

This transcript of the Advisory Board on Radiation and Worker Health, Savannah River Site Work Group, has been reviewed for concerns under the Privacy Act (5 U.S.C. § 552a) and personally identifiable information has been redacted as necessary. The transcript, however, has not been reviewed and certified by the Chair of the Savannah River Site Work Group for accuracy at this time. The reader should be cautioned that this transcript is for information only and is subject to change.

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U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
CENTERS FOR DISEASE CONTROL
NATIONAL INSTITUTE FOR OCCUPATIONAL
SAFETY AND HEALTH

+ + + + +

ADVISORY BOARD ON RADIATION AND
WORKER HEALTH

+ + + + +

SAVANNAH RIVER SITE WORK GROUP

+ + + + +

FRIDAY
DECEMBER 2, 2011

+ + + + +

The Work Group convened via teleconference at 10:00 a.m., Eastern Standard Time, Mark Griffon, Chairman, presiding.

PRESENT:

MARK GRIFFON, Chairman
BRADLEY P. CLAWSON, Member
JAMES E. LOCKEY, Member
JAMES M. MELIUS, Member
PHILLIP SCHOFIELD, Member

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2

ALSO PRESENT:

TED KATZ, Designated Federal Official

LYNN AYERS, SC&A

STU HINNEFELD, DCAS

CHARLES JERNIGAN

JENNY LIN, HHS

MIKE MAHATHY, ORAU Team

ARJUN MAKHIJANI, SC&A

KNUT RINGEN

GORDON ROWE

LAVON RUTHERFORD, DCAS

JOHN STIVER, SC&A

TIM TAULBEE, DCAS

BOB WARREN

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

2 (10:03 a.m.)

3 MR. KATZ: Very good. And let me
4 just go on with notes and then we'll get
5 started.

6 There is an agenda for the meeting,
7 which is posted on the NIOSH website and
8 should have been sent to petitioners, too, I
9 believe, and to all participants.

10 There's a variety of materials that
11 I've distributed to Board Members that have
12 come from Mr. Warren and from Mr. Ringen.
13 There are some limitations in what I could
14 distribute because some of that information
15 has Privacy Act information in it. And I've
16 informed those parties where they were
17 limited.

18 And I think that's it. Let me just
19 remind everyone on the line that there are a
20 lot of people on this line. Please mute your
21 phone except when you are addressing the

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1 group. And if you don't have a mute button,
2 press *6 to mute it and press *6 to take it
3 off of mute.

4 And if you need to leave the call
5 at any point, please don't put the call on
6 hold but hang up and dial back in because
7 putting the call on hold will actually disrupt
8 it for everyone else on the call. And that's
9 it.

10 And, Mark, it is your agenda. Mark
11 Griffon, maybe you're on mute.

12 CHAIRMAN GRIFFON: Hello?

13 MR. KATZ: Mark, have we lost you?

14 CHAIRMAN GRIFFON: Am I there?
15 Hello?

16 MR. KATZ: There you go.

17 CHAIRMAN GRIFFON: Hello?

18 MR. KATZ: Mark? Mark Griffon,
19 we're not hearing you. I don't know if you
20 are on mute or a cell phone that's out of
21 range or -- okay. Well, let's hang in here

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1 until Mark rejoins us. There's a lot of
2 background noise on this call, which makes me
3 think a lot of people have not put their phone
4 on mute. So, again, while we're waiting for
5 Mark Griffon, would you please mute your
6 phones? Press *6 if you don't have mute
7 button. That will mute your phone.

8 (Whereupon, the above-entitled
9 matter went off the record at 10:08 a.m. and
10 resumed at 10:09 a.m.)

11 MR. KATZ: Mark? Mark Griffon, are
12 you with us?

13 CHAIRMAN GRIFFON: Hello, Ted?

14 MR. KATZ: Yes. We lost you.

15 CHAIRMAN GRIFFON: Oh, I'm sorry.
16 All right. I don't know what happened. I am
17 on a cell phone. So that might be part of the
18 problem.

