting.

5 MR. KATZ: LaVon, is that the
6 teleconference or the next face-to-face we're
7 talking about?

8 MR. RUTHERFORD: Let's go with the
9 next face-to-face.

10 MR. KATZ: Okay. Thank you.

11 CHAIRMAN MELIUS: Thank you.

12 Do any of the Board Members on the
13 phone have questions?

14 MEMBER LEMEN: This is Dick. No.

15 MEMBER FIELD: This is Bill
16 Fields. No.

17 MEMBER GIBSON: This is Mike. No.

18 CHAIRMAN MELIUS: Okay. Thank
19 you.

20 Okay. Thank you, LaVon.

21 We are running ahead of schedule.

22 Why don't we take a break now for 20 minutes,

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1 come back at 10 o'clock?

2 We'll start with Board working
3 time. I understand that individual Board
4 Members, starting I believe at 10:30, will be
5 having to leave one at a time.

6 MR. KATZ: For their Smart Cards.

7 CHAIRMAN MELIUS: Smart Cards. We
8 promise no jokes while you are gone to do
9 that. So we will try to work around that with
10 updates and so forth.

11 So let's take a break and come
12 back around 10 o'clock.

13 (Whereupon, the above-entitled
14 matter went off the record at 9:44 a.m. and
15 resumed at 10:10 a.m.)

16 MR. KATZ: Are the phones
17 connected? Thank you.

18 So let me just check on the Board
19 Members on the phone. Mike?

20 MEMBER GIBSON: Yes, I'm here.
21 This is Mike.

22 MR. KATZ: Okay. And Dick and

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1 Bill?

2 MEMBER LEMEN: Dick is here.

3 MEMBER FIELD: This is Bill. I
4 can hear you.

5 MR. KATZ: Great. Thanks.

6 CHAIRMAN MELIUS: Okay, let's get
7 started.

8 The first one, Lew Wade has an
9 update on the ten year review process.

10 DR. WADE: Thank you, Dr. Melius.

11 I need to sort of clarify a
12 comment that I made yesterday that it has been
13 pointed out to me might be a little bit
14 confusing.

15 I did, when I spoke to you
16 yesterday, point out that the authors of the
17 various reports are here and that you might
18 want to have a conversation with those people.

19 Those conversations really would be for
20 clarifying purposes. If you have substantial
21 comments you wanted to make concerning the
22 drafts in front of you, we have always valued

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1 transparency in this program, and those
2 comments should be made on the record. The
3 docket may be opened, and you can make those
4 comments to the docket.

5 So I wasn't suggesting that we
6 turn our back on the value of transparency.
7 Quite the contrary, if you have substantive
8 comments to make, please make them on the
9 record.

10 CHAIRMAN MELIUS: Thank you.

11 And schedule-wise, just so the
12 Board Members know, we are running ahead of
13 schedule, obviously partly because a number of
14 things sort of dropped off the agenda in the
15 last few weeks unexpectedly. So we have more
16 time.

17 Mark would prefer that we do the
18 case selection, the DR reviews, tomorrow
19 morning. So I was trying to get a sense, will
20 all the Board Members be here tomorrow
21 morning? That may be our only agenda item,
22 but we will see how we go through in terms of

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1 we have already done the SEC update and we
2 will see how we are doing in terms of working
3 time.

4 MEMBER LOCKEY: That would be the
5 first thing in the morning?

6 CHAIRMAN MELIUS: The first thing
7 in the morning, that's right, yes.

8 Also, we might prevail on Mark to
9 change, but I think he got in pretty tough
10 travel.

11 MEMBER CLAWSON: I can understand.

12 (Laughter.)

13 CHAIRMAN MELIUS: We can do that.

14 So we will go through the Work
15 Group updates.

16 I have one other sort of piece of
17 information for the Board since we don't have
18 a Work Group on Sandia. We have a Site
19 Profile. NIOSH is evaluating a petition. We
20 have had a situation where NIOSH has been
21 conducting, staff has been conducting
22 interviews and some record reviews there.

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1 There are security issues and so forth
2 regarding these.

3 Then, just in terms of the
4 interviews, it is a difficulty for some of the
5 people to come in and be interviewed, and so
6 forth.

7 So, to sort of lessen the burden
8 on the facility and time, and so forth, and
9 then the people being interviewed, and so
10 forth, we have authorized SC&A to participate
11 in some of these visits, being very careful to
12 avoid sort of prejudging anything in the
13 Evaluation Report. Normally, we do it
14 sequentially and we have SC&A go back later,
15 once things have moved along. For these
16 circumstances, when they have come up, we have
17 been doing it a little out of sequence.

18 I just wanted the Board to know
19 that. Each visit is reviewed, and so forth.
20 There's been one so far, and there's another
21 one coming up.

22 I think it is probably better for

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1 the program, given some of the difficulties,
2 potential difficulties, with classification
3 security issues at that facility, I think it
4 is best all around that we do it that way.

5 Okay. We will start with
6 Brookhaven. Josie?

7 MEMBER BEACH: Thank you. Okay,
8 thank you.

9 Brookhaven did have a first
10 meeting on July 28th. We met for a half a
11 day.

12 Our first meeting was focused on
13 SC&A's preliminary issues matrix. That was
14 issued in February of 2010.

15 The issues matrix report
16 identified two issues. First, the
17 availability of bioassay records from 1980
18 through 2007 and, secondly, the adequacy of
19 the neutron dosimetry.

20 The other thing we have been
21 tasked with is the Site Profile review, and we
22 hope to have a schedule to be able to meet on

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1 that soon.

2 Thank you.

3 CHAIRMAN MELIUS: Anybody have
4 questions for Josie?

5 (No response.)

6 Next on my list is Chapman Valve,
7 and I don't think there's been any activity,
8 but I was just wondering if NIOSH had any
9 update.

10 MR. HINNEFELD: Yes, we have --
11 Stu Hinnefeld -- we have completed, or not
12 completed, we are in the process of capturing
13 documents from Hanford. We have identified
14 and are capturing some documents for Hanford.
15 We have made initial contact with the Navy,
16 but have not gone very far down that path, but
17 we have made initial contact.

18 CHAIRMAN MELIUS: Okay. Thank
19 you.

20 Fernald. Brad?

21 MEMBER CLAWSON: Yes. We had the
22 last Work Group meeting, and it was 1/29 of

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1 2010. We still have several outstanding
2 issues. SC&A has accomplished what was
3 requested from them. We are still waiting for
4 NIOSH to be able to respond, to be able to
5 give us some type of a time frame, so that we
6 can set up another Work Group, we are hoping
7 in the next month or so.

8 CHAIRMAN MELIUS: Anybody have
9 questions or comments on Fernald?

10 (No response.)

11 Okay. Hanford is mine. I'm the
12 Chair of that Work Group.

13 We have not met. We have had some
14 contact with NIOSH and with SC&A on this. We
15 are in the process of looking at some of the
16 later years. NIOSH is still working out
17 theirs. SC&A is also working on sort of
18 updating their report.

19 There are some security
20 classification issues we are dealing with
21 there, but probably sometime in the fall
22 things should be clarified, I guess, in terms

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1 of steps forward, what NIOSH has found and
2 also, then, we should be ready from SC&A in a
3 timely fashion. But that's really all we have
4 to report now.

5 Any questions on Hanford?

6 (No response.)

7 Okay. Idaho. Phil.

8 MEMBER SCHOFIELD: There have been
9 substantial revisions to the TBD, and I would
10 give SC&A a chance to review these. As Pete
11 pointed out yesterday, we might want to have a
12 technical call before we actually have the
13 first Work Group meeting, which I would like
14 to have before the next full Board meeting.

15 CHAIRMAN MELIUS: So you're
16 thinking of October time period?

17 MEMBER CLAWSON: Yes.

18 CHAIRMAN MELIUS: Okay. I think
19 you sent me -- I'm on the Work Group -- sent
20 me an email on that. No wonder it sounded
21 familiar.

22 Anybody, other people have

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1 questions on the Idaho Work Group?

2 (No response.)

3 Lawrence Berkeley. Paul? One of
4 our newest Work Groups.

5 MEMBER ZIEMER: The Lawrence
6 Berkeley Work Group has been formed. There is
7 an SC&A report that was issued earlier this
8 year.

9 The Work Group has not yet met,
10 but we want to get on the schedule for
11 October. So, when we get to that part in the
12 meeting where we are doing the scheduling, we
13 want to schedule the initial meeting. We will
14 need to also look at the NIOSH responses to
15 the SC&A draft review of the Site Profile.

16 As you may recall, there was an
17 SEC approved for Lawrence Berkeley in our May
18 meeting, I believe. So part of the Lawrence
19 Berkeley time period has been covered already
20 by SEC. That was at our March meeting.

21 CHAIRMAN MELIUS: Okay. Any
22 questions, comments, on Lawrence Berkeley?

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1 (No response.)

2 Okay. Linde. Gen?

3 MEMBER ROESSLER: I made a
4 detailed Work Group report to the Board at the
5 May meeting in Niagara Falls. At that time, I
6 gave the background and mentioned the numerous
7 issues that we have covered in the Work Group.

8 I reported at that time that the
9 remaining issues dealt with utility tunnel
10 questions, and these were brought to the
11 attention of NIOSH and the Work Group by the
12 claimant's representative, [Identifying
13 information redacted].

14 So we set up a Work Group meeting.

15 We met on July 28th. We thought we would be
16 able to cover these issues at that time. And
17 actually, we did one.

18 NIOSH presented a method to bound
19 doses from airborne and fixed contaminants in
20 the tunnels, and SC&A accepted this bounding
21 method.

22 The other topic of discussion,

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1 SC&A actually questioned the NIOSH estimate of
2 radon and daughters in the tunnels, radon that
3 would have been generated in the soils around
4 the tunnels.

5 The discussion then in the Work
6 Group centered around NIOSH's approach to
7 handle this. They have two methods to try to
8 do this. One is diffusion calculations, and
9 the other idea that came up is that maybe
10 actual measurements can be made in the
11 tunnels, which still exist today. Then, if
12 that's possible, compare the two methods.

13 So what we are waiting for now is
14 for NIOSH to complete this. They assured us
15 that this could be done fairly soon. Give
16 SC&A a chance to review it.

17 We will try to schedule another
18 Work Group meeting shortly, and our plan is to
19 bring this all to completion at the November
20 Board meeting.

21 CHAIRMAN MELIUS: What
22 specifically does NIOSH need to complete?

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1 MEMBER ROESSLER: Okay. They are
2 looking at coming up with estimates of radon
3 and daughters in the tunnels that would have
4 been generated by the soils surrounding the
5 tunnels.

6 There are two approaches to it.
7 The one is to do some diffusion calculations,
8 and Jim or somebody can help me on this. The
9 other one was that it is known that the
10 tunnels still exist. They were going to check
11 to see if it would be possible to make some
12 actual measurements in the tunnels.

13 And I think I forgot one thing. I
14 think, also, there were some more records set,
15 were found. They probably won't add much to
16 this, but they were going to also check those
17 and report on that.

18 CHAIRMAN MELIUS: Okay. I was a
19 little confused with the sampling issue
20 because I think that's a first, or it would be
21 a first.

22 Any questions, other questions, on

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1 Linde?

2 (No response.)

3 Okay. Mark, LANL.

4 MEMBER GRIFFON: We did have a
5 Work Group meeting. I don't have the date
6 right in hand.

7 But there are several outstanding
8 issues as far as the Work Group stands. At
9 this point, we are in the middle of -- NIOSH
10 is working on coworker models, I believe is
11 one of the big deliverables and the ever-
12 present other radionuclide issue I think is
13 there as well, as well as tritides is now an
14 issue.

15 So, at this point, we are in
16 between Work Group meetings where NIOSH has
17 action items and then SC&A has some action
18 items as well. We will have to reschedule
19 probably. I would think we could reschedule
20 in mid-fall for another Work Group meeting,
21 but we are not ready to bring our findings
22 back to the Board yet.

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1 CHAIRMAN MELIUS: What do you
2 think about in terms of bringing -- because
3 our next meeting, full Board meeting, is in
4 Los Alamos or nearby, and the date on that
5 is --

6 MR. KATZ: In November, the week
7 before Thanksgiving, in Santa Fe.

8 MEMBER GRIFFON: Yes, I would
9 think, and I would ask maybe Joe Fitzgerald to
10 help me out, but I would think that we are
11 probably not going to be ready for a final
12 decision. We have an update on several of
13 these action items within the Work Group's
14 work, but I don't think we will be --

15 MR. FITZGERALD: Yes, this is Joe
16 Fitzgerald.

17 I think the key issue is looking
18 for NIOSH's responses and being able to --

19 MR. KATZ: Joe, can you come close
20 to the microphone?

21 MR. FITZGERALD: Yes. I think the
22 key issue is being able to see the NIOSH

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1 responses that were indicated in the Work
2 Group meeting. So, I think that site, and I'm
3 not sure where that stands. So it is hard to
4 know where we will be.

5 MEMBER GRIFFON: Yes, I'm not
6 sure. I have to look at the dates on this
7 because I think we might be slipping on some
8 dates, on estimates on action items, and
9 delivering on behalf of NIOSH, you know,
10 posting things to the O: drive by a certain
11 time frame. Usually, it is a flexible time
12 frame, but I am not sure what they have
13 achieved to this point from our last meeting.

14 MR. FITZGERALD: The key issue
15 will be just being able to see those products
16 and be able talk to them, I think.

17 MEMBER GRIFFON: So, at the very
18 least, for the full Board meeting, I think we
19 would have a much more detailed summary of the
20 work that the Work Group is working on. But I
21 don't know that we would be ready to push
22 for a vote on it.

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1 CHAIRMAN MELIUS: Does NIOSH have
2 any updates on when the response?

3 MR. HINNEFELD: Stu Hinnefeld.

4 No, we don't have anything on the
5 schedule right now.

6 CHAIRMAN MELIUS: Okay. Anybody
7 have questions on it?

8 (No response.)

9 Okay, Mound.

10 MEMBER BEACH: Okay, Mound had a
11 Work Group meeting on July 27th. We had six
12 open items on our agenda and closed the two
13 items during our meeting.

14 The first item from our original
15 matrix dealing with radon was Issue 2, the
16 post-1980 years. If you'll remember, NIOSH
17 reported at the last Board meeting that radon
18 became a recognized and characterized concern
19 after the venting of the tunnel in January of
20 1980 and reported that the measurements taken
21 in March of 1980, March of 1982, and March of
22 1990 confirmed the radon levels were low.

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1 That was all reported at the last Board
2 meeting.

3 The Work Group had some concerns.

4 We followed up on those concerns. That had
5 to do with interviews with two rad techs
6 claiming to have taken high readings. They
7 pegged out their alpha meters, holding them
8 over cracks in the floors in the 1980s. So we
9 looked at that issue, and that was after the
10 venting, suggesting that influx of radon into
11 the R building. There was also a 1990 memo
12 alluding to unexplained levels approaching DAC
13 levels.

14 Then, finally, we conducted an
15 interview with a Mound radon site expert.
16 Both SC&A, NIOSH, and Work Group Members were
17 involved in that phone interview. That expert
18 felt that the remedial action taken at that
19 time proved successful.

20 With all that, the Work Group
21 decided that they really had no choice but to
22 close out the post-1980s radon issue with the

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1 understanding that if additional data surfaces
2 showing elevated levels anywhere in R or SW,
3 NIOSH would need to reopen its 83.14
4 proceedings.

5 Did I state that, Joe? Anything I
6 missed there? I just wanted to give kind of
7 an understanding because we did say that we
8 wanted to look at that and that post-1980 time
9 frame.

10 Secondly, we had a Pu-238 issue,
11 which was Issue 9 of our original matrix.
12 That was determined to be a TBD issue. NIOSH
13 has agreed to make available in the TBD both
14 Type L and Type J solubility models as
15 bounding options.

16 Okay, I'm getting a nod from Jim,
17 so that's correct.

18 The other items that we have open
19 right now, there's four of them remaining, and
20 both SC&A and NIOSH have more work to do. We
21 had hoped to come to this meeting closing out
22 Mound, but there's just still some stuff that

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1 needs to be taken care of. Those include the
2 neutron dose reconstruction, Issues 14 and 15;
3 stable tritium compounds, that is our Issue 6.

4 We have adequacy and completeness of internal
5 dose, Issues 11 and 12, and we have a D&D,
6 Issue 10, we're still working on.

7 So I am hoping that, if all the
8 reports come in prior to the November meeting,
9 we will try to meet and report to the Board in
10 November on those final issues.

11 CHAIRMAN MELIUS: Thank you.

12 Anybody have questions on Mound?

13 (No response.)

14 The Nevada Test Site, I don't
15 think we really have any activity there, Bob?
16 No, nothing? Okay.

17 MEMBER PRESLEY: The Test Site?

18 No, sir.

19 CHAIRMAN MELIUS: Okay. Brad,
20 Pantex?

21 MEMBER CLAWSON: We had our first
22 Work Group meeting 5/4/2010 of this year. We

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1 have several issues that we are starting into.

2 One of the things, NIOSH has got
3 several action items. One of the big ones
4 that they've got is how they are going to
5 back-extrapolate the information from 1990
6 back to 1948. They are working on that, going
7 to bring this back.

8 SC&A had several action items that
9 they are working on, and we are hoping to get
10 a Work Group together in the next two or three
11 months.

12 CHAIRMAN MELIUS: Anybody have
13 questions on Pantex?

14 (No response.)

15 On Pinellas, Phil?

16 MEMBER SCHOFIELD: There has just
17 been a White Paper on the tritium issues that
18 Pinellas just issued, which, to be honest with
19 you, I don't think I have distributed to all
20 the Work Group yet.

21 As far as the tritium issues go,
22 we are kind of holding off having a Work Group

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1 meeting because much of the same issues are
2 being dealt with in the Mound Work Group,
3 rather than have duplication here.

4 CHAIRMAN MELIUS: So you're not
5 planning any meetings?

6 MEMBER SCHOFIELD: Not at this
7 time, no.

8 CHAIRMAN MELIUS: Piqua. John?

9 MEMBER POSTON: The Piqua Work
10 Group had its first meeting on July the 8th at
11 the Marriott. Dr. Fields and Mr. Schofield
12 and myself composed that Work Group.

13 There is a Petition Evaluation
14 Report, but there is no Site Evaluation Report
15 for us to work with.

16 We did have a fairly lively
17 discussion trying to understand organic
18 moderated reactors and the sources of
19 exposure, and so forth. We have put together
20 sort of a plan to move forward trying to
21 answer some of the questions that need to be
22 answered.

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1 Some of the data is missing, but,
2 hopefully, will show up, which we have a
3 request to Landauer for the dosimetry data.
4 We discussed in great detail the potential
5 neutron exposures; also, production of
6 nitrogen-16 and other exposure sources.

7 So, right now, we are just
8 beginning. We do have a path forward, and we
9 will continue to meet.

10 CHAIRMAN MELIUS: Thank you.

11 Any questions for Dr. Poston?

12 (No response.)

13 Thank you.

14 Portsmouth, Paducah, K-25. Phil?

15 MEMBER SCHOFIELD: SC&A has
16 released a matrix in June. Right now, the
17 ball's back in OCAS's court. I know they are
18 doing some work on it, but this is something
19 that we need to get on the schedule, so that
20 we can get a confirmed date when they will be
21 ready. Then we will set a Work Group meeting.