19 MR. KATZ: Yes.

20 CHAIRMAN GRIFFON: Anyway, I just
21 want to start off the meeting -- I mean the

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1 main -- I want to say to all on the phone that
2 the main -- there is an agenda. But the
3 primary purpose of this Work Group call is to
4 have some follow-up discussion on the proposed
5 Savannah River Class -- the proposal by NIOSH
6 for the addition of the Class related to
7 thorium. And the actual Class Definition.

8 There was some question in our Work
9 Group call and in the last Board Meeting -- I
10 believe it was the last Board Meeting. So as a
11 follow up to that, we did ask SC&A to review
12 some cases and look at whether this particular
13 Class Definition was, in their opinion anyway
14 -- again, it would have to be implemented
15 successfully.

16 And so one thing I'd like to start
17 off with is have SC&A present their review.
18 And sort of give us a sense of what they
19 found. And also, I think, on the table, the
20 petitioners have offered a proposal in terms
21 of changing the Class Definitions.

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1 And certainly after we hear from
2 SC&A, we can possibly consider that proposal
3 as well. They're sort of -- I think the two
4 are related.

5 So maybe SC&A can start us off with
6 review and maybe, you know, give a little
7 background on the -- if you could, I think
8 Arjun is going to present -- give a little
9 background on the proposal the way it exists
10 and then what you found that's possible.

11 DR. MAKHIJANI: Hello, this is
12 Arjun. Can you hear me? Hello?

13 CHAIRMAN GRIFFON: Yes, I can hear
14 you.

15 MEMBER CLAWSON: Yes, Arjun, we
16 could hear you.

17 DR. MAKHIJANI: Hello, can you hear
18 me?

19 MEMBER CLAWSON: Yes, Arjun we can
20 hear you.

21 DR. MAKHIJANI: Sorry. I'm was

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1 having a problem. I didn't know whether I was
2 on or off the mute.

3 By background, NIOSH proposed an
4 SEC from 1953 to September 1972 for certain
5 areas in which thorium work was done at
6 Savannah River Site. And proposed also that
7 those people who were in those areas be
8 defined by dosimetry codes and in the early
9 years from '53 to '57 by area codes in their
10 dosimetry records so that they could be
11 identified as working in the designated areas.

12 The -- sorry, there is a little bit
13 of background noise where I am -- so what we
14 did was examine ten claims. Many of them were
15 submitted by petitioners or petitioner
16 representatives. Bob Warren, who is on the
17 line, submitted some names. Knut Ringen, who
18 is also on the line, submitted some names. And
19 we also had some others.

20 But most of them came from
21 Petitions. And so it is not a random sample.

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1 And most of them also were said by petitioner
2 representatives to have some problems in
3 defining these areas.

4 But we're finding a good place to
5 start to give the Working Group an idea and
6 also address the Petition concerns about how
7 the Class was proposed to be defined. And do
8 some research on that.

9 You have that paper we produced.
10 And we examined ten claims in all. What we
11 did was look at all of the DOE records that
12 are in the claimant files. These are all
13 claimants. And we also looked at all the
14 computer assisted telephone interview records
15 to see what we could find about the area of
16 work and whether we could correlate in
17 sufficient detail with the dosimetry records
18 at Savannah River Site.

19 And it is a pretty short report.
20 Lynn Ayers did more of the work. I'll give
21 you the main findings and let you -- let her

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1 explain specially Table 1 to you. What we did
2 was we compiled the total years worked and we
3 looked at how many years or parts of years for
4 which there were complete records and how many
5 years there were no records and how parts of
6 years there were no records.

7 And also in addition to no records,
8 there are a lot of problems or petitioner said
9 there were a lot of problems with illegible
10 records, scratched out area names, unreadable
11 records, and so on. So we had three different
12 categories: records available and clear,
13 illegible, scratched out, and so on, or not
14 there. There were clear gaps where no record
15 was available for a particular time.