22 CHAIRMAN MELIUS: Stu or anybody

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1 from NIOSH, do you have an estimate on that?

2 MR. HINNEFELD: It looks like we
3 hope to have an internal product about
4 September, next month.

5 CHAIRMAN MELIUS: Yes. Okay.

6 MR. HINNEFELD: So it will be
7 sometime after that by the time we start with
8 you.

9 CHAIRMAN MELIUS: So, possibly
10 October or something?

11 Rocky Flats. Mark, have you had a
12 chance? You missed Jeff's update. So, Jeff,
13 you and Mark can get together because I think
14 the Work Group is sort of holding off until
15 that. Okay.

16 Santa Susana. Mike?

17 MEMBER GIBSON: Yes, Jim, we had a
18 meeting. Nothing new since the last Board
19 meeting. We did have a Work Group meeting
20 back on April the 20th, and currently DCAS is
21 working on a coworker model for internal dose.

22 They have indicated at the last meeting that

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1 it will probably be spring of 2011 before they
2 will be ready. So we are kind of on hold
3 until they get that ready.

4 CHAIRMAN MELIUS: Okay. Any
5 questions for Mike?

6 (No response.)

7 Savannah River.

8 MEMBER GRIFFON: Yes, we had a
9 Work Group meeting I believe in May. I guess
10 this is one that I just got --

11 MR. KATZ: Mark, can you lean a
12 little closer to the microphone?

13 MEMBER GRIFFON: I just got a
14 little briefing from SC&A on the status of
15 some of the action items from the last Work
16 Group meeting. I would love to hear a little
17 more feedback from NIOSH on where things stand
18 because at this point, best we can tell,
19 nothing has been posted that was agreed upon
20 in the previous Work Group meeting.

21 And several of these things were
22 just a matter of -- NIOSH indicated to the

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1 Work Group that we have this completed, this
2 data, and we had tasked SC&A with reviewing
3 and looking at it. It was just a matter of
4 posting, we thought. SC&A is telling me that
5 it is not even there to be reviewed. So, I am
6 concerned that several of these actions
7 outstanding for Savannah River have had no
8 movement.

9 I know the only thing that I do
10 know that is happening is there is a tour.
11 I'm not sure exactly the date, but SC&A is
12 involved with that, as well as the Board was
13 included to go down to the site and review,
14 targeted at the tritide issue. That is
15 happening soon or it might have happened
16 already.

17 MEMBER CLAWSON: It's going to
18 happen August 29th through September 3rd, I
19 believe.

20 MEMBER GRIFFON: So that's fine,
21 and that's certainly important and one of the
22 issues we brought up in the Work Group

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1 meeting. But several of these other things
2 that certainly we could be making progress on
3 seem to have stalled, and I am quite concerned
4 about that, that there's been no movement.

5 MR. HINNEFELD: This is Stu.

6 I apologize for that. We will see
7 to it that it happens in the next few days, if
8 it is stuff we have that we just need to put
9 out there for review.

10 MEMBER GRIFFON: Okay. Maybe you
11 can give us a better update tomorrow at the --

12 MR. HINNEFELD: All right, I'll
13 try.

14 MEMBER GRIFFON: All right.
15 Thanks. That would be great.

16 CHAIRMAN MELIUS: Any other
17 questions on Savannah River?

18 (No response.)

19 SEC issues. Well, we will have a
20 report this afternoon, an update on the less
21 than 250 day issue.

22 MEMBER BEACH: Jim?

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1 CHAIRMAN MELIUS: Yes? Pardon?

2 MEMBER BEACH: I just had a
3 comment, but I will wait until you're
4 finished.

5 CHAIRMAN MELIUS: Go ahead. Go
6 ahead.

7 MEMBER BEACH: Well, I should have
8 brought it up during LANL. I received an
9 email from Andrew, and I did it forward it on
10 to Ted and Jim. But I wanted to mention that
11 he was hoping that we could set up some type
12 of a tour for that site at our next meeting
13 since it's going to be close. So I just
14 wanted to mention that.

15 CHAIRMAN MELIUS: Okay. So we
16 will have an update on the less than 250 day
17 issue this afternoon and discussion on it.

18 The other item pending with the
19 SEC Issues Group is the Dow Madison, and there
20 were a number of issues in terms of some of it
21 is new documentation; some of it is making
22 sure the petitioners had adequate access to

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1 information, had a number of questions that
2 needed to be answered.

3 So we will try to hold the
4 meeting, and presuming that all this
5 information has been exchanged, and so forth,
6 we will try to do a meeting of the SEC Work
7 Group to deal with Dow Madison. The timing of
8 that will somewhat depend on our discussions
9 this afternoon on the 250 day issue.

10 Any questions on that? Yes, Brad?

11 MEMBER CLAWSON: Jim, I'm sorry,
12 this doesn't have to do with the 250 days, but
13 it's --

14 MR. KATZ: Brad, can you talk into
15 the microphone, please?

16 MEMBER CLAWSON: Yes. The
17 problem, the question that I was going to
18 bring up, and I don't know if this is the
19 right time or not, we have tasked SC&A to look
20 at the Clarksville and Medina Sites, which
21 they are in the process of.

22 Now I have been courtesy-copied on

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1 that because the Pantex Work Group is really
2 the only one that some of this stuff that we
3 can deal with. I am wondering if we should
4 roll that under the Pantex Work Group now, the
5 reason being is so that there's a point of
6 contact, so that we kind of have a feeling of
7 what's going on with it, and so forth like
8 that.

9 I don't really feel that I can
10 respond to anything because I'm not the Chair
11 or anything else for those two smaller sites.

12 They haven't had a Work Group assigned to
13 them, but due to the complexity of them, I
14 don't see any other Work Group but the Pantex
15 Work Group being able to review it.

16 CHAIRMAN MELIUS: That's a good
17 point. Yes, normally, we wait for the SC&A
18 review --

19 MEMBER CLAWSON: Right.

20 CHAIRMAN MELIUS: And then form
21 a Work Group. It's sometimes delayed, and
22 then there's also SEC petition issues that

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1 come in. But I actually think, given the
2 issues that Brad raised, to me, that makes
3 sense, is to fold those under the Pantex Work
4 Group going forward.

5 Does anybody have any problems
6 with that? Especially since the Work Group
7 Chair volunteered.

8 (Laughter.)

9 MEMBER CLAWSON: Well, yes. A lot
10 of the thing is because of the classification
11 issues, but also, too, a lot of the
12 documentation is actually at Pantex.

13 CHAIRMAN MELIUS: Yes. I
14 appreciate you bringing that up. It is a good
15 point. So you've got them.

16 (Laughter.)

17 MEMBER CLAWSON: Okay. Thank you.

18 MR. KATZ: The broader Work Group.

19 CHAIRMAN MELIUS: The broader Work
20 Group.

21 Okay. We will do the Subcommittee
22 on Dose Reconstruction tomorrow morning.

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1 TBD-6000.

2 MEMBER ZIEMER: TBD-6000 is
3 currently focusing mainly on General Steel
4 Industries and, to a lesser extent, on Bliss &
5 Laughlin.

6 In the case of General Steel
7 Industries, we have received from the
8 petitioner, [Identifying information
9 redacted], within the last two months,
10 actually, a number of additional documents
11 that he has uncovered, some documents in June
12 that deal with consideration of air activation
13 from the accelerators, and then, also, some
14 documentation relating to possible additional
15 source terms, some information provided in
16 mid-June. That material has been distributed
17 to the Work Group, as well as to NIOSH.

18 We will need NIOSH's evaluation of
19 that material in order to have a productive
20 next meeting. I would like our next meeting
21 to be in October, if possible, and maybe
22 piggyback during the week that some of the

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1 other meetings in Cincinnati will occur
2 because of overlap in the Work Group
3 membership. But, in any event, we will need
4 to look at the new documentation, and we will
5 need to have NIOSH's responses on those.

6 Then, in the case of Bliss &
7 Laughlin, we have the SC&A review of the
8 Evaluation Report, which they completed, I
9 believe, in May. We will need NIOSH responses
10 on that as well.

11 So, I am hoping that those
12 materials will be ready for the Work Group to
13 address in the next meeting, which will,
14 hopefully, be in October, since the Chair is
15 not available, basically, in September in any
16 event.

17 CHAIRMAN MELIUS: Any questions
18 for Paul?

19 (No response.)

20 TBD-6001. Henry?

21 MEMBER ANDERSON: Well, we had our
22 first meeting, and I think we did a good job

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1 of getting through the matrix that had been
2 already developed. We also got through, we
3 began to focus on electrochemical issues.

4 There has been a significant find
5 in data, box data anyway, from
6 electrochemical, and NIOSH was in the process
7 of going through that. We tasked SC&A to
8 review it to see whether that made the
9 difference of available information, and could
10 it be used and how it would impact assessments
11 for electrochemical.

12 We came up with an agreed-upon set
13 of priority activities. Both SC&A and NIOSH
14 are now in the process of developing a
15 timeline for deliverables and specific details
16 of what will be done for us.

17 So now we are hoping to get that
18 and perhaps have another meeting before our
19 next face-to-face meeting. Hopefully, we will
20 be able to knock off many of the issues that
21 have been languishing a bit on some of this.

22 But we spent a day, but it went

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1 quite rapidly through the materials. I think
2 we focused on or created a plan for the most
3 critical issues to address. So I think we're
4 making headway.

5 CHAIRMAN MELIUS: Okay. Thank
6 you, Henry.

7 Questions? Brad?

8 MEMBER CLAWSON: Sorry.

9 CHAIRMAN MELIUS: Okay. It may
10 have been up for quite a while. I might not
11 have noticed it.

12 MEMBER CLAWSON: It was. Sorry.

13 CHAIRMAN MELIUS: Okay. The next
14 Work Group is mine, use of surrogate data.

15 I distributed to the Board -- we
16 had discussion at the previous meeting -- I
17 distributed a couple of comments, a couple of
18 changes to the document that came forward. So
19 I made those changes, distributed it to the
20 Board. So I think, at least for the present
21 period of time, our activity on the Board
22 policies or guidelines -- excuse me -- is

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1 complete.

2 The Work Group also has an
3 outstanding SEC to address, which is with the
4 Texas City one. We are waiting on that for
5 NIOSH to make a decision on how they were
6 going to go forward, I believe, on the radon
7 issue.

8 Are we still waiting?

9 MR. HINNEFELD: Yes, I think we
10 are pretty close to coming forward with
11 something, but we don't have anything yet
12 today.

13 CHAIRMAN MELIUS: Okay. Because
14 once NIOSH has made this decision and come
15 forward in terms of documentation, then we
16 would be scheduling a Work Group meeting, I
17 think, to address Texas City. So we will
18 definitely try to do something to address that
19 before the next meeting, but it obviously
20 depends on what NIOSH proposes.

21 Any questions on that?

22 (No response.)

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1 Weldon Springs, which is Mike, a
2 brand-new Work Group.

3 MEMBER GIBSON: Yes. Jim, as you
4 know, this is one of the new Work Groups you
5 just appointed, asked me to Chair, along with
6 Bob Presley and Richard Lemen.

7 We have not had a meeting, our
8 first meeting yet. We are just taking a
9 little time to kind of read back through and
10 re-familiarize myself with the SEC Evaluation
11 Report, and then to look back through the
12 Weldon Springs Site Profile. And hopefully,
13 we can get a meeting scheduled in October,
14 along with some of the other meetings.

15 CHAIRMAN MELIUS: Good. Thank
16 you. Thank you, Mike.

17 Any questions for Mike on Weldon
18 Springs?

19 (No response.)

20 Then, Worker Outreach, that's also
21 Mike.

22 MEMBER GIBSON: Yes. Jim, our

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1 last meeting was March the 19th of this year.

2 We're still working on some issues.

3 I think Ted sent out to, I
4 believe, the whole Board a spreadsheet kind of
5 demonstrating how he had someone on his staff
6 had taken the public comments from the
7 meetings and incorporated them onto this
8 spreadsheet, and how they're tracked. So we
9 can kind of watch this process and see how it
10 serves us, see if it needs any modifications;
11 see if there's other areas that we need to
12 better track worker comments. So we're just
13 in the process of doing that.

14 Again, hopefully, we can have a
15 follow-up meeting sometime in October.

16 CHAIRMAN MELIUS: Okay, good.

17 And again, to reiterate what we
18 talked about yesterday, because of just sort
19 of the delay in the timing on some of this, at
20 our next Board call we would be reviewing the
21 comments from the previous meeting, yes. So
22 good.

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1 Any questions for Mike?

2 (No response.)

3 In follow-up, Wanda gave the
4 report on the Procedures Review Subcommittee
5 yesterday. She did distribute an email, I
6 believe last night, I think to the entire
7 Board.

8 MEMBER MUNN: To the Board.

9 CHAIRMAN MELIUS: Yes. I don't
10 know if people have had a chance to look at
11 that. That was in response, I think, to our
12 discussion, my comment and the discussion on
13 sort of clarifying the process.

14 I actually would also ask that you
15 also look at clarifying the same thing in the
16 individual reports. I don't think it has to
17 be long. I think it's adding a sentence or
18 something just to clarify that. But I think
19 that's fine to do as you go into these next
20 five, I believe it was, and then we'll be
21 probably reviewing those at our next Board
22 meeting, I assume.

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1 MEMBER MUNN: I would hope that
2 would be the case.

3 CHAIRMAN MELIUS: Yes.

4 MEMBER MUNN: And I would assume
5 that the electronic link would appear --

6 CHAIRMAN MELIUS: Yes.

7 MEMBER MUNN: Within the body or
8 at least at the end of each those reports, in
9 any case.

10 So, if anyone has any problem, I
11 will be glad to read the suggestion.

12 Yes, it looks as though Dave has a
13 question.

14 CHAIRMAN MELIUS: David?

15 MEMBER RICHARDSON: I just wanted,
16 Dr. Melius, when you first raised this issue,
17 it seemed like you were questioning how the
18 attribution of authorship was represented on
19 these documents. And while what's proposed is
20 to add some text to another document
21 describing the process, I'm not sure it gets
22 to really the spirit of what you are doing,

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1 which is that we are putting forward a
2 document in which there is ghost authors,
3 basically, is my concern, and whether it might
4 be more appropriate just to say this document
5 is prepared by SC&A, and then below that, on
6 the face page, say with text, substantial
7 comments or revisions and editing. So that
8 there's basically, as in other written
9 documents, the authorship is clearly
10 communicated to the reader.

11 CHAIRMAN MELIUS: Yes, that was
12 what I was trying to -- you actually expressed
13 it better than I did. Do that, that we have
14 some clarification on each sort of about the
15 process involved in these documents.
16 Sometimes this is a Board product, not an
17 SC&A. SC&A is a contractor to the Board, and
18 they're not, you're right, the sole authors.
19 We have approved those as a Board, do that,
20 and just needs to be, I think it's a sentence
21 or something, clarification. Maybe it's the
22 heading or a footnote, as David I think was

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1 suggesting.

2 MEMBER MUNN: Well, if you would
3 like, we could, of course, include a formal
4 tracking sheet at the face of these two-
5 pagers, as we have done in other reports. We
6 can get as extensive as you would like with
7 respect to attribution.

8 CHAIRMAN MELIUS: I don't think
9 we're asking to be extensive, but just some
10 small clarification of the process there.

11 MEMBER MUNN: Could I ask, David,
12 if you have some suggestion with respect to
13 something other than the wording that has been
14 presented here? If you would like to send it
15 to me, I will be more than glad to bring it to
16 the Subcommittee and redistribute it to the
17 Board.

18 MEMBER RICHARDSON: I was actually
19 thinking of something much simpler than a
20 tracking sheet or something. It's that
21 currently it says, "Prepared by SC&A". It
22 could say, "Prepared by SC&A and the Working

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1 Group on" -- I mean it's often, if somebody
2 makes a draft of something, and I begin to add
3 text to it, if it's editorial, I say, you
4 know, "Your semicolon needs to be moved." But
5 when it gets to substantive changes to the
6 document, it becomes something that I have
7 participating authorship of, and you would
8 simply put your name as one of the authors.
9 Then you would take responsibility for the
10 content.

11 MEMBER MUNN: Do you have my
12 wording in front of you right now?

13 MEMBER RICHARDSON: Yes. My
14 understanding was --

15 MEMBER MUNN: If you do, may I
16 make a suggestion then? May I ask whether in
17 the first sentence, would it suit your need if
18 it read, "When the technical reviews are
19 complete and all deficiencies have been
20 resolved, a brief summary of what has
21 transpired in the resolution process is
22 prepared by Sanford Cohen & Associates and the

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1 Subcommittee for Procedure Reviews?" If we
2 removed the "presented to" words, would that
3 achieve the clarity that you're seeking? Or
4 do you want names?

5 CHAIRMAN MELIUS: I think what we
6 are referring to, Wanda, is, as I understand
7 your email, it is that you are referring to
8 the introductory page.

9 MEMBER MUNN: I am.

10 CHAIRMAN MELIUS: We're referring
11 to each procedure page.

12 MEMBER RICHARDSON: As I
13 understood it, you have a one-page document
14 which describes the production of a series of
15 reports, and you're describing the process
16 here in this paragraph.

17 MEMBER MUNN: Yes.

18 MEMBER RICHARDSON: I'm saying the
19 face page of each of those reports would have
20 attribution of authorship of all those who
21 contributed to the authorship of that report.

22 If that report floats out there and somebody

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1 picks it up, they know who wrote it.

2 MEMBER MUNN: All right.

3 Steve, are you here?

4 Will we have any problem listing
5 the SC&A authors as well as the Members of the
6 Subcommittee who are involved in these
7 individual reports on the face page?

8 DR. OSTROW: In general, we don't
9 put individual names on any of the reports we
10 do.

11 MEMBER MUNN: I know, but we're
12 being asked to.

13 DR. OSTROW: I don't see why we
14 should change it here. If we are going to do,
15 I think, 53 of these two-pagers, if the
16 Subcommittee intends to actually participate
17 in those and edit them, then I would suggest
18 just add the SC&A and the Procedures
19 Subcommittee on the title page of the two-
20 pagers and that's all.

21 MEMBER MUNN: Well, what I'm
22 trying to identify here is whether the Board

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1 wants actual names of authorship in there. I
2 am getting the feeling they do.

3 DR. OSTROW: I don't remember us
4 ever doing this on any report that we have
5 produced, put an individual's name here.
6 There's no problem doing it, but it would be a
7 precedent.

8 MEMBER MUNN: Thank you.

9 I guess I will need to get a
10 response from the Board in order to --

11 DR. OSTROW: I don't quite
12 understand. Why would the Board want to put
13 individual names on a report like this?

14 MEMBER MUNN: I know it's an
15 archive report, but --

16 MR. KATZ: Can I make a suggestion
17 here, David and Steve?

18 I mean these reports are really --
19 I mean, what SC&A is just doing is distilling
20 down the resolution process that occurred in
21 the Subcommittee really. So all the
22 Subcommittee Members participated,

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1 substantially, in producing the resolution of
2 these issues.

3 What SC&A is doing is writing it
4 up, basically, like a reporter, and trying to
5 do it in a way that is clear and simple enough
6 that non-technical people, our audience out
7 there of claimants and petitioners, can
8 understand what has happened with the
9 procedure that was evaluated.

10 So, it seems to me it would be
11 fine for the reports to be simply credited as
12 Subcommittee reports prepared with the
13 assistance of SC&A, and that, then, credits
14 the Subcommittee, which is really the
15 authority, not SC&A. SC&A is, again, doing
16 the Subcommittee's bidding, and that's good
17 for that. It's very simple.

18 DR. OSTROW: We would be fine with
19 that.

20 MR. KATZ: Does that suit you,
21 your concerns, Paul or David?

22 CHAIRMAN MELIUS: Paul?

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1 MEMBER ZIEMER: Well, actually,
2 Ted, you took the words out of my mouth, which
3 is a very unsanitary way of speaking, by the
4 way.

5 (Laughter.)

6 But I think what you are
7 proposing, and the thought I had, was maybe
8 these should be Board reports. I mean they
9 are a Subcommittee, but reports of the Board.
10 And we haven't had that in the past. We
11 haven't had something that we called a Board
12 report, but this would be a Board report that
13 is prepared with the assistance of the Board's
14 contractor. And basically, it just summarizes
15 what was done with the main SC&A document, how
16 it was resolved and what the outcomes were.
17 So I guess I am sort of seconding that
18 concept.

19 I agree the attribution probably
20 is everyone on the Subcommittee because they
21 are all involved in working the words, and
22 that was the case in this particular one.

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1 DR. OSTROW: SC&A is fine with
2 whatever the Subcommittee decides on this.
3 What Paul is suggesting sounds good.

4 MEMBER MUNN: Thanks, Steve.

5 Well, I hope that the general
6 feeling is that we are all right as long as --
7 the concept of having this be a Board report
8 seems logical to me. There's no reason why
9 the face page on these two-page reports should
10 not say, "Report of the Advisory Board on
11 Radiation and Worker Health, compiled by the
12 Procedures Subcommittee and Sanford Cohen &
13 Associates," or whoever the contractor may be
14 in 2030.

15 If there's no objection to that,
16 we will proceed on that assumption.

17 CHAIRMAN MELIUS: That was my
18 concern. And I'm ambivalent on whether you
19 list names or not. It may be hard, given the
20 group authorship, so to speak, and different
21 people, and I think it may be difficult to
22 identify, and I'm not sure it adds, though, to

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1 it.

2 I think, as I recall, it's
3 clarified in the reports, the individual
4 reports, the views. So, if you're trying to
5 trace back who was involved in the technical
6 review, and so forth, that would be available.

7 MEMBER MUNN: Yes, the individual
8 technical documents are all authored.

9 CHAIRMAN MELIUS: Yes, yes. And
10 Dr. Ziemer's wording was fine, but, I mean, if
11 there's other wording that fits better, when
12 you format these documents, there may be some
13 better way of doing that also. So I think as
14 long as it captures the concept, I think that
15 was my concern anyway.

16 MEMBER MUNN: We will proceed on
17 that assumption unless I get significant
18 feedback from the Board to the contrary.

19 The one thing I would ask before
20 we leave this topic is some direction with
21 respect to our point of contact at the agency
22 in order to set up this electronic database,

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1 so that it is easy to contact. If I know who
2 to be talking to about that, or if I know who
3 is going to be talking to me -- Stu?

4 MR. HINNEFELD: And this is from
5 the Procedures Work Group?

6 MEMBER MUNN: Yes.

7 MR. HINNEFELD: I would start with
8 Brant.

9 MEMBER MUNN: All right.

10 MR. HINNEFELD: Brant Ulsh.

11 MEMBER MUNN: All right.

12 MR. HINNEFELD: And he may direct
13 you directly to Leroy or somebody.

14 MEMBER MUNN: Good.

15 MR. HINNEFELD: Start with Brant.

16 MEMBER MUNN: All right. Thank
17 you.

18 CHAIRMAN MELIUS: Thank you.
19 Thank you, Wanda, on that. Did I miss a Work
20 Group?

21 (No response.)

22 I think we got them all.

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1 Is everyone prepared in terms of
2 having calendars handy, and so forth, in terms
3 of dealing with the scheduling?

4 MEMBER MUNN: Yes.

5 CHAIRMAN MELIUS: If not, if
6 someone is not, we can postpone it and do it
7 later. It was sort of listed on the agenda
8 for tomorrow, but if everyone's ready -- I
9 just don't want somebody, when we start moving
10 dates around or something, having people not
11 ready.

12 So, the Board Members on the
13 phone, are you --

14 MEMBER FIELD: No, that would be
15 fine.

16 CHAIRMAN MELIUS: Okay.

17 MEMBER LEMEN: I can do it anytime
18 you want to do it.

19 CHAIRMAN MELIUS: Mike, are you
20 there?

21 MEMBER GIBSON: Yes, that's fine.
22 I can do it now.

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1 CHAIRMAN MELIUS: Okay, good.
2 Okay.

3 MR. KATZ: Okay. So, if you look
4 on your annotated agenda, I outlined -- and
5 this caused a little confusion last time
6 because it seemed like a teleconference that
7 would go on for two weeks -- but I outlined
8 two weeks that are sort of best placed sort of
9 in terms of time between one Board meeting and
10 the next for the next teleconference following
11 our meeting in Augusta.

12 So I have the dates. The week
13 April 11th through the 15th of 2011 and April
14 18th through 22nd. That's sort of the best
15 time frame, if we can find a day in there. We
16 generally have shot for Wednesdays for
17 teleconferences, but there's no need to be on
18 a Wednesday.

19 So I guess it would be good to
20 hear dates that don't work.

21 MEMBER ANDERSON: Yes, the EIS
22 conference is the week of the 11th.

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1 MR. KATZ: Okay, and that consumes
2 the entire week?

3 MEMBER ANDERSON: Yes, the entire
4 week, yes.

5 MR. KATZ: Well, is the week of
6 April 18th, does everyone have some
7 availability that week?

8 MEMBER ANDERSON: That's good for
9 me.

10 MEMBER MUNN: April?

11 MR. KATZ: April, yes.

12 MEMBER MUNN: April 18, yes, that
13 week.

14 MR. KATZ: So the 20th would be
15 Wednesday?

16 MEMBER MUNN: Yes.

17 MR. KATZ: Does that work for
18 everyone?

19 MEMBER MUNN: Fine.

20 MR. KATZ: Well, that's easy.

21 CHAIRMAN MELIUS: People, Board
22 Members on the phone?

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1 MR. KATZ: Yes, does that work for
2 you, Bill and Dick and --

3 MEMBER FIELD: Yes, it works for
4 me. Bill.

5 MR. KATZ: Okay.

6 MEMBER LEMEN: The week of April
7 18th, you're saying use the 20th?

8 MR. KATZ: April 20th is the
9 suggestion.

10 MEMBER LEMEN: That is fine with
11 me.

12 MR. KATZ: 11:00 a.m. is usually
13 the time we use for conference calls.

14 And, Mike, how about you?

15 MEMBER GIBSON: Yes, that is good.

16 MR. KATZ: Done. April 20th,
17 11:00 a.m. Eastern time. It's usually two to
18 three hours, unless we have a very full plate.

19 CHAIRMAN MELIUS: Usually less
20 than two.

21 MR. KATZ: I always overestimate.

22 (Laughter.)

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1 CHAIRMAN MELIUS: He is. We
2 always have it scheduled from like 11:00 to
3 5:00, but it's something to keep us. It's
4 like on this agenda he has -- we were working
5 until 11:30 p.m., from 10:30 a.m. until 11:30
6 p.m.

7 (Laughter.)

8 MR. KATZ: I'm trying to get my
9 money's worth out of you.

10 (Laughter.)

11 Okay. Then we have a face-to-
12 face, and I have laid out the time frames
13 there. The last two weeks in May or the week
14 that overlaps into June.

15 First of all, let's just hear if
16 any of those weeks are off the table
17 completely for anyone.

18 MEMBER SCHOFIELD: The last two
19 weeks in May I'll probably have some
20 graduations.

21 MR. KATZ: So, Phil, are you
22 saying the last two weeks of May are off the

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1 table because they don't work for you?

2 MEMBER SCHOFIELD: Yes, they don't
3 work for me. I suspect a lot of people
4 probably will have some graduations.

5 MR. KATZ: Okay. Well, how is the
6 week May 31st to June 3rd for people?

7 MEMBER ZIEMER: Is the 16th one of
8 the last two --

9 MEMBER GIBSON: Ted, this is Mike.
10 Wouldn't that require us to travel
11 on Memorial Day?

12 MR. KATZ: I think I left out
13 Memorial Day. Oh, yes, well, it depends. If
14 we started on the 31st, yes, but I believe
15 Memorial Day is the 30th.

16 CHAIRMAN MELIUS: Yes, it is.

17 MR. KATZ: Yes. So we still
18 would --

19 MEMBER ZIEMER: Is that the last
20 week of May or --

21 MR. KATZ: Well, it depends if we
22 started the 31st or we started June 1st. I

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1 guess June 1st, if we are not going to travel
2 on Memorial Day. June 1st through the 3rd.
3 So that would be ending on a Friday, which is
4 I think okay.

5 MEMBER MUNN: Is it not possible
6 for us to move that a little earlier in May?
7 Is it impossible to get --

8 MR. KATZ: Phil is saying that he
9 has a conflict.

10 MEMBER MUNN: The last two weeks
11 of May?

12 MEMBER BEACH: So the week of the
13 16th is bad, Phil?

14 MEMBER LEMEN: Ted?

15 MR. KATZ: Yes, yes? I am sorry,
16 Dick, can you speak up? You are hard to hear.

17 MEMBER LEMEN: Where will this be
18 located?

19 MR. KATZ: Well, that's the second
20 question.

21 MEMBER LEMEN: That might make a
22 difference to whether you want to do it this

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1 week or whether you want to do it the
2 following week.

3 MEMBER BEACH: I like the week of
4 the 16th of May, if everybody is available.
5 Phil is still looking, but you get into
6 vacations and stuff possibly the first week of
7 June. I don't know. That's my thought.

8 MEMBER LEMEN: The 16th of May is
9 okay for Dick Lemen.

10 MR. KATZ: Phil? Phil, would that
11 work for you?

12 MEMBER SCHOFIELD: I think that
13 would work.

14 CHAIRMAN MELIUS: Do you want to
15 check? We don't need necessarily to finalize
16 this right now.

17 MEMBER SCHOFIELD: Yes, I will
18 check and get back with you in a couple of
19 hours from now.

20 CHAIRMAN MELIUS: Okay.

21 MR. KATZ: Okay. Do we want to
22 talk about locations?

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1 MEMBER ANDERSON: So do you want
2 us to tentatively hold that week?

3 MR. KATZ: Yes.

4 CHAIRMAN MELIUS: We will decide
5 this afternoon --

6 MEMBER ANDERSON: Oh, okay.

7 CHAIRMAN MELIUS: When we come
8 back.

9 MEMBER ANDERSON: It won't fill
10 between now and then. Don't worry.

11 CHAIRMAN MELIUS: Maybe. Bill and
12 Mike, you're okay with those weeks?

13 MEMBER GIBSON: Jim, it's Mike.
14 It's good for me.

15 CHAIRMAN MELIUS: You're okay?

16 MEMBER FIELD: This is Bill. It's
17 good for me.

18 CHAIRMAN MELIUS: Okay. Location?

19 MR. KATZ: So, locations, we have
20 Augusta, and then we have Santa Fe. No, the
21 other way around, Santa Fe and then Augusta.
22 Is that correct? Yes.

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1 MEMBER MUNN: Augusta is February
2 23rd, 24, 25.

3 MR. KATZ: It would be helpful to
4 think about which Work Group feels like they
5 will be teeing up. In fact, it would be nice
6 to show up at a site where we are ready to
7 deliver.

8 CHAIRMAN MELIUS: We have been
9 uniformly unsuccessful --

10 (Laughter.)

11 MR. KATZ: It is very difficult to
12 do, absolutely. It is very difficult to do.

13 CHAIRMAN MELIUS: Yes, and
14 especially guessing so far ahead.

15 MR. KATZ: Yes, but I don't think
16 we have to settle the location right now.

17 CHAIRMAN MELIUS: No, but --

18 MR. KATZ: Maybe you all want to
19 think about location and get back to me by
20 email. We can do some thinking and discussing
21 with DCAS as well in terms of their scheduling
22 and what kind of location.

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1 CHAIRMAN MELIUS: Are there any
2 locations -- I'm trying to think what were
3 candidates last time. We did --

4 MR. KATZ: The candidates last
5 time, the places were Augusta or we discussed
6 the possibility of going back to Tennessee.

7 CHAIRMAN MELIUS: Right. Some of
8 that was weather-related.

9 MR. KATZ: Right.

10 CHAIRMAN MELIUS: So we're talking
11 about May.

12 MR. KATZ: Which would be good.

13 CHAIRMAN MELIUS: Yes.

14 MEMBER BEACH: I will vote for
15 Tennessee.

16 MR. KATZ: We haven't been there
17 in quite a while, right?

18 MEMBER PRESLEY: We talked about
19 going to Nashville, moving around to the sites
20 that were down there, too.

21 MEMBER BEACH: Which is Tennessee.

22 MR. KATZ: And that leaves quite a

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1 bit of time for the Work Groups that are
2 dealing with the Tennessee sites.

3 Any suggestions, concerns?

4 CHAIRMAN MELIUS: Any other
5 possible sites?

6 MEMBER MUNN: Are we still
7 discussing February?

8 MR. KATZ: No, February is set.
9 We are discussing May. February is Augusta.
10 Okay. So we'll look into Tennessee. And,
11 Bob, you're suggesting Nashville is a good
12 location?

13 MEMBER PRESLEY: That was one of
14 the things that came up last time, is that we
15 go to Nashville. That's between Oak Ridge and
16 Memphis. You've got Milium in there. You've
17 got Clarksville right up above Nashville. The
18 Oak Ridge people can get there, if they want
19 to.

20 MR. KATZ: What kind of distance
21 is that for the Oak Ridge?

22 MEMBER PRESLEY: It's about 160,

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1 180 miles.

2 MR. KATZ: Oh, that's quite a
3 ways.

4 MEMBER PRESLEY: If you remember,
5 last time we were in Knoxville we didn't have
6 hardly anybody came from Oak Ridge.

7 MR. KATZ: So we'll look into
8 Nashville.

9 CHAIRMAN MELIUS: Another location
10 that's been mentioned repeatedly, it's not a
11 site, but it's the Washington, D.C. area.
12 We've had requests to appear there. I'm not
13 sure that May is the best.

14 MEMBER PRESLEY: Henry and I are
15 still pushing for the Bikini Atoll.

16 (Laughter.)

17 MEMBER ANDERSON: We haven't been
18 up in Alaska for a while.

19 CHAIRMAN MELIUS: Amchitka in
20 February.

21 (Laughter.)

22 We'll have a special Subcommittee,

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1 a special Work Group we'll send up there, just
2 a site visit.

3 (Laughter.)

4 We can discuss, if anyone has
5 thoughts --

6 MR. KATZ: Yes, we'll look into
7 this, but, yes, if you have other thoughts,
8 and even beyond this Board meeting, it won't
9 be set in stone that quickly.

10 MEMBER MUNN: Do you want to
11 address Work Group calendars at the same time?

12 CHAIRMAN MELIUS: Yes, we can. I
13 guess what I was going to say, we need to know
14 from sort of the NIOSH side what are bad
15 dates. What I heard from everybody was we're
16 talking about October, seemed to be the month.

17 I don't know if you're ready, Ted, but what I
18 was going to suggest is over lunch, maybe,
19 sort of NIOSH and Emily could consult and sort
20 of tell us what dates are available or aren't
21 available. Some of the Work Groups can then
22 think about --

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1 MEMBER MUNN: As a point of
2 information, Procedures is scheduled for the
3 13th.

4 CHAIRMAN MELIUS: Right.

5 MR. KATZ: Emily is here, so she
6 could participate in this, but I mean I have
7 dates already laid out that are open for
8 October. So we can talk about those.

9 I would, I guess, ask whether
10 there are any groups that would be meeting
11 before October. It gets fairly intense when
12 everybody is meeting in the same month, but
13 maybe you want to think about that while we go
14 through October.

15 So, October, actually, it's quite
16 open. October, we have a teleconference
17 already on October 7th. So that's off. And
18 October 13th is the Procedures Subcommittee,
19 and October 25th through 27th is unavailable.

20 But the rest of October is open.

21 MEMBER ROESSLER: I need to get a
22 Linde Work Group in there before the next

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1 Board meeting, and maybe I can get some advice
2 from NIOSH as to when we can schedule that.
3 When will you have your material? In about
4 three weeks, which would be early September.
5 Then SC&A needs some time to go over it. So
6 we could be ready probably for the Linde Work
7 Group by the end of September, early October
8 maybe.

9 MEMBER BEACH: I am not available
10 September 6th through October 9th myself.

11 MR. HINNEFELD: This is Stu
12 Hinnefeld.

13 I would just caution it will be
14 hard for us to establish travel towards the
15 end of September, you know, to get the travel
16 set and paid for for September.

17 MR. KATZ: I mean we will need to
18 book it now, if we need to.

19 MR. HINNEFELD: I had to book mine
20 last week for travel for the end of the fiscal
21 year.

22 MR. KATZ: Okay. I had understood

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1 we still have a couple of days. You may be
2 under strictures.

3 MEMBER ROESSLER: Josie, what were
4 your out dates?

5 MEMBER BEACH: September 6th
6 through October 9th, unavailable.

7 MEMBER ROESSLER: So how about
8 sometime after October 9th?

9 MEMBER BEACH: Yes.

10 MEMBER ROESSLER: Jim, and Mike is
11 on the phone, what do you guys have? Anybody
12 want to pick a date? Do we want to maybe make
13 it in conjunction with another Work Group?

14 MEMBER BEACH: Gen, that's what I
15 was going to speak up because I'm going to
16 look to Joe and NIOSH for Mound because I know
17 we are going to want to meet before the
18 meeting. Is that too early? I was thinking
19 toward the end of October, but now those
20 aren't available. So the week of the 18th-
21 19th, do you -- end of October. So, yes, as
22 late as possible for Mound.

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1 MEMBER MUNN: Well, the 28th and
2 29th are available, right?

3 MR. KATZ: The 29th is available.

4 MEMBER BEACH: Is the 28th?

5 MR. KATZ: October 29th is
6 available, but, no, the 28th is not.

7 MEMBER BEACH: Okay. Well, if we
8 were doing back-to-back --

9 MEMBER SCHOFIELD: How about
10 October 19th and 20th?

11 MEMBER BEACH: Well, I would like
12 to pencil in Mound for the 29th then.

13 MR. KATZ: Okay.

14 MEMBER ROESSLER: That puts it
15 kind of late. If our Board meeting --

16 MEMBER BEACH: Our Board meeting
17 is not until the 16th.

18 MEMBER ROESSLER: The 16th, so I
19 guess that would work. So you're suggesting
20 the 29th for Mound?

21 MEMBER LOCKEY: What day is it?

22 MEMBER ROESSLER: Yes, what day of

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1 the week is that?

2 MEMBER BEACH: That's a Friday.

3 MEMBER ROESSLER: How about the
4 Thursday then?

5 MEMBER MUNN: Thursday's out.

6 MEMBER ROESSLER: Thursday's out?

7 MEMBER MUNN: Yes, that week only
8 the 29th is available.

9 MEMBER ROESSLER: Well, that
10 doesn't help then.

11 MR. KATZ: But, anyway, we have
12 the 18th through the 22nd open. We have the
13 11th or earlier. It could be Linde earlier
14 than that.