16 And in Table 1, what you see is the
17 total number of years for which these ten
18 people worked. So it is an employee year
19 table. And it shows the gaps, or partial
20 gaps, or completeness for by employee year.
21 And Table 2 shows it by claimant and shows

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1 where all the gaps or problems were and where
2 the completeness was, which years we had
3 complete records, and which years we did not
4 have complete records. And which years there
5 were problems other than completeness or
6 incompleteness, like scratched out records or
7 unreadable records.

8 And the main finding, as you can
9 see on page one of the report -- and I really
10 want to thank CDC for having done the previous
11 versions so petitioners have it, and Table
12 One, I believe is not redacted. But the main
13 finding is that there were gaps or some kind
14 of incompleteness or illegibility problems in
15 terms of getting a clear record to determine
16 SEC eligibility in nine out of ten cases.

17 In four out of the other -- in four
18 out of those nine -- so there are complete
19 records for all periods that were clear -- and
20 I mean one out of ten. In four out of the
21 nine for which there were incomplete or

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1 unclear records, there was at least one code
2 that would qualify the person for an SEC if
3 you only are looking at codes.

4 And for five, either were some
5 clear codes that would not qualify them but
6 there were also gaps so that you can't tell
7 whether those gaps might indicate they worked
8 in a thorium area.

9 So our main finding was since we
10 don't know for some period of time where these
11 workers were, that it would not be claimant-
12 favorable to assign them a non-thorium area
13 since it is a don't know.

14 And then I'll let Lynn explain
15 Table One.

16 Lynn, do you want to do that?

17 MS. AYERS: Sure.

18 DR. MAKHIJANI: Hello, Lynn?

19 MS. AYERS: Yes. Can you guys hear
20 me? Hello?

21 MEMBER CLAWSON: Yes, we can hear

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1 you, Lynn.

2 MS. AYERS: Okay. Good.

3 Well, as I started to plow -- dig
4 through the data, Table Two was actually the
5 first thing that got put together. And then I
6 was trying to get a handle on, you know, what
7 does it mean or how significant are these
8 questions or gaps or issues in terms of the
9 total volume of the data present for these
10 people for these times. So that's where I got
11 around to the claimant year approach because,
12 you know, if I just dealt with how many of
13 these claimants had some kind of issues at
14 some period, well that's like 90 percent of
15 them.

16 And if you looked at how many years
17 had someone with an issue, that would, I
18 think, be 100 percent of the years, which
19 really doesn't seem fair because, you know,
20 that could be only one issue out of, you know,
21 100 records or something.

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1 So that's where we came up with
2 this. It gave us a little bit more data
3 points to look at in terms of trying to
4 represent the extent of the gaps.

5 So in the rows, obviously we have
6 the years. I kind of divided it into the
7 periods as the Class has been defined. The
8 '58 to '72 period, there were 103 claimant
9 years. That's over on the far left. And from
10 '53 to '57, there were 36. So within the ten
11 people, there were that many years
12 represented, and 139 total then.

13 Probably the bottom line, the most
14 important data, is the first set of columns
15 there, how much of the data was available and
16 legible so that one can actually access and
17 interpret the information in order to apply
18 the Class Definition.

19 So we, again, as Arjun said, divide
20 it into full and partial years because I
21 wanted to have a sense, you know, if there was

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1 some data to represent that person for that
2 year, then that was worth considering. So we
3 have, as you see, for the '58 to '72 period,
4 we had 64 claimant years that were fully
5 represented, meaning there weren't any gaps in
6 the record. There were 27 additional that had
7 some period of a year. So there might have
8 been one quarterly report or one side of a
9 card had a dosimetry code on it, something
10 like that.

11 Obviously it is not a card in that
12 period. Sorry.

13 The other period, '53 to '57, there
14 were 12 with full representation and either
15 with partial that could be read and
16 interpreted as to apply to the Class. That
17 was a total of 76, which were fully
18 represented, which is 55 percent of the total
19 volume of data, and 35 -- or 25 percent of --
20 overall a total of 80 percent. So there was a
21 20 percent gap.