15 MEMBER ROESSLER: Well, we could
16 be ready earlier I think.

17 MR. KATZ: Right. The 11th
18 through the 12th, those dates are open. The
19 11th is Columbus Day. Okay, the 11th is out.

20 MEMBER ROESSLER: How about
21 October 12th for Linde?

22 MR. KATZ: The 12th?

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1 MEMBER BEACH: That is a Tuesday.

2 MR. KATZ: Okay. How about
3 October 14th?

4 MEMBER ROESSLER: Okay, October
5 14th, does that work? We'll just celebrate
6 your birthday. We'll take you out to lunch.

7 Okay, how about October 14th?

8 MR. KATZ: Linde we're talking
9 about, yes.

10 MEMBER ROESSLER: The 14th for
11 Linde? Steve, that's okay? Where's Chris? Is
12 he still here? Okay, October 14th, Josie?

13 MEMBER BEACH: Yes.

14 MEMBER ROESSLER: Mike Gibson?

15 MEMBER GIBSON: Yes, that's fine.

16 MEMBER ROESSLER: And Lockey,
17 October 14th?

18 MR. KATZ: Done.

19 MEMBER BEACH: Okay, and then
20 Mound October 29th. Paul, are you okay with
21 that?

22 MEMBER ZIEMER: I'm okay with

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1 that, and I want to see if we can piggyback on
2 Procedures for like the 12th because, Josie,
3 you're involved in that also.

4 MEMBER BEACH: Yes.

5 MEMBER ZIEMER: And I believe
6 maybe Mark is on both Procedures and TBD-6000,
7 and Wanda is.

8 MEMBER MUNN: The 12th would be
9 fine for me. Yes, I don't mind traveling on
10 the 11th.

11 MR. KATZ: Okay. So TBD-6000 on
12 the 12th.

13 MEMBER ZIEMER: And all of these,
14 I think we're going to have to confirm, and I
15 don't think we can do it here today. But, for
16 example, I'll have to go back to Dave Allen on
17 Stu's staff and make sure that the documents
18 we need will be available, and likewise with
19 the SC&A folks, where we need responses. I
20 guess that's going to be the case for all of
21 us.

22 MEMBER BEACH: Yes.

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1 MEMBER ZIEMER: These are sort of
2 penciled in pending confirmation that we'll
3 have the documents because, if they're not
4 available, it's not fruitful to meet.

5 MEMBER SCHOFIELD: I would like to
6 pencil in October 19th and 20th for INL and
7 Gaseous Diffusion plants, October 19th and
8 20th.

9 MR. KATZ: I'm sorry, Phil, I
10 couldn't hear you.

11 MEMBER SCHOFIELD: October 19th
12 through 20th for INL and Gaseous Diffusion
13 plants.

14 MEMBER ANDERSON: I don't know if
15 we're going to -- hopefully, we'll have the
16 6001 information, but if we could maybe put
17 that group the 28th or 29th?

18 MEMBER MUNN: The 28th is not
19 available. The 28th is penciled in for Mound
20 right now.

21 MEMBER ANDERSON: How about the
22 29th then?

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1 MEMBER MUNN: Mound is penciled
2 in.

3 MEMBER ANDERSON: The 27th?

4 MEMBER MUNN: No, the 23rd, 26th,
5 27th, 28th is out.

6 MEMBER ANDERSON: For everybody or
7 for the INL?

8 MEMBER MUNN: Yes, for everybody.

9 MEMBER ANDERSON: Why?

10 MEMBER MUNN: I think NIOSH and
11 Ted and others are --

12 MR. KATZ: Yes, I am not
13 available.

14 MEMBER ANDERSON: Okay.

15 MEMBER MUNN: People who have to
16 be there can't.

17 MEMBER ANDERSON: Okay.

18 MR. KATZ: So, Phil, you suggested
19 the 19th and 20th? Was that what you
20 suggested?

21 MEMBER SCHOFIELD: Yes, the 19th
22 and 20th.

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1 MR. KATZ: And that's for INL and
2 for the Gaseous Diffusion?

3 MEMBER SCHOFIELD: Yes. The INL
4 would be on the 19th; the Gaseous Diffusion
5 plants would be on the 20th.

6 MR. KATZ: So, Stu?

7 DR. OSTROW: Can that be the other
8 way around?

9 MEMBER SCHOFIELD: The other way
10 around? Anybody have a problem?

11 MR. KATZ: Can we just check in
12 with Stu or someone about INL? I know INL
13 some things are not going to be delivered in
14 that time frame, according to the current
15 schedule. So I'm just a little bit worried
16 about that end of it.

17 MR. HINNEFELD: Well, I think the
18 next proposed action on INL, isn't that where
19 we're doing the technical phone call? Or is
20 that something else?

21 MEMBER SCHOFIELD: Hopefully, the
22 technical phone call occurs before that.

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1 MR. HINNEFELD: Yes, we can do
2 that before, and I would think that would be
3 more informative about what can be ready in
4 October. I just am not really in a position
5 to say very much right now.

6 MR. KATZ: I think under the
7 current schedule there are some elements that
8 aren't going to be delivered on the revisions
9 of the TBDs until November or December, if I
10 recall correctly.

11 MEMBER ANDERSON: I mean, what's
12 the first week in November like?

13 MR. KATZ: The 1st and the 3rd
14 through the 5th are open for November.

15 MEMBER ANDERSON: Okay. So, I
16 mean, if we tentatively do the 6001 on the
17 2nd?

18 MR. KATZ: The 2nd is not.

19 MEMBER ANDERSON: Oh, it's not?
20 Okay, then the 1st.

21 MR. KATZ: The 1st and 3rd through
22 5th.

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1 MEMBER ANDERSON: Yes.

2 MR. KATZ: Well, actually, the 2nd
3 could be. The only issue with the 2nd is it's
4 Election Day. I don't know, some people, if
5 you want an absentee ballot, then you can. If
6 it's not a problem for the people who want to
7 meet, then it's fine with me.

8 MEMBER ANDERSON: How about the
9 4th?

10 MR. KATZ: Sure. I mean the 3rd
11 through the 5th is open. We just have to ask
12 the Members.

13 MEMBER ANDERSON: Okay. Let's do
14 that.

15 MR. KATZ: So November 4th for
16 6001?

17 MEMBER ANDERSON: Yes, as a
18 tentative. If we get the data, the
19 information, by then, fine; if not, we'll turn
20 it loose.

21 MR. KATZ: Okay. And for the
22 Gaseous Diffusion plants, the three, I guess

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1 that's also a question.

2 Phil, are you clear we'll have
3 what we need from DCAS for that?

4 MEMBER SCHOFIELD: Well, you know
5 what? It seems like there's a number of
6 conflicts, and given Stu's comments just now,
7 maybe I'll try to move that into the first
8 part of December.

9 MR. KATZ: Okay.

10 MEMBER BEACH: December? Okay.

11 MEMBER SCHOFIELD: Yes, rather
12 than push it.

13 MEMBER BEACH: Both of them?

14 MEMBER SCHOFIELD: Yes, both of
15 them.

16 MR. KATZ: Mark, how about SRS?
17 Just thinking that we'll have Augusta in
18 February, do you think that's coming later
19 after the next Board meeting?

20 MEMBER GRIFFON: I was just
21 telling Jim I want to try to get a hold of
22 NIOSH and maybe Tim Taulbee before I try to

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1 set a date --

2 MR. KATZ: Okay.

3 MEMBER GRIFFON: Because I don't
4 want to make it where, you know --

5 MR. HINNEFELD: I do have an
6 update on the documents. They had to go to
7 ADC to be reviewed for classification. They
8 came back from classification while Tim was on
9 vacation. We'll have them up this week.

10 MEMBER GRIFFON: Okay.

11 MEMBER SCHOFIELD: Okay, Ted, how
12 about if I propose November 30th and December
13 1st? That should give everybody plenty of
14 time on the Gaseous Diffusion plants and INL.

15 CHAIRMAN MELIUS: What were your
16 dates again?

17 MEMBER SCHOFIELD: November 30th
18 and December 1st.

19 CHAIRMAN MELIUS: If you do INL on
20 the 30th -- I'm not available on the 1st.

21 MEMBER SCHOFIELD: Okay, it works
22 for me.

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1 MEMBER ROESSLER: And hope for
2 good weather in February.

3 CHAIRMAN MELIUS: The first
4 snowstorm.

5 MEMBER SCHOFIELD: Just bring your
6 snowshoes.

7 (Laughter.)

8 MR. KATZ: Paul?

9 MEMBER ZIEMER: I'm thinking we
10 need to also pencil in the Lawrence Berkeley
11 Work Group. It's Dr. Lemen and Dr. Richardson
12 and me. And that will be dependent, I think,
13 on NIOSH being in a position to respond to the
14 SC&A review of the Site Profile. So, again, I
15 don't know where we are on that or who the
16 point person from NIOSH will be on Lawrence
17 Berkeley.

18 LaVon, do you know?

19 MR. RUTHERFORD: Dr. Hughes is our
20 point person on Lawrence Berkeley.

21 MEMBER ZIEMER: Okay.

22 MR. RUTHERFORD: However, what

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1 time frame are we looking?

2 MEMBER ZIEMER: Well, I would say
3 maybe if we could piggyback it onto, for
4 example, for me, I will be at the Mound on the
5 29th. So, if we can do like the 30th or --

6 MEMBER BEACH: That's a Saturday.

7 MEMBER ZIEMER: Well, okay, I
8 guess that one's out.

9 MEMBER BEACH: Well, I can push
10 Mound off until the first week of November, if
11 that's more helpful. I just don't want to go
12 earlier in October.

13 MEMBER ZIEMER: Yes, yes. Well,
14 maybe we could do that. Again, we need to
15 check with David and Dick Lemen.

16 MR. KATZ: Right. So, we have
17 6001 on November 4th. We could put these
18 cheek by jowl, before November 3rd.

19 MR. HINNEFELD: We will let you
20 know on Berkeley because right now we have
21 scheduled it in January. So we will have to
22 juggle the schedule.

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1 MEMBER ZIEMER: Well, yes, I don't
2 know that there is an urgency. It is just the
3 fact that it is another item. We haven't met
4 yet, but there is no point in meeting until
5 you have a chance to look at those responses.

6 MR. HINNEFELD: We're just
7 scheduled for a Berkeley product in January.
8 And we are willing to adjust the schedule to
9 what the Board wants to do. That's not an
10 issue.

11 MEMBER ZIEMER: Well, I think you
12 have a lot of items here.

13 MR. HINNEFELD: Yes.

14 MEMBER ZIEMER: So I think maybe
15 in that case we will just postpone on this
16 one.

17 MR. HINNEFELD: Okay.

18 CHAIRMAN MELIUS: Yes, I think
19 that makes sense, Paul.

20 Any others?

21 MEMBER BEACH: Well, I am
22 wondering if Mike Gibson is thinking about a

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1 Worker Outreach meeting because I think he
2 mentioned that he would try to schedule one.
3 I don't know if you're ready for that, Mike,
4 or not.

5 MEMBER GIBSON: Well, yes, I
6 mentioned October only because I thought we
7 were shut out of travel because of the end of
8 the fiscal year. But I just find it's more
9 efficient to let the dust settle on the
10 schedule and then to email the individual Work
11 Group Members to find a date, rather than just
12 do it wholesale right here at the Board
13 meeting.

14 MEMBER BEACH: Yes, that makes
15 sense.

16 CHAIRMAN MELIUS: Yes.

17 CHAIRMAN MELIUS: Okay. There
18 will be others. Phone ones are easier to set
19 up. I just will say, in general, we are
20 hoping, and it sort of takes time to sort of
21 pick out these processes, but it's getting
22 difficult to schedule these, to try to do

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1 that.

2 As we said earlier, we are trying
3 to get a listing, and Stu is helping putting
4 together something that will give us a
5 schedule when to expect documents. So that
6 when we come into the face-to-face meetings,
7 we will have that available to us. Then I
8 think we'll know, and then I think we can also
9 probably prevail on both SC&A and on Stu to
10 come in with schedules, too.

11 So if we can set the time frame,
12 we'll figure out who's available, so that we
13 have to do less scrambling or less contingent
14 stuff. It's always going to be hard because
15 things slip and there's classification issues,
16 whatever, that are going to come up and delay
17 things, and so forth. So we'll never be
18 perfect, but I think the nice thing is, when
19 we're all here, it does give us an opportunity
20 to try to have everybody's schedule and try to
21 work it out, and it's easier than trying to do
22 it, I think, by email and scrambling, and so

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1 forth.

2 I think we have all experienced we
3 think we've got dates and then I'll send
4 something to Ted, and he'll say, no, somebody
5 else's Work Group has already grabbed that
6 date, or something, or somebody is not
7 available. It is hard.

8 So I think we can at least get
9 more information. We will try to do some of
10 this at each Board meeting. If there is other
11 information or other ways you think would be
12 helpful, let us know, but we will do that.

13 I mean one thing I have been
14 doing, and I think it's working, but would
15 certainly like some feedback, is also
16 assigning only three Board Members to each
17 Work Group, particularly where it's just a
18 Site Profile review or something, because I
19 think it just makes the scheduling easier.
20 And I think it's adequate, but I mean in the
21 past we have generally had four or more.

22 So I would appreciate feedback on

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1 how that works as it goes along. I think it's
2 too early to tell now, but it is just one way
3 of trying to relieve some of the scheduling
4 issues, and so forth. Everyone was getting
5 assigned to so many Work Groups, that
6 complicated the scheduling.

7 So good. Okay.

8 MR. KATZ: Okay. So I will send
9 out a new schedule with availability for
10 October and November, so that we can fill it
11 in with other possibilities.

12 CHAIRMAN MELIUS: Yes. Okay.

13 I believe we're scheduled for a
14 break now. So why don't we plan on being back
15 here at one o'clock?

16 (Whereupon, the above-entitled
17 matter went off the record at 11:35 a.m. and
18 resumed at 1:24 p.m.)

19

20

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1 button, and then pressing *6 again will take
2 you off mute. Thank you.

3 CHAIRMAN MELIUS: This afternoon,
4 at least for the first part of the afternoon,
5 we are going to discuss the SEC Evaluation
6 Work Group sort of ongoing review on the less-
7 than 250 day health endangerment issue.
8 However, we have been working on this a while.

9 I'll give a brief sort of overview
10 of what we have done, and so forth. Then
11 Arjun will present some of the information on
12 some of the sites that we are involved in.
13 Then NIOSH will have some comments also.

14 The purpose of this is not to
15 reach any conclusion or decision at this point
16 in time, but to get some Board discussion and
17 sort of figure out how we want to handle this
18 issue going forward -- it's something we have
19 worked on for a while -- and understand the
20 issue better. So, it's sort of an open
21 discussion on this.

22 We have circulated some of the key

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1 documents. There's lots of documents here
2 because I think Ted provided you with some of
3 the key background documents. I provided you
4 with sort of the latest draft of the
5 guidelines that the Board Work Group has been
6 working on, and there's also one of the other
7 documents is a summary report on the three
8 sites, just to summarize what our really
9 several other reports are. Arjun will present
10 that later when we do that.

11 So I think that's sort of the
12 information background on this, and so forth,
13 and we'll get started.

14 I will just note for the record
15 some of our Board Members are dealing with
16 some computer security issues. So they will
17 be rejoining us, I think, over the next 15
18 minutes or half an hour.

19 Stu passes the computer test. I
20 thought we were going to have to get Laurie
21 back. She's on her way to the airport.

22 This issue has been going on for

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1 so long we're not even sure what to call it.
2 We do it because it deals with that. So I've
3 sort of titled for today the less-than 250 day
4 issue. It's not quite right, but I guess it's
5 close enough, at least for discussion purposes
6 to do that.

7 My guess is from the reports, and
8 so forth, this goes back to at least 2006. It
9 may even be a little bit longer that we have
10 been meeting to discuss this. I believe it
11 first came up with the Ames Site.
12 Subsequently, we talked about it a little bit
13 with the Met Lab and also with the Nevada Test
14 Site.

15 All three of those sites were
16 referred to the SEC Evaluation Work Group to
17 address this issue. These were either the
18 potential for consideration of someone less
19 than 250 days as health endangerment either
20 came up at our SEC review of the site or just
21 something as we were going through a review on
22 a NIOSH report we noticed that this also sort

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1 of fit into that grouping, and the issue
2 needed to be addressed with that site.

3 We have had many, many Work Group
4 meetings on this to discuss it. It's not
5 always been the only thing on the agenda.
6 We've talked about general guidelines and
7 we've talked about how it would apply to each
8 site. There are reports that address that;
9 also, both SC&A and some NIOSH reports on
10 this.

11 Why is it a problem is because in
12 the regulations, and really in the law in
13 terms of health endangerment, there is not a
14 quantitative threshold on that in terms of
15 exposure. We bifurcated it in the regulation,
16 at least putting this simplistically as 250
17 days of work or presence at a site and that a
18 discrete incident -- I'll go into that more
19 later, but that's been sort of how we have
20 guided this.

21 We had discussions of this when we
22 did the original SEC regulations, about how to

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1 approach this. I remember some of the Board
2 discussions and trying to decide what to do
3 with it. We, I think, continued, probably
4 discussed the same issues, and it is difficult
5 to resolve.

6 I think the context for this, for
7 the discussion here today, is really we are
8 looking at situations that health endangerment
9 is a decision made after the question has been
10 settled of whether or not you can do dose
11 reconstruction, whether it's feasible for that
12 site. If it's not feasible, then there's a
13 review of essentially the health endangerment
14 criteria.

15 But, in other ways, as you will
16 see from some of our discussion, they are
17 linked. But it usually is the general
18 procedure has been to do it sequentially, and
19 that's what's called for.

20 Like all the other issues we
21 struggle with, it's also something that's more
22 of an issue at older sites, where there's less

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1 monitoring, less documentation, and less
2 information to work from.

3 These next two slides are sort of
4 the keywords from the regulation. Every time
5 we go into a review of this, we sort of
6 memorize these and pick out keywords and tend
7 to forget them by the next meeting. But some
8 of these are key.

9 What we are trying to do going
10 forward is really to focus on these and try to
11 come up with some guidelines or guidance on
12 how it would apply in situations that we're
13 dealing with. So let me just briefly read
14 this.

15 What the regulation says is, "For
16 Classes of employees that may have been
17 exposed to radiation during discrete
18 incidents, likely to have been involved in
19 exceptionally-high exposures such as nuclear
20 criticality incidents or other events
21 involving similarly high levels of exposures
22 resulting from the failure of radiation

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1 protection controls, NIOSH will assume for the
2 purposes of this section that any duration of
3 unprotected exposure could cause a specified
4 cancer and, hence, may have endangered the
5 health of members of this Class. Presence
6 with potential exposures during the discrete
7 incident, rather than a quantified duration of
8 potential exposure, will satisfy the health
9 endangerment criteria."

10 I think that's the correct quote.

11 So issues in terms of, what is a discrete
12 incident, what's an exceptionally-high
13 exposure, become, I think, sort of critical,
14 and to a lesser extent, failure of radiation
15 protection, and so forth, also becomes
16 something that may be reviewed as part of this
17 issue.

18 We have gone through this, as I
19 said, discrete incident. We have mainly
20 focused in our discussions so far on
21 exceptionally-high exposures as being what we
22 needed to struggle to try to define in some

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1 way. And I'll go through a little bit of the
2 background on that.