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1 Looking across the rows, you don't
2 really get -- it doesn't come up to 100
3 percent because, obviously, any partial year
4 that was partially available is also partial
5 something else, either blank or unavailable.

6 The second two sets of columns --
7 categories -- it was just kind of an attempt
8 on my part to differentiate. In some cases it
9 seemed like one might be able to recover the
10 information. For instance if the copy quality
11 was bad, you know, if those original records
12 are still available, I was, you know, trying
13 to account for the fact that some of those --
14 it might be possible to recover the data and
15 then be able to use it.

16 So my attempt was to sort of
17 differentiate there. So the final set of
18 columns, record unavailable, actually means
19 there wasn't a record for a particular time
20 period. Either there was no card or there was
21 no quarterly report for any particular quarter

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1 and/or year. And that's what that last column
2 represents.

3 So the middle is kind of a catch-
4 all. It may not be tremendously meaningful.
5 And I had to make a lot of sort of judgment
6 calls about what was in what category.

7 Arjun, would you like me to explain
8 what kinds of things went into that central
9 category? He's probably muted.

10 DR. MAKHIJANI: Yes, yes, you know,
11 I can take it from there. I think like some
12 of the illegible records were, you know, dark
13 copies presumably of microfiche. In some
14 places, things were cancelled out. And there
15 is another area of entry, and that was
16 cancelled out. So there was no area. So
17 those were the kinds of things that are in the
18 illegible -- in the middle column there.

19 In terms of how the SEC has been
20 proposed, there are two -- there's one number,
21 I think in my opinion, that's more important

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1 than all the others, which is full year
2 available and legible in Table One. I mean
3 Table Two is really the more important table.

4 But -- so for 45 percent of the
5 years -- either for a full year or a partial
6 year, the records were either illegible, not
7 copied, or unavailable, mostly not available.
8 The illegible is smaller than the unavailable.

9 And you can see this in the fine
10 grain in table, which, in my opinion actually
11 has more importance because the way at least
12 it was proposed to the Board Meeting last
13 time, although DOL hasn't given a formal
14 opinion that I'm aware of on how this would be
15 implemented, is if there is one dosimetry code
16 or area code that corresponds to the SEC list,
17 then the person would be in. Otherwise not.

18 So you actually have to have a
19 record for every period for which a record
20 should have been kept. And that is shown in
21 Table Two.

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1 So as you can see for Case One, for
2 '55 to '57, there were five areas were
3 illegible and for '53, there were no records.

4 For Case Two, there's no records
5 sprinkled throughout their employment period,
6 mostly for partial years.

7 For Case Three, it's the same
8 thing.

9 For Case Four, also partial records
10 in both periods.

11 For Case Five, also lots of periods
12 with no records.

13 So there's only one case, which is
14 Case Seven, where we found no discrepancies
15 and all legible records for the '54 to '72
16 period, that whole 18-year period for which
17 there were complete records available. I mean
18 that's why the main finding is structured the
19 way it is.

20 And then we enter a secondary
21 finding that kind of more or less gone over

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1 them. And finally I would say in terms of
2 giving you a fine-grained picture of how these
3 ten cases worked, out, and keeping in mind all
4 the time that this is -- we're not saying that
5 this is a statistical sample.

6 But at the same time, since the
7 dosimetry codes have to be there for every
8 single period, it's a very tough criterion to
9 meet in terms of completeness of data -- the
10 most stringent, in terms of records
11 availability, than in any other SEC that I
12 worked on that I can remember.

13 The other issue is how is the 250-
14 day going to be defined. If it is only one
15 code and codes are produced every quarter,
16 then a person could have a dosimetry code --
17 one code through the employment but would 250-
18 day employment at Savannah River suffice or
19 250-day employment in the thorium area
20 suffice? And that seems to be an issue that
21 should be addressed if this is going to be the

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1 approach.

2 Overall, you know, you have the
3 main finding. We found -- actually I will
4 finish with this point is that I think it
5 matters less that four of the ten people would
6 qualify because they have a code than nine out
7 of ten people actually had gaps in their
8 records because currently we don't know
9 without a more random sample how many people
10 would actually be included or excluded who
11 worked in that SEC period because of code
12 availabilities.

13 So thank you. That's our
14 presentation. And we'll take questions if you
15 have any.

16 MEMBER LOCKEY: Arjun, Jim Lockey.
17 Can I ask you a question about the SEC
18 inclusion indicators? The way I read that,
19 and I want to make sure I'm right, is that of
20 these ten people, then one, two, three -- how
21 many would be included in the SEC as currently

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1 defined?

2 DR. MAKHIJANI: Four out of ten --
3 Lynn, you can jump in at any time if I'm
4 saying something not quite right -- four out
5 of ten would be included if the way in which
6 the dosimetry codes are in the Evaluation
7 Report addendum or update presented to the
8 Board as having one -- at least one period for
9 which they were present in a thorium area
10 according to the dosimetry or area code.

11 Now I should say one more thing is
12 that, you know, these are dosimetry codes in
13 terms of where the badges were issued, not --
14 and there were other code 000, I talked with
15 Tim and corresponded with Tim about this. And
16 he said yes, it should be included but it
17 wasn't in the NIOSH addendum to the Evaluation
18 Report. And we have treated 000 as unknown
19 because it isn't defined in any document that
20 we could see.

21 So basically as it stands, four out

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1 of ten would be included. Six would not be
2 included.

3 MEMBER LOCKEY: And if you included
4 000, then it would five out of ten I take it,
5 right?

6 DR. MAKHIJANI: Yes, Lynn, do you
7 know that number?

8 MEMBER LOCKEY: The only thing I
9 can see Number Six would be included.

10 DR. MAKHIJANI: Yes, yes, I think -
11 - roughly you can of the cases examined, about
12 half would be included.

13 MEMBER LOCKEY: Got you. Thank
14 you.

15 CHAIRMAN GRIFFON: Any more
16 questions from Board Members? This is Mark
17 Griffon.

18 I'd like to hear -- NIOSH did have
19 an opportunity to look at this, I assume, and
20 maybe Tim has a response from NIOSH's
21 standpoint?

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1 DR. TAULBEE: Yes, this is Tim
2 Taulbee. Can everybody hear me okay?

3 CHAIRMAN GRIFFON: Yes.

4 DR. TAULBEE: Thank you. And thank
5 you, Mark, for the opportunity to clarify some
6 of the concerns that SC&A has raised here in
7 their report.

8 There's a few things that I'd like
9 to -- backup just to refamiliarize those for
10 this particular SEC, the thorium work at
11 Savannah River that we identified during the
12 Board Meeting that we indicated we could not
13 estimate dose for was for two areas. That
14 would be the 773-A area and the CMX, TNX
15 facility.

16 Now we developed the ER to cover
17 employees or the Class Definition to cover
18 employees who likely worked in these areas.
19 And then we expanded the Class to include
20 other who may have worked in this area.

21 As Arjun had pointed out and Lynn

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1 had pointed out in their analysis, that this
2 sampling that they looked at was not a random
3 sample. And so that's an important point to
4 remember with this particular analysis.

5 The other point that I would like
6 to point out to the Board Member is that there
7 is no explanation of these gaps. Now during
8 the Rocky Flats SEC evaluation, there was
9 another report written by SC&A that went
10 through a similar approach of identifying gaps
11 and raised a bunch of -- or raised some
12 concerns about that.

13 When NIOSH went through and
14 conducted an evaluation of each of those gaps,
15 a reasonable explanation was found. I'm not
16 saying that's going to be the case for
17 Savannah River but right now we are going
18 through and evaluating all of these particular
19 gaps that SC&A has identified in this report.

20 To give you an example of one of
21 them that was identified this morning earlier,

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1 one of the gaps is from a person who left the
2 site, went into the military service and then
3 came back. So some of the data and I guess
4 the concern associated with these gaps really
5 needs to be explained further and evaluated
6 further as to is there a reasonable
7 explanation as to why this gap is occurring.