3 Originally, at one point, probably
4 around 2006, we thought that criticality
5 incidents would sort of be a benchmark that we
6 could use for defining these incidents or for
7 comparison purposes. We then had SC&A do a
8 background report on identifying and sort of
9 briefly describing a large number of
10 criticality incidents.

11 And we found that there was a wide
12 range of exposures of those, and that by
13 itself it was not something that would
14 establish a clear threshold for comparison
15 purposes. So we sort of didn't abandon that,
16 but it was just something that wasn't going to
17 be helpful in terms of developing some
18 criteria.

19 We have also had extensive
20 discussions on coming up with other numerical
21 criteria, but that's difficult for a number of
22 reasons, and so forth. And part of that

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1 reason is, with any numerical criteria for
2 what would be an exceptionally-high exposure,
3 we are dealing with a situation where we can't
4 reconstruct dose; therefore, there's a great
5 amount of uncertainty about, well, how do you
6 estimate what the exposure is that you're
7 using for comparison or how high it could be,
8 and so forth? That's difficult, and something
9 that I think will become more important as we
10 look at specific sites or specific candidates
11 for dealing with this issue on that.

12 So, for our most recent meetings,
13 we have come up, and what you will see in the
14 draft guidelines that I circulated is that we
15 would have to reach some sort of judgment
16 based on some general guidelines and some
17 examples as a way of at least specifying or
18 providing a range for what would be
19 exceptionally-high exposures from a discrete
20 incident. And that's what we put forward in
21 terms of the drafts that we have been working
22 with so far in this area.

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1 There are other issues, I think,
2 that are sort of less important for the Board,
3 for us to deal with directly on this. We have
4 had some discussions in our Work Group on,
5 what does it mean with failure of radiation
6 protection controls?

7 We also have issues where some of
8 these sites we're not talking about a single
9 discrete incident; we're having multiple
10 discrete incidents, and that also poses some
11 complications in terms of how we approach this
12 at a particular site because the regulation
13 would seem to specify that it is a single high
14 incident that is the focus for this. It's
15 presence at that incident, a discrete incident
16 of that.

17 We also have in some of these
18 situations, partly based on the lack of good
19 information, monitoring, particularly in the
20 early years, we have some situations where
21 there may be exceptionally-high exposures, but
22 it's not clear that they are occurring from

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1 discrete incidents. I think it is clear in
2 those situations that at least they appear to
3 be exceptionally-high exposures, and it raises
4 the issue of, are we being fair to claimants
5 by requiring the 250 days?

6 In fact, in at least one of these
7 situations, most of the people employed or
8 many of the people employed in this particular
9 site were only there for a few months and
10 wouldn't qualify. Yet, certainly compared to
11 some of the other sites that we have looked
12 at, their exposures would have been much
13 higher.

14 So, it's been in trying to be fair
15 and consistent, think of some way of
16 addressing that. That may be difficult within
17 the current regulations since these may really
18 not be discrete incidents, and we'll have to
19 sort of decide what to do in dealing with
20 those situations, if we want to try to
21 addressing it in some way.

22 So our plan for the Work Group,

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1 next steps, is we want to spend more time
2 looking at the three candidate sites, Ames,
3 Met Lab, and NTS. Then, to the extent that it
4 is warranted, come forward with
5 recommendations on those sites. Then,
6 secondly -- probably this is a misspelling
7 there -- to then finish the guidelines and do
8 that.

9 I'm not sure how we do this
10 stepwise, whether we'll do the guidelines
11 first and then that, but I think we are still
12 not sure how this will work and what would be
13 best to put in the guidelines to make them
14 helpful for our review, and so forth.

15 So what we thought would be useful
16 for the Board to share the information
17 provided is to talk about the three sites
18 because they are the ones that have been
19 referred to the Work Group and where we would
20 like to come to some resolution on, or at
21 least have some idea on a way forward for
22 dealing with these three sites.

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1 So I will stop here. We briefly
2 can take some questions, or if you want to
3 wait until later on after you have heard the
4 other presentations, that's fine also.

5 So anybody have questions?

6 (No response.)

7 Anybody on the phone, Board
8 members on the phone, have questions now?

9 MEMBER GIBSON: This is Mike. Not
10 yet, Jim.

11 CHAIRMAN MELIUS: Okay.

12 MEMBER LEMEN: Not at this time
13 yet.

14 CHAIRMAN MELIUS: Okay. Bill?

15 MEMBER FIELD: No.

16 CHAIRMAN MELIUS: Okay. Then let
17 me turn it over to Arjun.

18 DR. MAKHIJANI: All right. I'm
19 Arjun Makhijani from SC&A.

20 Over the years, a number of
21 reports were prepared for the Work Group on
22 this topic, the site-specific reports related

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1 to these studies. In the last Work Group
2 meeting we had, the Work Group directed us to
3 summarize what was relevant, you know, in the
4 context of the discussions that have been had
5 in the Work Group. So it might be helpful in
6 both perhaps providing some way forward on
7 these specific sites and on developing
8 guidelines. So that's what we have done.

9 You have a PA-cleared as well as
10 full report with the specifics of doses and
11 claimants, and so on, with you. I believe
12 both were circulated.

13 So we look at these three case
14 studies, Ames to 1954, Met Lab, and NTS, which
15 I split into two periods, atmospheric and
16 underground testing. We haven't really looked
17 as carefully at the underground testing period
18 from the less-than 250 day period, but I
19 wanted to give you a brief recap of what we
20 have.

21 Okay. You've already seen this.
22 Dr. Melius talked about it. As he mentioned,

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1 the direction of the last Work Group meeting
2 was to take the key phrases, and HHS counsel
3 as well as the Work Group reminded everybody
4 that while we're considering the individual
5 phrases, the intent is to look at the
6 paragraph as a whole and to kind of place the
7 meanings of these things in that context. So
8 that's what we have tried to do, as I go
9 through these examples.

10 Now 42 CFR 83 has that criticality
11 example in the paragraph itself. Then, in
12 other parts of 42 CFR 83, where it says who
13 might file an SEC petition, it has a couple of
14 other descriptions, although they are not part
15 of the paragraph that says less than 250 days
16 SEC can be granted.

17 The second bullet is important,
18 depressed white blood cell count or chelation
19 therapy, because that exception paragraph does
20 not have any specific reference to what might
21 be exceptionally high for internal doses. So,
22 initially, we had quite a lot of discussion:

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1 well, you know, how do you feel with 50-year
2 committed doses, and so on?

3 Then, over time, it was pointed
4 out that there are these two specific things
5 in guidance for filing an SEC petition, and
6 that they might constitute a specific internal
7 equivalent for the exceptionally-high
8 exposures that criticality accidents was meant
9 to serve. But you'll see in practice it's
10 quite complicated.

11 So, at Iowa State University, we
12 know that there were these blowouts where you
13 had uranium and thorium tetrafluoride
14 reduction to metal, and there would be a
15 reaction that took place too fast and then the
16 material from the crucible would blow out and
17 cause a lot of dust. There were a lot of
18 blowout incidents, including six documented in
19 one day.

20 The very important sort of point
21 in this example is that we know there were
22 incidents. We know there were many of them.

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1 But we cannot place any individual. We don't
2 know Worker X was on such-and-such day in this
3 blowout because that information simply does
4 not exist. So we know that most of the people
5 were there routinely, and perhaps people that
6 were not there so often would have very likely
7 experienced a blowout, but we can't relate the
8 blowouts to individual workers.

9 And we haven't considered the
10 residual period at all. We've just considered
11 the production period during which these
12 blowouts would have occurred.

13 So what we did in following the
14 Work Group's direction was to prepare a table
15 with the key terms, so that you could see them
16 all together and give you a sense of where the
17 existing data stands. As I go through this,
18 you will see that all of the kind of points of
19 difficulty that Dr. Melius talked about are
20 illustrated.

21 So, in the reports that SC&A did
22 on Ames, we attempted to calculate what might

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1 have been an exposure during a blowout, what
2 might have been an intake during a blowout. A
3 hundred nanocuries. But the idea wasn't to do
4 a dose reconstruction. The idea was to come
5 up with a number that was plausible which
6 might indicate whether exposures were high or
7 not.

8 Now we didn't make a judgment
9 about whether chelation therapy would
10 definitely be considered today, but probably
11 maybe considered. And there might be a
12 mixture of consideration here, depending on
13 the number of incidents or a single incident.

14 NIOSH also did one report on this
15 topic. While there were some arguments with
16 the specifics of how SC&A did its estimate,
17 there was sort of a general agreement that you
18 could come up with some idea of what happened
19 during a blowout.

20 NIOSH also tried to reconstruct a
21 thorium dose based on some bioassay data, but
22 those bioassay data are not known to be

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1 related or not related to any incident.

2 And the results of that dose
3 reconstruction were that you could get lung
4 doses, you could estimate lung doses as high
5 as, I think the first year was 8,000 rem, and
6 50-year committed doses, obviously, were
7 higher than that. This was considered
8 implausibly high by NIOSH.

9 But the bottom line for this
10 particular discussion is that we have a range
11 of estimates out there, including doses in the
12 tens or hundreds of rem to the lung and bone
13 or doses that were considered implausibly high
14 that can't be related to an incident. But,
15 generally, if you look at other exposed
16 workers, they might be considered high.
17 Whether they would be considered high in terms
18 of chelation, you would have to have a more
19 precise intake estimate. Now the exposure,
20 the duration of the incident was brief
21 generally, less than one day in terms of
22 exposure, maybe minutes.

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1 The second example is Met Lab. As
2 you know, it is famous for the first chain
3 reaction, but there were also a lot of other
4 things going on, including potential internal
5 exposures to plutonium, as I will show you.

6 And here we come across situations
7 where it's not clear that we can actually
8 calculate anything. It's clear there was
9 contamination, and it's not clear whether
10 there were incidents.

11 So, there are some discrete
12 external exposure type of situations where
13 some workers were involved in handling radium,
14 and there is a discussion of what might be
15 regarded as a failure of radiation controls in
16 the sense that exposures were known to be
17 higher, much higher, than the tolerance doses.

18 Now this was in the normal
19 performance of job duties. So you will have
20 to decide whether this would constitute an
21 incident. It certainly wasn't an accident
22 because somebody was doing something they were

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1 required to do and were getting above
2 tolerance, quite a bit above tolerance doses
3 every day as a result of that.

4 Now, in some cases, there were
5 blood count changes. We have some
6 documentation of what that meant at that time
7 in terms of the prevailing practices.

8 So, for the Met Lab documentation,
9 it says that more than 21 rads, white blood
10 cell count would be more than 21 rads, but
11 there's no actual number.

12 At Y-12, we have documented that
13 they didn't detect white blood cell count
14 changes for doses as high as 300 rads. So
15 that maybe much higher qualification that you
16 see is based on then contemporaneous data from
17 Y-12. So we don't know how to put a limit or
18 bound a dose or have an approximate number,
19 but we know it's more than 21 rads.

20 There was an incident where there
21 was an exposure related to cyclotron where
22 there was also documented blood count changes,

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1 but we have no details on this incident at
2 all. It's simply mentioned in one report.

3 Now I have to qualify this. We
4 have produced a report on the Met Lab, but we
5 haven't been directed to do an exhaustive
6 effort on any one of these incidents to make
7 sure that we have all the available
8 information. We haven't gotten to that point
9 yet.

10 Then there were plutonium
11 exposures at Met Lab. In these cases, it's
12 not known, we had no information as to whether
13 it was related to an incident.

14 We have one case of a fecal sample
15 where you can make a low-end estimate,
16 certainly not a bounding estimate. We have no
17 bioassay data, no air concentration data. So
18 this 7 rem and 12 rem might be considered as
19 simply that we know that the dose is more than
20 this, but we don't know how much. Therefore,
21 we don't know whether chelation might have
22 been used or not. We don't know whether there

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1 was an incident, and we don't know whether
2 there was a failure of radiation controls. So
3 there are several situations like this.

4 In another case, there was
5 plutonium tracked into workers homes, on their
6 faces, on their skin, refrigerator. Again, we
7 don't know whether this was a result of
8 routine contamination occurring during
9 processing, whether there was an incident, but
10 it was certainly noted as a problem in the
11 documentation of the time. Again, we don't
12 know if there is an incident, and we have not
13 enough information to make any dose
14 calculation at this time. We haven't
15 attempted to do that.

16 All right, the Nevada Test Site,
17 so I divided this into atmospheric testing and
18 underground. Atmospheric testing, we actually
19 did a specific report.

20 Maybe some of the Board members
21 don't have all of these reports, and if you
22 would like, please tell me. I would be happy

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1 to send them to you because I have them in my
2 computer right here, and I can do it right
3 away.

4 So there is external and internal
5 examples of this, and there were high
6 exposures during Operation Teapot, but those
7 are documented. We know those exposures.

8 Now one of the big things that has
9 come up is, if you can put a number to a dose
10 during an incident, does it meet the SEC
11 criteria? This appears to be an unsettled
12 issue for you to consider, in that when you
13 get to health endangerment, you have already
14 said you can't do dose reconstruction. But,
15 at the same time, you may have dose
16 information for the incident. So whether you
17 are considering health endangerment for the
18 incident or whether you are considering that
19 as a new SEC all by itself is kind of an
20 issue.

21 At the Work Group meetings, we
22 have talked about 25 rads to 50 rads as

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1 meeting the definition of a high dose.

2 There's been no numerical resolution to this.

3 I just have noted this to give you a little
4 bit of a sense of what the Work Group
5 discussions have been like.

6 So there have been some internal
7 dose issues during the atmospheric testing
8 period. Now we know there were bioassay data
9 after Shot 4, the plutonium safety test that
10 had a criticality associated with it. So
11 there's an accidental criticality here. We
12 have some high external exposures.

13 The indicated internal intake, the
14 high end of it would qualify by NCRP
15 guidelines for chelation therapy today, at
16 least by our calculations.

17 And then, again, you have a
18 question as to whether this would qualify for
19 high exposure. It would appear to qualify for
20 high exposure, but we're not sure, and have
21 not investigated, whether the external and
22 internal intakes took place at the same time.

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1 So that's an open question.

2 Underground testing, there are a
3 couple of incidents that we know about. There
4 was Yuba in 1963, radioiodine exposures, and
5 there was an external exposure incident. I'm
6 not going to show you that slide. I have a
7 more redacted version, but I'm going to skip
8 over that slide.

9 You have the non-PA cleared
10 version of this. So you will have all the
11 numbers, but I can summarize for you that
12 there was an incident during cobalt-60 source
13 change out where there were high organ doses,
14 and those organ doses may meet the criteria of
15 exceptionally-high exposures. There have been
16 explicit estimates. So here, again, you have
17 the question of whether you have high
18 exposures, whether you can estimate the dose,
19 and whether that qualifies under the rule.

20 Yuba, highest recorded thyroid
21 exposures during 1963. There was a failure of
22 radiation controls. That is quite

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1 well-documented and was investigated at the
2 time, and there was a several-hour incident at
3 which workers were present.

4 And this just summarizes that we
5 have done a number of reports, two reports on
6 Ames and a NIOSH response, one report on Met
7 Lab, one on NTS atmospheric testing, all
8 dedicated to this one issue, quite apart from
9 other reports that have been done.

10 Then there was one SC&A issue that
11 was called "Parsing Health Endangerment
12 Criteria." I believe that was probably the
13 first one that we produced, and that was the
14 team that produced this report.

15 CHAIRMAN MELIUS: Okay, thank you,
16 Arjun.

17 Any questions for Arjun at this
18 point?

19 (No response.)

20 Any of the Board Members on the
21 phone have questions at this point?

22 (No response.)

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1 Okay. If not, then Sam Glover
2 will have some comments from NIOSH.

3 DR. GLOVER: Thank you, Dr.
4 Melius.

5 I would like to extend my
6 appreciation to the members of SC&A and my
7 team. We picked this up in January, and as
8 Dr. Melius said, it has been something that
9 has been going on for a long time. It's been
10 four years we have been looking at Ames and
11 some of these other facilities. We have
12 discussed this quite a bit in technical phone
13 calls, had several meetings, and it's a
14 complicated issue and bears a lot of
15 interesting analysis.

16 So at our last conference call, we
17 agreed to review some cases that SC&A put
18 forth. I would like to make a brief comment.

19 So in the July 31st working
20 conference call, we agreed to review the
21 examples as provided by SC&A. So I want to
22 state that we reviewed them as they were put

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1 forth. We didn't try to add any additional
2 detail or try to find the point and
3 counterpoint that gets involved when you get
4 into the very detailed kind of analysis. We
5 let them pretty much stand at face value.

6 And something that I really want
7 to point out is that we really had to make
8 sure that the dose must be infeasible to be
9 reconstructed and then you look at these
10 particular discrete incidents for it to be
11 considered for the basis of a Class. So it
12 is, for that incident, if it's infeasible,
13 then you can move forward to find out is that
14 an exceptionally high exposure that is so
15 egregious that it would warrant presence and
16 not this 250-day, so an exception to the
17 length of time required. So there is this --
18 for that very specific, independent,
19 individual discrete incident.

20 So a general comment also would be
21 that, apparently, or based on our review, just
22 this very quick review, many of the examples

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1 that have been put forth are plausibly bounded
2 based on, again, our preliminary review.
3 Again, some of these have been going on for
4 four years. So I don't want to -- you know,
5 before the Board, it's not something that is
6 preliminary. There's been a lot of
7 discussions back and forth. But based on the
8 evidence put forth and the SC&A review, we put
9 forth that, based even on the words that they
10 have used, that they are actually plausibly
11 bounded.

12 So, again, due to the short time
13 available to review these, our opinions are
14 based solely on the information contained in
15 the SC&A report and also based, obviously, on
16 the current rule that exists. There has been
17 discussion about rule changes or what makes
18 more sense, but everything right now is based,
19 obviously, on the current regulation and rule
20 that is set forth as we believe we understand
21 them.

22 Chelation was brought up. It's

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1 kind of an interesting way to start out. Dr.
2 Art Wahl was a colleague of mine, and he
3 actually was a co-discoverer of plutonium in
4 1943. And after they got done building the
5 bomb, his quote was, "We've built it. Now
6 develop in vivo methods and chelation methods
7 to get it out of us." So there was no
8 chelation before 1946. So these early time
9 frames, they were hoping to get some method to
10 actually alleviate it. So I just thought I
11 would bring that up, somebody I got to work
12 with which was rather unique.

13 So I'm just going to go directly
14 into the cases that have been previously set
15 forth. We chose a fairly simple format to
16 respond.

17 So for Ames Laboratory, I want to
18 be specific that the basis for the current
19 Class is the inability to reconstruct thorium.

20 So we concluded that it can reconstruct
21 uranium dose. So there's no infeasibility.

22 So the Ames blowout incidents,

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1 which the basis for the Class was our
2 inability to reconstruct doses from the
3 thorium blowouts. So I will speak to each of
4 these individually.

5 So there's the uranium blowouts,
6 based on our current analysis, can be
7 reconstructed. So there's no reason to go to
8 Part 2. We've already established that
9 there's no infeasibility at that point. That
10 particular incident has to be infeasible,
11 then, to go to the next phase.

12 So for a thorium blowout, the
13 first criteria is can we reconstruct dose for
14 a single incident. So NIOSH evaluated the
15 SC&A report and observed that while it was
16 likely high-sided, it provided a valid
17 framework for consideration of dose for a
18 single incident. Thus NIOSH believes dose
19 from a single incident is bounded.