8 And so that's something that we are
9 currently going through and doing. And I
10 expect that we'll complete our analysis by the
11 16th of December. Now given the Christmas
12 holidays, I'm not sure that we're going to be
13 able to get a report back to the Board or a
14 response back to the Board until the first of
15 January -- first or second week of January.
16 But I wanted to bring up the data gaps.

17 Another point that Lynn mentioned
18 during about the illegible records, and I'm
19 very glad she clarified Table One as to some
20 concern as to whether these records could be
21 available or could be turned from illegible

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1 into legible is an important point. And I'm
2 very glad she pointed that out.

3 Keep in mind that the samples that
4 were sent out to everyone, at least from the
5 ones that had been redacted from the Privacy
6 Act standpoint, are actually copies of scanned
7 documents of a microfiche printout. So in
8 that case, there's three degradations of image
9 quality.

10 The originals are available at the
11 site. There are file cabinets of the
12 microfiche. And whenever we send a claim to
13 Savannah River, they go through their
14 microfiche, they pull out this microfiche, and
15 then they print out these particular copies.

16 Early on, we told them to
17 emphasize the central portion where the
18 dosimetry data is. And try and make that the
19 most readable. From an SEC standpoint, from
20 an illegible record standpoint, two things can
21 happen. One, Department of Labor can ask the

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1 site to emphasize the location information. So
2 those illegible records would be more
3 readable. As you see, they're darkened too
4 much right now.

5 If you lighten it up, some of those
6 images, the dosimetry information or the dose
7 information will be less legible but the
8 location code would be more legible. So I
9 want to emphasize that the illegible records,
10 I personally don't see as a major issue. There
11 are some that could be illegible. But most of
12 them with a little more care and concern from
13 the standpoint of an SEC can be turned from
14 illegible to legible.

15 Now having said that, I want to
16 give a little bit of a heads up, we are
17 proposing or we'd like to propose to the Work
18 Group to modify our Class Definition slightly
19 to include these illegible records as part of
20 the Class. And because this is a concern and
21 clearly if even after a microfiche reading and

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1 we do the best we can, we can't see it --
2 can't see that location, then I would count
3 that as an unknown or indeterminable location.

4 And so we'd like to include that as part of
5 the Class Definition, which I'll propose here
6 at the end of my discussion.

7 The other issue that was pointed
8 out by Lynn and Arjun is the 000 code. And
9 yes, Arjun and I and Lynn had discussed this.
10 Our interpretation is that those 000 codes
11 should be included. That's another component
12 that we're recommending to add and modify this
13 Class Definition such that anyone with a 000
14 code would be included in the Class Definition
15 which, by my count, would then turn that Table
16 Two from those included in the SEC up to six.

17 So it would change from four to six
18 to answer Dr. Lockey's question there a few
19 minutes ago when we include those 000 codes.

20 The further clarification, and this
21 is something we've talked with our OGC about,

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1 is we've also reworded our proposed Class
2 Definition to make it clear that you only have
3 to have one dosimetry code and then you have
4 to have worked somewhere on site -- did you
5 all catch that because I heard some background
6 noise.

7 MEMBER CLAWSON: No, Tim, this is
8 Brad. I could not understand -- somebody
9 stepped over you at the very last.

10 DR. TAULBEE: Okay. What we've
11 done is we've reworded the Class Definition
12 slightly to make it clearer that you only have
13 to have one of these dosimetry codes and
14 worked somewhere on site for 250 days. Not
15 necessarily 250 days' worth of these dosimetry
16 codes.

17 The main reason for this is those
18 initial cards from 1953 to 1957 are annual
19 cards. They don't have quarterly data. They
20 don't have biweekly information. So if you
21 have one dosimetry code and 250 days anywhere

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1 on site, effectively you would be included as
2 part of this Class. So I wanted to clarify
3 that particular part.

4 The final point I want to emphasize
5 here is on -- let's see, I believe it is page
6 nine of SC&A's report -- there's a statement
7 about Case Eight that caused me some concern.