20 So only by combining this with an
21 observation that an unknown number of
22 incidents occurred did NIOSH reach the Class

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1 Definition that came forth, which was that we
2 can't do dose reconstruction at Ames. So
3 NIOSH comments based on the observations set
4 forth in the SC&A report, "It is not possible
5 to reconstruct the dose associated with an
6 unknown number of multiple discrete
7 incidents."

8 So for the Metallurgical
9 Laboratory radium source handling, the basis
10 for the current Class is the inability to
11 reconstruct internal or external dose from
12 plutonium, radium, fission products, uranium,
13 and progeny. So the SC&A report indicates a
14 chronic exposure scenario on the order of up
15 to several rem per day. So we don't see any
16 evidence put forth or really established for a
17 discrete incident.

18 A several-rem-per-day exposure
19 does not, we believe, necessarily meet the
20 criterion for exceptionally high exposure from
21 a single incident, as put forth in the
22 regulation. So based on the observations set

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1 forth in the SC&A report, the criteria for
2 establishing health endangerment based on
3 presence during the discrete incident may not
4 have been met.

5 So for the cyclotron exposure, and
6 again, this is the same current Class, we see
7 that insufficient evidence was available to
8 determine if a discrete incident was actually
9 involved. So if exposure to a discrete
10 incident occurred, the blood changes appear to
11 meet the definition of exceptionally high
12 exposure.

13 So for the plutonium case 1, the
14 basis, again, the same basis for the Class.
15 The description of the case put forth in the
16 SC&A report we believe fails to establish a
17 discrete incident. If this dose were a
18 discrete incident, the 7 to 12 rem internal
19 dose cited we don't believe would meet the
20 criteria for exceptionally high exposure. So
21 based on the observations set forth in the
22 SC&A report, that criteria of establishing

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1 health endangerment based on presence during a
2 discrete incident may not have been met.

3 For case 2, a description of the
4 work again fails to establish a discrete
5 incident. The worker doses for an externally-
6 contaminated worker would not, in and of
7 itself, meet the criteria of exceptionally
8 high exposure. Again, therefore, based on
9 these criteria set forth, establishing health
10 endangerment based on presence during a
11 discrete incident may not have been met.

12 So the NTS atmospheric testing
13 external exposures. So the basis for the
14 current Classes. In `51 through `62, internal
15 doses from suspended or resuspended
16 radiological materials; from January 2nd, `63
17 through 1992, internal dose for all members of
18 the Class.

19 We note that several examples
20 might qualify as discrete incidents. However,
21 we also put forth that exposure rate data does
22 not in itself establish dose to an individual.

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1 So that external dose might be reconstructed
2 using the dose rate information and stay
3 times.

4 So based on the observations set
5 forth in the SC&A report, the criteria, again,
6 for establishing health endangerment based on
7 the presence during a discrete incident might
8 not have been met. Actually, I believe that
9 may be the failure to establish infeasibility
10 may not have been met.

11 All right, so I think we are at
12 the plutonium exposures here. So for the
13 plutonium exposure for NTS, the description of
14 the case put forth in the SC&A report does not
15 clearly identify a discrete incident. The
16 existence of bioassay data implies that the
17 internal dose to this worker may be able to be
18 reconstructed. So, again, because of the
19 feasibility component, we believe that the
20 criteria associated with this presence versus
21 time may not have been met for this example.

22 For external exposure, a cobalt-60

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1 example appears to qualify as a discrete
2 incident. The existence of dosimeter badge
3 readings seems to indicate that the doses
4 could be reconstructed. So, therefore, you
5 haven't found an infeasibility to reconstruct
6 dose. So, therefore, you wouldn't go to step
7 two.

8 For the radioiodine exposure, the
9 iodine example Yuba event appears to qualify
10 as a discrete incident. The existence of
11 thyroid measured uptakes in dose estimates
12 seems to indicate the doses can be
13 reconstructed. So based on the observations
14 set forth in the SC&A report, we don't believe
15 that we have established a basis for health
16 endangerment or going down the path for
17 reviewing health endangerment, based on the
18 presence of a discrete incident may not have
19 been met for an infeasible discrete incident.

20 And finally, the final plutonium
21 exposure for NTS underground testing. The
22 underground testing of plutonium does not

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1 clearly identify a discrete incident based on
2 our review of the data that we put forth.

3 The existence of bioassay data
4 implies that internal dose to this worker
5 could be reconstructed. So, again, therefore,
6 based on the observations set forth in the
7 SC&A report, we don't believe that, again, we
8 have met the criteria.

9 So with that, I certainly would
10 take any comments or questions from the Board.

11 CHAIRMAN MELIUS: Any specific
12 comments or questions for Sam?

13 Yes, Phil?

14 MEMBER SCHOFIELD: Okay, I've got
15 one on the blowouts. How you can tell us that
16 you can bound the internal dose without
17 knowing how much they actually took in?

18 DR. GLOVER: For which one, sir?

19 MEMBER SCHOFIELD: For the
20 blowout, the thorium blowout.

21 DR. GLOVER: For the thorium or
22 the uranium blowout, because the uranium

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1 blowouts we have bioassay data. There was a
2 report put forth by SC&A which established --
3 it was reviewed by the Work Group, the team.

4 One of the things that makes this
5 difficult is there is a series of Working
6 groups, all who deal with the very, very
7 specific details. Up to this point, I really
8 haven't been part of that.

9 So the thorium exposure that's put
10 forth, there have been hypotheses -- not
11 hypotheses. There's been proposed models to
12 actually come up with a reconstructable dose.

13 So NIOSH still contends that that proposed
14 model is valid, that the model, the proposed
15 method for reconstructing dose for thorium
16 blowouts, based on, I believe, uranium data --
17 and certainly correct me if I'm wrong. I have
18 several colleagues in the audience who are
19 very close to this. So that we believe we can
20 reconstruct dose from thorium.

21 I believe, also, the amount of
22 material for thorium was much less. These

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1 were small ingots. So this is where you get
2 into, if you have to review everything -- we
3 only review these based on the data put forth
4 in the SC&A report. We didn't really try to
5 get into a very detailed point and
6 counterpoint and didn't want to try these
7 points in -- not try them, but try to
8 completely go into all the details in front of
9 the Board. We really tried to only review the
10 facts that were put in front of us.

11 CHAIRMAN MELIUS: Arjun, we will
12 let you comment.

13 DR. MAKHIJANI: Just a small
14 clarification on this and a couple of other
15 things. The SC&A report didn't attempt to or
16 present itself as creating an upper bound for
17 a blowout dose. Actually, we had some
18 information from Fernald. We had some
19 estimates of how big the building might be and
20 a number of other things including, if I
21 remember correctly, one or two assumptions
22 that would indicate that that piece of it

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1 would make it not an upper bound dose.

2 So it was presented as a way of
3 creating a ballpark idea of where the dose
4 might be, so if you come up with an idea that
5 the committed dose was 10 rem, then you could
6 walk away from a committed organ dose of 10
7 rem or 5 rem, and you could walk away from the
8 idea that it was exceptionally high.

9 But if it was 50 or 100 or 200, as
10 it turned out to be the case, then you would
11 have a question of whether you want to
12 consider this internal dose as exceptionally
13 high.

14 The idea of the SC&A work at least
15 was not to create a model for dose
16 reconstruction, and certainly not for bounding
17 the dose. That's also true of some of the
18 other things I presented to you, like the 7 to
19 12 rem example was explicitly cited as a low-
20 end estimate and not a bounding because we
21 only have one fecal sample.

22 We also pointed out -- I agree

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1 with Sam on a number of these things -- it's
2 not clear that these are incidents and whether
3 they would fall into -- but all of these
4 things were not -- the dose estimates that we
5 made were not made with the idea that they are
6 bounding doses or modeled doses.

7 The short answer here is that
8 there were many different ideas and you could
9 discuss whether they are exceptionally high or
10 not.

11 CHAIRMAN MELIUS: And can I just
12 add, Sam is relatively new to this effort, and
13 we had been working with Jim Neton before.
14 He's conflicted now on this particular Work
15 Group at least with regards to this situation.

16 So this has got a long history of back and
17 forth.

18 So the conundrum on Ames, I think,
19 is that, yes, theoretically, you can maybe
20 reconstruct one dose, but when you get an
21 actual case, an individual, they may have
22 multiple incidents and you are not sure which

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1 one they were exposed to. So is it the one
2 you have got information on or not? Then,
3 given the basic problem of reconstructing
4 thorium, it is even more difficult at this
5 site. It is sort of hard to figure out where
6 it falls in.

7 At one point, we actually thought
8 the way to deal with Ames was to reconstruct,
9 but then it turns out you can't because there
10 are multiple incidents, you don't have enough
11 information on them. You can't really -- that
12 isn't practical for that.

13 So then we are sort of caught in
14 between here sort of figuring out what to do.

15 I think, yes, theoretically, you can. That
16 is one thing for an incident, but then you
17 have sort of this concept we talked about in
18 sort of other situations, like General
19 Electric. What's the probability of -- if
20 there's a high probability a person was
21 exposed at a significant incident, one of
22 these incidents, then, that may have

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1 exceptionally-high exposures, then does that
2 qualify?

3 It's not easy, and I don't think -
4 - the problem is I don't think we ever
5 contemplated this when we were dealing with
6 the original regulation. So we are trying to
7 make something fit the actual situations that
8 we're involved in and do that. So it is a
9 long history of trying different approaches
10 that might work or might not.

11 And I would just add, on the
12 Nevada Test Site, one of the things we were
13 trying to do is that, well, it may only be
14 that when NIOSH goes to do an individual dose
15 reconstruction that you discover whether or
16 not you have enough information on that
17 individual to be able to do the accurate dose
18 reconstruction for him or her, based on
19 whether their exposure would include one of
20 these incidents. But, then, do we have a
21 whole bunch of individual 83.14s? Basically,
22 you would have to determine on a case-by-case

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1 basis, which is sort of unwieldy and certainly
2 would take a lot of time and effort.

3 So is there a more general
4 approach that could be used? I don't think we
5 are there yet on NTS. So it is complicated
6 and difficult. I don't think any of these --
7 if these were straightforward, we wouldn't be
8 still talking about them five years after we
9 started or four years. At least on the Ames,
10 we have claimants that are -- have been
11 waiting.

12 I mean another issue that has come
13 up is that, when we were originally doing the
14 SEC determinations, we didn't think of
15 whether, even contemplate whether you would
16 want to reconstruct for during an incident.
17 So we say you can't reconstruct thorium.
18 Well, now are we going to go back? Do we
19 start over again, when we have an incident, do
20 the whole feasibility, dose reconstruction
21 feasibility, or should we think of it at the
22 time?

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1 Then that's further complicated by
2 the fact that I think we don't have a lot of
3 information on these incidents, and they may
4 not even be recognized in our initial review
5 on the SEC. So we sort of have to think how
6 we are going to approach these.

7 Brad, you have a question?

8 MEMBER CLAWSON: Yes. When I was
9 listening to this, Sam -- and correct me if
10 I'm wrong -- but you made the comment that
11 NIOSH felt that this wasn't a high exposure.
12 So do we have a number that you consider as
13 high exposure?

14 Because I look in my industry
15 right now, and if I get anything over a
16 certain amount, they classify that as a high
17 exposure. I'm looking back in the time frame
18 20 years ago, that if I received a certain
19 amount, you know, I had to go to the
20 principal's office and everything else because
21 it was classified as high exposure. And we're
22 talking in the Rs, and I was never near any of

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1 that.

2 The thing that bothers me, and I
3 feel everybody's pain on this, is the
4 perception, what do you classify as a high
5 exposure? Because everybody is going to have
6 something different. They classify a high
7 exposure as, if I go over my RWP, boom, we're
8 done; we're into problems.

9 And I'm wondering, and I know it
10 is hard to interpret something that somebody
11 else has put together.

12 MR. HINNEFELD: Well, we all
13 recognize that this is a difficult issue, and
14 it is all based in subjective language and
15 it's going to end up being judgments. I think
16 certainly NIOSH would take the position that
17 the administrative controls established today
18 or in any recent year -- exceeding an
19 administrative control would not be an
20 exceptionally large exposure.

21 The kinds of examples that are
22 listed, while some of them you can take issue

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1 with and you can interpret them in different
2 ways, the one that kind of rings true to me --
3 and this is me -- is the blood changes. You
4 know, it's particularly in blood changes. So
5 it is really a description of a deterministic
6 effect rather than a probabilistic effect, you
7 know, cancer later on. So the deterministic
8 effects are the things that you see from high
9 doses, typically seen in accidents.

10 And from our reading of this, that
11 is the kind of criteria you are laying out for
12 an extremely large exposure. I mean that's
13 our reading of it.

14 MEMBER CLAWSON: Well, and I
15 understand that. Being on the Nevada Test
16 Site, I know that we have gone around this,
17 too, because they were talking criticalities.
18 Well, I think when a bomb blows up, it's kind
19 of critical.

20 MR. HINNEFELD: Certainly the
21 inclusion of a criticality incident, even an -
22 - incident in something like the Y-12

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1 incident, if you look at all the doses, all
2 the people who evacuated from the building at
3 the criticality event, you are going to have
4 this enormous range of doses from that
5 criticality.

6 I would think that in the minds of
7 the authors they were thinking of people in
8 the vicinity where the criticality occurred as
9 the people who were exposed to an incident
10 with extremely high exposure because they were
11 the ones who were proximal to the actual
12 criticality, rather than the people who were
13 300 yards away at the other end of the
14 building, or however big that building was.

15 So to us and to our discussions
16 that we have had internally recently
17 associated with this issue, is the
18 deterministic effect criterion out there is
19 sort of one that rings true to our reading of
20 it. And, again, I wanted to say "our reading
21 of it."

22 CHAIRMAN MELIUS: Well, then, do

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1 you have a threshold number you want to
2 associate with a deterministic --

3 MR. HINNEFELD: I suspect there
4 are far better radiation biologists in the
5 room who could do better than I on that. It
6 is usually, I would say, at least tens of rem,
7 wouldn't you say, tens of rem?

8 CHAIRMAN MELIUS: Yes, actually,
9 David was first, and then John.

10 MEMBER RICHARDSON: I had a few
11 questions about this.

12 One, as a starting point, was --

13 MR. KATZ: David, it's just hard
14 to hear you. If you could pull it closer?

15 MEMBER RICHARDSON: Sam, your
16 presentation started off with laying out a
17 condition of feasibility which really moves
18 the stake in this argument or plants a stake
19 on a piece of turf that is not sketched out
20 here in the regulation.

21 I was interested in that because
22 really I read this as an intention that

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1 there's an SEC-constructed -- there are a
2 group of people who can't document that they
3 were present for 250 days or more. So they
4 don't go into the NIOSH system. And yet, the
5 authors of this text say, well, there are
6 situations in which the dose rate is
7 exceedingly high, and it's -- and presence
8 with potential exposure during one of these
9 discrete incidents of high dose rates, rather
10 than a quantified duration of 250 days or
11 more, will satisfy the health endangerment
12 criterion.

13 So I can picture that in my head,
14 what they are kind of imagining. And what
15 they are imagining is not, well, we could take
16 an estimate of the dose rate and bound based
17 on some kind of assumptions about how long
18 they were at different distances from this
19 event.

20 So you are making an argument that
21 it is feasible, and I agree with you that it
22 is feasible, but I don't really see

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1 feasibility as part of the intention here.

2 DR. GLOVER: There are several
3 actually steps in this, C and D, and there is
4 a feasibility component that has to first be
5 established. If you read the next paragraph,
6 it says then you state that incident for which
7 it is infeasible, and then you go to this
8 exceptionally high. So there is this -- there
9 seems to be this stepped approach.

10 So you need to stay very focused
11 on this feasibility starts out and it can't be
12 some other -- so I am going to let my boss
13 talk because I see him walking up behind me.

14 MEMBER RICHARDSON: Okay.

15 MR. HINNEFELD: Sam was describing
16 a position that we labor under, which is that.

17 If you read this regulation and read it
18 carefully, or I don't know if you are reading
19 it carefully or not. Passages of this
20 regulation lead you to that position. Okay?
21 Certain readings of the regulation lead to
22 that position.

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1 I know now that not all readings
2 of that regulation take everybody to that
3 position. I stopped trying to explain to
4 people what regulations meant the day I found
5 out that there's an area of law called
6 statutory construction which actually applies
7 to regulatory construction as well.

8 The way the words are put together
9 in the lawyer's mind have importance in how it
10 is carried out, what it means. And when I
11 found that out, I stopped trying to explain to
12 people what regulations mean.

13 Now this gets me to the point I
14 kind of wanted to -- the point that NIOSH
15 would like to talk about on this, and I know
16 Dr. Melius is being cautious and he wants to
17 make sure we are compliant with regulation,
18 and that's my desire, too. It serves none of
19 us very well to recommend to the Secretary
20 something that her lawyers say is not
21 compliant.

22 And the lawyers are loathe to

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1 provide us advice on a hypothetical position.

2 So I am saying, how do we get out of this
3 catch-22?

4 If there is a position to take
5 that you would like that is different than
6 what we have described as our reading of the
7 regulation, and you think that is a position
8 that we think a reading works with, and that
9 is a position we would like to take, and form
10 it with the basis for why you formed it, but
11 don't act on it, consider it as sort of an
12 item for future consideration, or whatever
13 term you could use. Don't vote on it because
14 when you vote on it, it starts a time -- a
15 calendar on the Secretary and a calendar on
16 OGC, and they may not get done.

17 They may not get to -- if you took
18 a position that you wanted to understand, get
19 an evaluation of legality, they have indicated
20 to me that they will provide an opinion on the
21 position when it is established, but
22 preferably not voted on because then you are

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1 not on the clock.

2 So I'm not saying for today; I'm
3 not saying for whenever you want to do it.
4 I'm not trying to suggest what the Board
5 should do. It is an avenue that I think gets
6 us out of this circular, well, only OGC can
7 opine on legalities, and they aren't going to
8 opine on hypotheticals.

9 MEMBER RICHARDSON: Could I ask
10 you one other follow-up? This piece of text
11 that is in front of me relates to 83.13s. Is
12 there a parallel set here for the 83.14s?

13 MR. HINNEFELD: I don't know.

14 CHAIRMAN MELIUS: I think it
15 refers back to 83.13, yes.

16 MEMBER RICHARDSON: But is that a
17 -- because I am sort of wondering. Because I
18 can imagine a claimant coming forward and
19 saying, "I worked less than 250 days, but I
20 was present at a criticality accident, and I
21 want to be," and then initiating an SEC for a
22 particular accident. Whereas, if the ball's

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1 in NIOSH's court and they have to begin to
2 define a roster of all possible high dose rate
3 situations, that seems like a much bigger
4 task.

5 MS. HOWELL: I think, as Dr.
6 Melius said, 83.14 refers back to 83.13, and
7 you just have the same process. I don't see
8 any reason why you couldn't have a petition
9 based on a discrete event, but then you would
10 revert back to the original finding of
11 infeasibility as being a condition to this
12 event to determining that a discrete event had
13 occurred and, therefore, the health
14 endangerment requirement is met.

15 CHAIRMAN MELIUS: Can I just add -
16 - Emily, you probably should stay there
17 because if I make a mistake you can correct
18 me -- but this is not a requirement from the
19 law. When we originally, NIOSH did the
20 regulations, there was a lot of discussion
21 with NIOSH and the Board about what should be
22 the criteria for health endangerment. We sort

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1 of had the same sort of issue going through,
2 and there are some other issues relevant to
3 that, too.

4 But we decided that we would sort
5 of follow what was in the law as at least
6 providing, I don't know whether you call it a
7 benchmark or what Congress's intent was or how
8 you interpret that, that for the SECs that
9 were included in the law, the original, the
10 gaseous diffusion when it was 250 days, so
11 that was selected. But Amchitka was not the
12 250 days.

13 We thought that there were going
14 to be situations where 250 days might not be
15 appropriate for endangerment. We really
16 weren't sure what those were. We didn't have
17 examples. We sort of thought in general
18 criticality, and there was lots of Board
19 discussion with NIOSH, and so forth, around
20 that point.

21 But we are at a point now where
22 this has never been done. There are, as I

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1 mentioned, at least at Ames there are
2 claimants that don't have 250 days of work
3 there but were present at these incidents.
4 And there may very well be other claimants,
5 too. I don't think we have identified any at
6 Met Lab, but I don't necessarily keep up with
7 all those.

8 So anyway, we sort of went from
9 what was in the law, the set of regulations we
10 had, what we thought where the situation
11 applied, but it has never actually been done
12 yet.

13 We have had these discussions on
14 what would be the threshold. Stu offered his
15 personal opinion on that. And we have had
16 discussions with other people from OCAS and
17 DCAS about this also. I think we all have
18 slightly different interpretations of what --
19 I think we all can agree what will fit. It is
20 the question of where's the threshold, is
21 what's hard.

22 So is it only when there are blood

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1 changes? Is that it? Well, what if they are
2 not documented? Well, then, it's a situation.
3 So it is hard to do. But that background
4 helps a little bit.

5 And, Dr. Poston, you have been
6 very patient.

7 MEMBER POSTON: Well, I'm not sure
8 I am going to contribute, but I did have a few
9 opinions. I think, first off, that even
10 though it is included in your regulation that
11 you showed there, we don't have to do a lot of
12 talking about criticality incidents. Those
13 doses are pretty well reconstructed and
14 documented.

15 When SC&A started this a couple of
16 years ago, I pointed them to the compendium
17 for which all of the criticality doses are
18 established, even for those that resulted in
19 the death of the employee. So those are --
20 even though they are included, those are not
21 ones that have an infeasibility. They have
22 already been done.

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1 Secondly, what is the threshold
2 varies, and the recommendations change. The
3 ICRP now says no exposures above 10 rem, but
4 that is a little ridiculous. It turns out
5 that in the past the National Council on
6 Radiation Protection and Measurements has said
7 25 rem in an emergency and 100 rem to save a
8 life. A skilled cytogeneticist has a lot of
9 difficulty detecting radiation exposure in the
10 blood below about 25 rem.

11 Some of them claim that if you
12 leave me alone and put me in the lab, I can do
13 down to 10. But it's very difficult. So
14 maybe the threshold is 25 rem. I don't know.

15 I was waiting for Dr. Roessler to
16 correct me.

17 CHAIRMAN MELIUS: Gen?

18 MEMBER ROESSLER: I think it
19 depends on the lab, and I have heard anywhere
20 between 10 rem and 25. I don't know that I'm
21 going to contribute anything here, either, but
22 it is a brainstorming session. It is also

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1 kind of warm here, and so my head feels kind
2 of fuzzy.

3 But I wanted to pick up on Stu was
4 talking about deterministic effects and things
5 like blood changes. It seems like, at least
6 in modern-day things, if you have a good
7 measurement of a blood change, you have a
8 biological dose scenario. Maybe that doesn't
9 apply going back very well.

10 But, to me, it seems like, okay,
11 we have this information. We can do some sort
12 of dosimetry.

13 And I guess the next step I would
14 take would be -- now this is probably really
15 far out. So what we are trying to do is allow
16 this person to fit within the intent that they
17 be compensated because they really deserve --
18 now they have a high probability of developing
19 cancer or have developed it.

20 Why can't on an individual basis
21 within this group, if you have the
22 information, do dose reconstruction and give

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1 them that chance? As I told you, I am just
2 brainstorming.

3 DR. GLOVER: For the Class, we
4 have established sometimes you can't do dose
5 reconstruction for -- let's say the blowouts
6 of thorium. We just can't do that.

7 So it really depends on what you
8 are trying to get to. If it is the
9 infeasibility of that particular item, then if
10 we can do it, then there's not an
11 infeasibility, so there is no health
12 endangerment.

13 MEMBER ROESSLER: But then I
14 think, I guess what I am suggesting is if we
15 try to pick up even more on this blood changes
16 deterministic effects, because, to me, those
17 are the things that indicate high exposures.

18 CHAIRMAN MELIUS: Yes, I would
19 just, again, maybe it's reiterating, but what
20 we are saying is that, I mean, again, this
21 Ames, which is the one we have probably worked
22 on the most, and so forth. Again, an

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1 incident, you may be able to bargain and say
2 let's say you can't do the incident. The
3 problem there is then placing the person.
4 There's so many incidents; how do you place a
5 person?

6 They are not that committed well
7 enough in terms of time to know if a person
8 was present at those incidents, but they were
9 so frequent, I mean a person was present at a
10 particular incident, but they were so frequent
11 that the probability is extremely high that
12 they would be there. So that became the, say,
13 again, for argument's sake, the infeasibility
14 in that situation. That doesn't quite fit
15 sort of how we thought about it to begin with,
16 is the problem.

17 Let me do Board Members. Or,
18 Arjun, do you have a comment on that? Go
19 ahead.

20 DR. MAKHIJANI: I just want to
21 make a comment on the Ames situation,
22 especially in light of what Dr. Richardson

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1 said earlier. In that with the thorium, the
2 routine exposures were considered not feasible
3 to reconstruct. And so the thorium blowouts
4 are in that context. So you've got somebody
5 that worked for 150 days whose thorium
6 exposures routinely you cannot reconstruct who
7 was also exposed to blowouts. It is a little
8 bit of a more difficult situation. I just
9 wanted to clear that up.

10 CHAIRMAN MELIUS: Okay. Phil?

11 MEMBER SCHOFIELD: Okay. I've got
12 a question. Maybe Genevieve can answer this
13 one, the first part of it, for me.

14 At what levels would they see
15 these changes in the blood? If this person
16 isn't monitored in the sense that they are
17 taking blood samples to see if they have had
18 any changes, how do we know this person during
19 one of those blowouts didn't ingest 15 grams
20 of thorium, maybe a hundredths of gram,
21 without any bioassay, without any blood
22 samples being drawn? We really don't know

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1 because it would all depend on where they are
2 standing at the time of the blowout, where
3 they are facing.

4 CHAIRMAN MELIUS: Yes, David, and
5 then Paul.

6 MEMBER RICHARDSON: No.

7 CHAIRMAN MELIUS: Okay, Paul?

8 MEMBER ZIEMER: Well, Phil, you're
9 exactly right. I am reluctant for us to get
10 into the blood change thing. I think it is
11 already covered in the regulation. It talks
12 about that in some form or another, does it
13 not?

14 So if someone had the evidence,
15 they could use that to show that they were
16 present. So I think that is sort of a non-
17 issue. I think most of the cases we are
18 worrying about are cases where, as you say, we
19 don't have that information.

20 On the Ames case -- and I have
21 thought about the Ames cases a lot over the
22 past couple of years -- I am sort of at the

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1 point of thinking you really have to deal with
2 it on an individual basis. Someone is there
3 less than 250 days. The starting point is you
4 are going to look at doing a partial dose
5 reconstruction. You can't do the regular
6 thorium.

7 So then you have the question,
8 were they present at a blowout? If the person
9 can confirm that they were present, then I
10 think you are saying that we can bound that
11 part, and that becomes part of the partial
12 dose reconstruction. I believe that is the
13 case on the blowouts. We have said we could
14 bound the blowouts. So you can do a partial.

15 And one of the problems we were
16 having is that in most of those cases at Ames
17 the people really don't know if they were
18 present at the blowouts. They may say, "Yes,
19 I was there at some of them." Do they know
20 the number? Does that show up in a dose
21 reconstruction?

22 And we were trying to think about,

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1 well, could you simply have the condition
2 that, if they were there less than 250 days,
3 and it was likely that they were present at
4 some number of blowouts, they are still
5 covered? But, see, to do that, you have to
6 put a number on this. Like is 10 blowouts now
7 a high dose? And you get into the same
8 debate.

9 So it just seems to me that in all
10 of these cases, and you could talk about,
11 let's take the SL-1. Suppose that you didn't
12 have dosimetry on these folks, and, in fact,
13 on some of the earlier responders, the film
14 badges, I believe, as I recall, were beyond
15 the readability of the badge. So we know that
16 they were more than some number. But it
17 doesn't matter. They were able to reconstruct
18 those doses, and we know that they were
19 present.

20 But suppose you couldn't
21 reconstruct those doses, and it is a
22 criticality, and you had these people going

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1 in. I know that at least some of those did
2 have blood changes. So they would already
3 meet the criteria, and the presence is known.

4 So it seems to always come down to
5 these individual situations. I don't see how
6 you can cover them all in a general statement
7 that goes beyond what we already know about
8 criticality, somatic effects of, specifically,
9 blood changes, and then say, okay, I've got to
10 deal with each one individually.

11 Because we can think of all these
12 hypotheticals, and I am not sure how
13 successful we could write something that is
14 very much better than what we have now. I
15 think that is one reason why we struggled with
16 this for many years.

17 CHAIRMAN MELIUS: Well, yes. Yes.

18 And in Ames -- and correct me if I am wrong --
19 -- because it was infeasible to do thorium dose
20 reconstructions, it has never been done. I
21 mean, in a sense, what you suggested I don't
22 think has taken place for anybody. I am not

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1 sure.

2 Okay, Stu is nodding.

3 And maybe there are other ways,
4 like you suggested, of looking at that. I
5 think our plan would be for the Work Group to
6 spend time, more time, and look at each
7 incident, as long as there was general Board
8 agreement with the general approach, and then
9 we would work with NIOSH.

10 And I will add that I think I
11 failed to mention the Work Group has had
12 extensive discussions with NIOSH on this. So
13 the guidance document, there are guidelines,
14 draft guidelines. We have had input from
15 NIOSH on that. They don't necessarily concur
16 with that, et cetera, but there has been, I
17 think, a good dialogue on this issue. We are
18 just trying to get it to move forward, and we
19 understand sort of the legal interpretation
20 difficulty that Stu mentioned.

21 Any of the Board Members on the
22 phone have comments? I will start with Dick

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1 Lemmen.

2 MEMBER LEMEN: Not at this time,
3 no.

4 There is a lot of confusion on the
5 line. Ted, there's a lot of people talking.

6 CHAIRMAN MELIUS: Yes, I know.
7 Whoever is on the phone talking, I think you
8 need to put on mute.

9 MEMBER LEMEN: I don't have any
10 comments at this time.

11 CHAIRMAN MELIUS: Okay, good.

12 MEMBER LEMEN: I am generally very
13 supportive in trying to work something out. I
14 look forward to more discussion on it.

15 CHAIRMAN MELIUS: Yes, he was hard
16 to hear. He has no comments at this point in
17 time.

18 Bill?

19 MEMBER FIELD: No, I don't. The
20 problems pretty much have been discussed. I
21 don't see, really, an easy way.

22 CHAIRMAN MELIUS: Thank you.

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1 And Mike?

2 MEMBER GIBSON: No, not right now,
3 Jim.

4 CHAIRMAN MELIUS: Okay. Thank
5 you.

6 Any further comments from Board
7 members?

8 (No response.)

9 If not, again, assuming my fellow
10 Work Group Members agree, we will go forward
11 and I think sort of develop some of these
12 individual sites more. There's some
13 background work that needs to be done on
14 those, and so forth. And I think at some
15 point we will come back with specific
16 recommendations, and we will work, obviously,
17 with NIOSH and with counsel on that, so we can
18 move forward.

19 But I thank everybody for their
20 input and help on this.

21 I'm sorry. David?

22 MEMBER RICHARDSON: Yes, Dr.

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1 Melius, just one more comment.

2 CHAIRMAN MELIUS: Yes.

3 MEMBER RICHARDSON: I was thinking
4 back to some of the debates about the atomic
5 bomb survivors and the evidence of biological
6 effects. Using them as indicative of exposure
7 to a given magnitude of dose is really tricky.

8 At least among the A-bomb survivors, I
9 remember there was a big debate about this.

10 Was the dosimetry system in error
11 or do you see presence of epilation in some
12 people who have estimated doses relatively
13 low, absence of epilation in people who have
14 high doses? Then there appeared to be some
15 people who were high responders and some
16 people who were exceptionally-low responders.

17 A lot of those seemed to be concordant.
18 People would show multiple what we are calling
19 deterministic effects or acute effects, but
20 between the people there are differences in
21 their robustness to those effects.

22 That poses kind of a question if

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1 you want to take the presence of blood
2 abnormalities of some type as evidence of
3 their exposure magnitude. Some people are
4 going to be robust to that and some people may
5 not.

6 CHAIRMAN MELIUS: And then tying
7 that to the exposure when they weren't tested
8 for something, but you know it is a high
9 exposure; it's hard.

10 Okay. I think the Board has
11 earned a break time. So, why don't we take a
12 break for 20 minutes and come back around five
13 after 3:00?

14 (Whereupon, the above-entitled
15 matter went off the record at 2:46 p.m. and
16 resumed at 3:12 p.m.)

17 MR. KATZ: We are reconvening.

18 Let me check with Board Members on
19 the phone.

20 Mike Gibson, are you with us?

21 MEMBER GIBSON: Yes, this is Mike.

22 I'm here.

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1 MR. KATZ: Great. And Dick Lemen?

2 MEMBER LEMEN: I'm here.

3 MR. KATZ: And Bill Field?

4 MEMBER FIELD: Yes, I am here.

5 MR. KATZ: Great.

6 CHAIRMAN MELIUS: This will be a
7 quick change. We have a few things. First,
8 we'll have Wanda who will give another update.
9 The Procedures Committee is working so
10 quickly that from break to break she has a new
11 update. We can't keep up.

12 (Laughter.)

13 MEMBER MUNN: Our often efficient
14 contractor is the one that we can thank this
15 for.

16 I have been given the names of the
17 five procedures that will be their next review
18 topics.

19 The first one will be OCAS-IG-001,
20 External Dose Reconstruction Implementation
21 Guideline. OTIB-66, Calculation of Dose from
22 Intakes of Special Tritium Compounds. TIB-8,

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1 Use of ICRP 66 to Calculate Respiratory Tract
2 Doses. PR-3, Performing and Reporting Dose
3 Reconstructions. PROC-80, Conduct of Quality
4 Assurance Audits.

5 They have made an effort to try to
6 cover a broad spectrum of types of procedures
7 that we look at. So, that is what we will be
8 looking forward to for our report next time.

9 CHAIRMAN MELIUS: Okay. Thank
10 you.

11 We also have an update on our next
12 meeting time, full Board meeting, the May
13 meeting. And Phil checked in. The week he is
14 not available will be the 16th through the
15 21st of May?

16 MEMBER SCHOFIELD: Right.

17 MR. KATZ: So he is not available
18 the 16th through the 21st. So we are choosing
19 between the 23rd through the 27th or the 31st,
20 that week, through the 3rd. We wouldn't,
21 obviously, start until the 1st.

22 So I think people had said the 1st

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1 through the 3rd was good. Is that still --

2 MEMBER ANDERSON: Of June?

3 MR. KATZ: No. Well, the 1st
4 through the 3rd would be June. But the 23rd
5 through 27th, was that preferable?

6 MEMBER RICHARDSON: I think people
7 were saying, if we would move it back away --

8 MR. KATZ: Oh, okay.

9 MEMBER RICHARDSON: Is that right?

10 MR. KATZ: So, the 24th, 25th,
11 26th, that's the middle of the week, that
12 week?

13 MEMBER ANDERSON: Of May?

14 MR. KATZ: Of May. Does that
15 work?

16 CHAIRMAN MELIUS: For the Board
17 Members on the call? Dick, Bill, and Mike, I
18 think you were all okay for that week also?

19 MEMBER FIELD: What was the week?
20 I am having a hard time hearing.

21 MR. KATZ: So it is the week, it
22 would be the 24th, 25th, and 26th of May.

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1 Does that work?

2 MEMBER GIBSON: Ted, this is Mike.

3 Yes, that's good.

4 MEMBER LEMEN: This is Dick.

5 That's good.

6 MR. KATZ: Okay. Good.

7 MEMBER FIELD: This is Bill.

8 Good.

9 CHAIRMAN MELIUS: Okay. Thanks.

10 Tentatively, that will be the
11 Nashville, more than tentatively. But,
12 hopefully, they don't have another flood
13 there.

14 We have two items that I know of
15 left. One is Mark's report, including the new
16 dose reconstructions, which we will do
17 tomorrow morning.

18 The other is reviewing the
19 letters. You can ignore the letters that were
20 a handout. There's some changes, or one, I
21 call it a significant rewording, and then
22 others. So we will distribute new ones

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1 tomorrow morning. I think that is just
2 easier, and everyone will have a clean copy
3 and, hopefully, less confusion. We will do
4 that.

5 And I don't think we have any
6 Board correspondence pending or anything else.

7 So, since we have a scheduled
8 public comment period at 4:30, I think what we
9 will do is break and come back at 4:30 and do
10 public comment. We have people signed up. We
11 may also have people on the phone, and we will
12 go from there.

13 MR. KATZ: Okay, until 4:30.

14 (Whereupon, the above-entitled
15 matter went off the record at 3:18 p.m. and
16 resumed at 4:32 p.m.)

17 CHAIRMAN MELIUS: If everyone will
18 get seated, we will get started.

19 We are now scheduled for our
20 public comment period.

21 Ted?

22 MR. KATZ: Let me just check on

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1 the line. I don't know -- Dick, are you with
2 us? Just I wanted to be certain we can be
3 heard.

4 MEMBER LEMEN: Yes, Ted.

5 MR. KATZ: Okay, great.

6 MEMBER LEMEN: Yes, Ted, I'm with
7 you.

8 MR. KATZ: Thank you.

9 So welcome all who have come, who
10 are in the room for public comments or on the
11 line. We are about to get started with that.

12 Let me just explain the redaction
13 policy relates to how your comments are
14 represented in public.

15 We have a verbatim transcript of
16 the meeting, including the public comment
17 session. So, whatever comments you provide,
18 they will end up verbatim in the transcript
19 that ends up on the NIOSH website for public
20 access, and anything you say about yourself,
21 your name, all your personal information, that
22 would be included in the transcript.

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1 If you discuss other people,
2 though, third parties, information about third
3 parties enough to identify them, it will be
4 removed from the transcript, since we don't
5 have their permission for their personal
6 information to be public as such.

7 And there's the rules, the full
8 rules, if you want to read them, they should
9 be on the table there in the room. And for
10 people who are on the line, they would be on
11 the NIOSH website under the OCAS program,
12 under the Board section.

13 And that's it for rules.

14 CHAIRMAN MELIUS: Thank you, Ted.

15 We have at least three people
16 signed up here, and I will go in the order
17 that they signed up. Then we will see if
18 there is anybody on the phone that wants to
19 offer public comments.

20 And forgive me if I mispronounce
21 your name, and so forth.

22 I think it is a [Identifying

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1 information redacted] or [Identifying
2 information redacted]. Is he here? He signed
3 up earlier? Okay.

4 The next one is Knut Ringen.

5 MR. RINGEN: Thank you, Mr.
6 Chairman.

7 My name is Knut Ringen. I am the
8 Science Advisor for --

9 MR. KATZ: Knut? Knut, you will
10 need to speak right into that microphone to
11 pick up.

12 MR. RINGEN: How's that? Is that
13 better? Does that work better?

14 MR. KATZ: Very good. Thank you.

15 MR. RINGEN: My name is Knut
16 Ringen. I am the Science Advisor for CPWR,
17 which is the Center for Construction Research
18 and Training. I am here representing the
19 national building and construction trades.

20 This is the fourth time I have
21 been before you, and I thank you for your
22 patience.

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1 I didn't bring a written statement
2 today, but I will be glad to submit one later,
3 if you want more details on what I have to
4 say.

5 Now, as I said, we represent the
6 construction trades workers. My comments are
7 limited to their experience, my expertise.
8 And while my comments may apply to other
9 workers, I want to make clear that what I am
10 talking about is construction trades workers.

11 Today I want to focus, first, on
12 the 10-year review that has just come out, and
13 then I want to make some comments about the
14 SEC process, specially with regard to Fernald
15 and Savannah River.

16 First, the 10-year review. I urge
17 you to read the reports that Lew Wade, Nancy
18 Adams, and Randy Rabinowitz produced because
19 they contain very significant information.

20 When NIOSH created this program,
21 it essentially set out three criteria. It
22 wanted uniform treatment of claimants; it

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1 wanted a fairness throughout the process, and
2 it wanted scientific quality. Those three
3 things have been sort of the governing
4 principles, as I understand them.

5 NIOSH has always rejected the
6 inclusion of timeliness as a criterion for
7 reviewing the operation of this and its
8 effectiveness.

9 But what these three reports that
10 you have in front of you have focused on more
11 than anything else is the timeliness issue. I
12 think most people who have read them would
13 read that on timeliness the program has failed
14 miserably.

15 The issue of fairness and
16 scientific quality has not been addressed
17 extensively in these reports as yet, except
18 for Randy Rabinowitz's report on the SEC
19 process, which deals extensively with
20 fairness.

21 She makes a very significant
22 correction to the NIOSH modus operandi. NIOSH

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1 has always considered SEC to be a measure of
2 last resort. In other words, it is only if
3 the dose reconstruction process cannot succeed
4 that you should consider imposing or referring
5 workers to the SEC.

6 According to Randy, that is not
7 what the law says, and she knows a lot about
8 this. She is an experienced lawyer, has been
9 in Congress as a staffer for many, many years.

10 She points out that the statute
11 gives NIOSH two equal options. One is dose
12 reconstruction, where the other is assignment
13 to the SEC. But one is not dependent on the
14 other, and that, I think, is a very
15 significant change that has to take place in
16 this program. The SEC option is not depending
17 on the DR option failing.

18 It is important to raise this
19 issue because, as long as the SEC only comes
20 after the DR failure, then timeliness can
21 never be accomplished in this process.

22 I also urge you to take seriously

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1 the planning for the second, what's proposed
2 as the second phase of this 10-year review,
3 which, presumably, then, would be much more
4 extensive. And I hope that will take into
5 account scientific quality as well and
6 fairness and uniformity in the program. As
7 far as I know, there has been no attempt to
8 validate whether this program operates fairly
9 or is valid for all participants.

10 CPWR submitted fairly extensive
11 comments to the docket on this review and
12 provides an evaluation framework that you may
13 want to consider. I hope that you all will
14 work with NIOSH to develop a more detailed
15 framework for its second evaluation that will
16 be focusing on the validity, the scientific
17 validity and fairness of the program.

18 Now let me turn to the SEC
19 process. As I said, I am going to focus on
20 Fernald and Savannah River.

21 Let me first say that Fernald has
22 been with you for four and a half years by

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1 now, and you are coming up close to three
2 years on the Savannah River addition. By
3 comparison, I would like to note that the
4 Tacoma Narrows Bridge was designed and built
5 in less time than that, and that is the
6 biggest suspension bridge that has been built
7 in 70 years.

8 I would like to start with Fernald
9 review. The Working group on it has worked
10 incredibly hard. It has met nine times,
11 according to my count.

12 And I would encourage all of you
13 to go to the transcript of the January 29,
14 2010 meeting and start focusing on page 162
15 and continue reading until page 231.

16 NIOSH has proposed that the SEC be
17 rejected because it says it can extrapolate
18 dose from workers with complete monitoring
19 that they have in the HSE 20 database, which
20 is the dose monitoring database for Fernald,
21 or the principal one.

22 Except as the NIOSH expert says,

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1 HSE is very deficient for construction
2 workers. So they would likely have to
3 extrapolate from non-construction workers to
4 construction workers in the coworker model.
5 It is the same procedure that NIOSH is
6 essentially proposing to use at Savannah
7 River, and so I combined comments on these two
8 into one.

9 Now, at the January 29, 2010
10 meeting, the Working group spent a very long
11 time, including those 150 pages or so,
12 discussing whether this is valid, whether it
13 is valid to make this extrapolation from other
14 workers to construction workers, and how to
15 come to grips with how you should deal with
16 these construction worker cases.

17 In this regard, I could offer
18 three options to you, and I can only think of
19 three.

20 First, you can try to create
21 within HSE 20, and the same thing at Savannah
22 River, a sub-database for construction trades

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1 workers, and then extrapolate through that
2 complete monitoring exposure, and then try to
3 extrapolate from it to construction workers
4 who are inadequately monitored.

5 To do that, however, you would
6 have to create a sub-database for
7 approximately two dozen different trades that
8 are part of construction. You can't consider
9 construction just to be one big, uniform
10 group. There are all of these different
11 trades that have vastly different ranges of
12 exposure and exposure experiences.

13 So, by the time you get to
14 dividing this subgroup into all of these
15 different trades, and if you are going to
16 control for age, maybe sex, and race,
17 certainly, if you are going to do this, and
18 time that they worked at the site, you are
19 going to have so many cells that you couldn't
20 possibly have enough people in each of the
21 cells to make a statistically-meaningful
22 extrapolation under any circumstances.

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1 So, therefore, it is most likely
2 totally infeasible to use this approach. So
3 that's not going to work, I don't think.

4 The second option that NIOSH has
5 considered is to extrapolate from non-
6 construction workers and then use some sort of
7 a correction factor for the larger variance in
8 the range of those that construction workers
9 experience. To some extent, it has done this
10 in TIB-52. It has talked about its adding a
11 correction factor at Savannah River.

12 But no matter how you do that, you
13 can't validate whether actually this
14 correction factor is correct or not. And if
15 you can't validate it, then you are not doing
16 science. So that's not going to work, either,
17 I don't think.

18 And therefore, I come to the
19 conclusion that the third and most scientific
20 option to deal with these construction workers
21 who lack complete monitoring is that you
22 simply refer them to the SEC. That at least

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1 takes care of the problem of the arbitrariness
2 that comes into the kind of extrapolation that
3 is being discussed in these various models
4 that NIOSH has looked at.

5 Now let me finish up with the
6 Savannah River petition. It was submitted on
7 March -- no, let's see, on November 14, 2008.

8 NIOSH reviewed it and said it can reconstruct
9 dose for all construction workers and,
10 therefore, the SEC should be denied.

11 But it said it was going to
12 withhold judgment on one issue which had to do
13 with thorium exposure and see if you could
14 develop some model. So that took another year
15 and a half.

16 And on May 4 of this year, NIOSH
17 came out with this finding that said, gee,
18 actually, we can do something about these
19 thorium-exposed workers. This is an addendum
20 to their Petition Evaluation Report.

21 And they said they can do this by
22 developing a brand-new model in which it would

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1 substitute uranium bioassay data for the lack
2 of thorium bioassay data. In other words,
3 they said we can use uranium data to estimate
4 thorium risk.

5 Now, presumably, NIOSH has agreed
6 that this is valid because you signed off on
7 it. So it must be that they think this is
8 valid science. I do not, or we do not.

9 Now I am not an expert on
10 radiation. I have made that clear before, and
11 I certainly don't know much about the
12 difference between thorium and uranium. But I
13 have a colleague at CPWR, [Identifying
14 information redacted], who is. [Identifying
15 information redacted] is not only a highly-
16 experienced industrial hygienist, but he has a
17 Ph.D. in radiation biology from the University
18 of Rochester, where I believe we all agree
19 that they know the difference between uranium
20 and thorium.

21 He told me two things in
22 particular that he thought we should consider.

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1 First of all, in terms of physics, uranium
2 and thorium appear fairly similar. But in
3 terms of biology, there are some very big
4 differences, and that might be ascribed to the
5 fact that, as thorium decays, it converts to
6 radon, plutonium, and so much depends on how
7 pure the thorium is to begin with or how much
8 it has decayed, and so on, at the time of
9 exposure.

10 But the second thing that he said
11 is very important is that thorium acts
12 differently biologically than uranium. In
13 experimental studies, including studies of
14 dogs, they have found that thorium causes more
15 damage to the liver and to the kidney than
16 uranium.

17 So the question is, if we have two
18 exposures that appear differently but that
19 produce different outcomes or inputs -- sort
20 of the issue that I think David Richardson
21 raised earlier today -- how can we say that
22 this is a valid model for extrapolation?

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1 We have to remind ourselves that
2 in this program it's not just about doses; it
3 is also about outcome and the missed cancers.

4 Cancers I do know something about, and I do
5 know how little we know about the biology of
6 cancers, including the radiation biology or
7 the relationship. We know that radiation
8 causes cancer, but we don't know how it causes
9 cancers and we don't know why some people
10 exposed to radiation develop cancer and some
11 people similarly exposed to radiation do not
12 develop cancer.

13 So there is a very big problem in
14 using this model for dose reconstruction, and
15 I urge you to thoroughly review this model. I
16 do not believe this model represents science.

17 I believe it is bogus.

18 First of all, we think it is
19 unscientific. You guys can make the judgment
20 about that. But we know that there's
21 absolutely no way that it can be validated.
22 So, then, you all better make the judgment

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1 about how you want to view something that is
2 not valid, that you don't know is valid or
3 not. Consequently, I think it should be
4 rejected as pseudo-science, but you can decide
5 for yourself about that.

6 Finally, I urge you to look at
7 Nancy Adams' Evaluation Report in the 10-year
8 review. She reports that since the start of
9 this program a total of 2,000, or 200,
10 roughly, claimants died in the period from the
11 time that their claim arrived at NIOSH and
12 before NIOSH finalized its review. That's
13 about 10 percent of all of the claimants that
14 died during this lengthy process that it has
15 taken.

16 Now you can say you can look at
17 that in two different ways. You can say,
18 well, all of these folks had cancer, and by
19 definition, they are, also, therefore, old.
20 So that may not be an unreasonable mortality.

21 But you can look at it in a very different
22 way and say a program that serves human beings

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1 has to take into account more than just the
2 perfection of science.

3 It has to balance the needs of
4 science with the humanitarian needs that it
5 should afford the participants in the program.

6 I realize that is not an easy balance to
7 make, but I don't think so far either NIOSH or
8 this Board has done a very good job of
9 balancing those two things. And I think
10 people have been sitting around for way too
11 long.

12 For construction trades workers, I
13 don't know what's going to happen. Brad and
14 the Working group at Fernald is going to meet
15 again. They are probably going to wring their
16 hands again. The Board has been wringing its
17 hands about this for construction --
18 unmonitored or inadequately-monitored
19 exposures now for eight years, and have come
20 to no conclusion about how to handle it.

21 So I think it's time to bring this
22 issue to a close. I think people who are in

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1 this situation have a right to some sort of
2 closure to the process that you are dealing
3 with.

4 And I can only think, as I said,
5 of one way to do that, that will meet our
6 expectations in terms of science, and that is
7 to refer these cases to an SEC that is DOE-
8 wide and that covers any construction worker
9 at risk of inadequate or no dose records.

10 Thank you very much for your time,
11 and I can answer questions, if you have any,
12 or you can take it as it is.

13 CHAIRMAN MELIUS: Thank you.

14 I don't think we usually ask
15 questions.

16 I will add, though, one comment.
17 If I understood what Dr. Wade was saying this
18 morning, I do believe that the so-called
19 docket on the 10-year review is sort of being
20 reopened for comment. So your comments on
21 that report would be, or anybody else's would
22 be, most welcome. I think that should be

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1 available very shortly.

2 The next person to make public
3 comment is Malcolm Russell.

4 Mr. Russell? Okay.

5 MR. RUSSELL: Good afternoon,
6 Advisory Board on Radiation and Worker Health.

7 My name is Malcolm Russell. I am
8 a retired 37-year employee of AEC, CRDA, and
9 DOE prime contractors, including the SL-1
10 contractor, Combustion Engineering. I retired
11 in 1995, asserted my 2,944 hours of unused
12 sick leave without any compensation. I am now
13 a disgusted victim of the EEOICPA Part B claim
14 denial program. And I am still impaired by
15 and trying to rehab from eligible disease
16 therapy I received in 2003.

17 The data I have seen indicates
18 most of the claims have been denied. The
19 claim processors kept requesting and I
20 obtained, at my expense, my physician's
21 opinion on my eligible disease was a result of
22 my INL radiation exposure. None of my

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1 physicians have that kind of expertise.

2 Also, they wouldn't consider my
3 three-year radiation exposure at a Connecticut
4 Naval Reactor Test Site under AEC
5 administration. And this is the basis of my
6 sarcastic program description.

7 What I believe is that all Part B
8 claimants with an eligible disease should
9 receive an award based on their calculated
10 Probability of Causation. And for myself,
11 that computation would be my Probability of
12 Causation which was 23.99 percent below the 50
13 percent threshold number. Out of 150,000, I
14 think that would be about \$72,000.

15 And applying a fair claimant award
16 criteria would probably resolve the problem of
17 totally denying claims with a calculated
18 Probability of Causation just slightly below
19 50 percent. It would also provide each
20 claimant some compensation for their expenses
21 in submitting a claim and of therapy for their
22 cancer or disease and their impairment caused

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1 by the cancer or disease. These expenses are
2 not trivial and the impairments last until you
3 die.

4 I submitted a written protest to
5 the Final Adjudication Branch after the
6 recommended claim denial was sent to me in
7 August of 2007 explaining my indignant feeling
8 that the Part B claim award criteria, \$150,000
9 for a greater than 50 percent Probability of
10 Causation, was unfair. And my protest was, of
11 course, denied, too.

12 I don't have the financial
13 resources or the patience to fight the
14 denials. I believe the many cases of claim
15 denial is an indication of how unfair this
16 Part B program is, and I am bewildered by the
17 Administrator's apparent pride in this
18 program, which has hurt so many INL worker
19 claimants.

20 That's the end of my comments.

21 CHAIRMAN MELIUS: Okay. Thank
22 you, Mr. Russell.

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1 Anybody else in the audience wish
2 to make public comments?

3 (No response.)

4 Okay. If not, then does anybody
5 on the telephone wish to make public comments?

6 (No response.)

7 I will ask once again, does
8 anybody on the phone wish to make public
9 comment?

10 MS. HAND: Yes. This is Donna
11 Hand again.

12 CHAIRMAN MELIUS: Okay. All
13 right.

14 MS. HAND: Again, the issues that
15 I did not bring up or would like to elaborate
16 on a little bit more from last night.

17 For the people, I am Donna Hand.
18 I am a worker advocate and also authorized
19 representative for several claimants,
20 specifically the Pinellas Plant, but, also,
21 Oak Ridge, Savannah River, and Los Alamos.

22 The gentleman earlier had

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1 mentioned about the Special Exposure Cohort
2 petition and how long it had been taking to do
3 that. On the Federal Registry, Volume No. 67,
4 No. 85, page 22319e, it states that the HHS
5 shall determine the dose reconstruction in a
6 timely manner and consider that petition in a
7 timely manner. If the data for the dose
8 reconstruction is not available at this time,
9 OCAS will, which is mandatory, proceed as if
10 no data is available to do a dose
11 reconstruction with sufficient accuracy and
12 grant the said petition.

13 This Board and NIOSH has been
14 working in the reverse ever since this
15 program. This is established in the Federal
16 Registry, and yet, it has been denied and has
17 been overlooked and omitted from the facts of
18 every single said petition.

19 Let's go on to injury. You have
20 issued a technical bulletin regarding wounds
21 and injury. You also have in your internal
22 dose to elaborate for wounds and injury.

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1 However, the professional judgment of Brian
2 Gleckler and Peter Darnell refuses to add on
3 these injuries or incidents, even when they
4 have documentation.

5 I have a gentleman that worked at
6 Savannah River. He had two incidents. One
7 was uranium and one was plutonium. That was
8 never put into his dose reconstruction, even
9 though the report came from the file that I
10 received from NIOSH, and that is how I found
11 out about it.

12 The Pinellas Plant, I have a
13 worker that was cut on radioactive-producing
14 equipment, as per the Technical Basis
15 Document. It showed that he was cut, and went
16 to the infirmary, on that equipment and was
17 cut very heavily. They refused to put that
18 dose into his dose reconstruction.

19 I have a janitor that picked up
20 radioactive waste and put it in a can. He
21 went to the infirmary twice. The infirmary
22 put on the record, "Cut with a classified

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1 waste can." The Department of Labor, NIOSH,
2 and he has a statement that that can was full
3 with classified paper and not classified
4 products or anything else. So, therefore,
5 there was no radiation dose.

6 And unless I can prove that a
7 health physicist was called to the case, they
8 would not put that into the dose
9 reconstruction because, as far as they are
10 concerned, it was classified paper.

11 Now a cut that was extensive
12 enough to this gentlemen, who is 81, still has
13 a scar to this day on his hand from it, could
14 not have been a paper classified cut. But,
15 yet, you are not allowing those internal
16 doses, which would have been -- especially
17 alpha, go into his dose reconstruction.

18 This Board needs to address how
19 come you are issuing Technical Basis
20 Documents, you are issuing guidelines, but the
21 dose reconstruction people are not following
22 those guidelines. They say that it is all a

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1 matter of professional judgment.

2 We have now David Shatto has told
3 us in a closeout interview, unless we can
4 prove and document that a person was exposed
5 to a specific incident, they will not consider
6 it as an incident, such as in the Pinellas
7 Plant, in the 108 area, the tubes were made of
8 glass and they broke quite frequently. They
9 had to clean up the glass. They were exposed
10 to the glass and the leaking. However, if I
11 cannot prove that that person was there at
12 that particular time frame, they will not
13 consider it.

14 So we have guidelines that you
15 guys have, right here, approved that's not
16 being followed on down by the dose
17 reconstruction people.

18 Thank you very much.

19 CHAIRMAN MELIUS: Thank you.

20 Would anybody else on the
21 telephone like to make public comments?

22 (No response.)

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1 I'll ask again. Anybody else on
2 the telephone who would like to make a public
3 comment?

4 (No response.)

5 Okay. If not, then we will close
6 this public comment session.

7 Thank you all.

8 And we will adjourn until 8:30
9 tomorrow morning.

10 (Whereupon, the above-entitled
11 matter went off the record at 5:00 p.m.)

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