8 And this was about an individual who
9 transferred from A9 to D. And from D to CMX
10 in June.

11 What's interesting about this case
12 is effectively SC&A identified a code that we
13 missed. And we would like to include this as
14 part of the SEC as well. Going back in
15 further research the past few days since we
16 got this particular report, we were able to
17 pull out, based upon uranium bioassay that we
18 had for the CMX/TNX area.

19 And we pulled ten people out of
20 NOCTS that had clear designations for CMX in
21 this pre-1957 time period. And all of them

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1 had this D2 designator as part of their
2 dosimetry code. So in addition to the A, G,
3 CMX, TNX, we would like to add D2 and Y to
4 that Class Definition.

5 So we feel that this was a mistake
6 on our part for not understanding that at the
7 CMX/TNX facility in 1953, it was actually
8 designated as CMX area (Y) although some of
9 the cards just had area Y, the CMX part. And
10 then in 1954, an additional designator was D2
11 for that particular area.

12 So I guess one of the things that I
13 would like to emphasize here is that our
14 proposed Class Definition, and I'll read this
15 to you and we'll send this all out to you if
16 you want, is we'd like to change it to all
17 externally monitored employees of the
18 Department of Energy, its predecessor
19 agencies, and their contractors and
20 subcontractors, whose records have at least
21 one of the following dosimetry codes: A, G,

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1 CMX, TNX, D2, Y, or the code is blank or
2 illegible, indicating issuance from an unknown
3 or indeterminable location, and worked at the
4 Savannah River Site from January 1st, 1953,
5 through December 31st, 1957, for a number of
6 work days aggregating at least 250 work days,
7 occurring either solely under this employment
8 or in combination with work days within the
9 parameters established for one or more of the
10 Classes of employees included in the Special
11 Exposure Cohort or whose records have at least
12 one of the following dosimetry codes: 5A, 5C,
13 6B through 6Z, 12D through 12H, 12J through
14 12Z, or 000 indicating issuance from an
15 unknown location, and worked at the Savannah
16 River Site from January 1st, 1958, through
17 September 20th, 1972, for a number of work
18 days aggregating at least 250 work days,
19 occurring either solely under this employment
20 or in combination with work days within the
21 parameters established for one or more of the

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1 classes of employees included in the Special
2 Exposure Cohort.

3 So that's what I would like to
4 propose to the Work Group as a modified Class
5 Definition that incorporates the difficulty
6 with potential illegible records, add the D2,
7 the Y location, and add the 000 location.

8 CHAIRMAN GRIFFON: Thanks, Tim.

9 Obviously it's quite a switch so
10 it's going to take us -- I mean I don't have
11 that in front of me and neither do the rest of
12 us, I guess -- the rest of the Work Group. So
13 it's going to take a little bit to understand.

14 But one question I had is in that
15 definition you said -- and prior to the new
16 definition, you indicated that if the code is
17 blank or illegible, so you wouldn't -- NIOSH
18 wouldn't go through this process of trying to
19 take every case and if you had gaps or blanks,
20 try to determine whether there was a good
21 explanation for them like military service, et

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1 cetera? But you would just rather look at the
2 record and if there was a blank or illegible
3 record, then you would say they're in. Is
4 that correct?

5 DR. TAULBEE: No, no, I apologize
6 there. That's a misunderstanding.

7 CHAIRMAN GRIFFON: Well, maybe it
8 is my misunderstanding.

9 DR. TAULBEE: Okay, no, some of the
10 dosimetry cards, there is a -- it's a
11 preprinted out card, this is prior to 1958, it
12 is a preprinted card. And it will say
13 assigned area. And there will be a stamp
14 there that would say A1, A9, A5, or P reactor,
15 or P, L, K, C, D2, D1.

16 Sometimes some of those forms, that
17 location is actually blank. Okay, they would
18 still have to have a dosimetry card indicating
19 they were monitored. But the location is not
20 identifiable as to where they were monitored.

21 Keeping in mind that during our

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1 Class Definition to be exposed to thorium in
2 these areas, the requirements were that you
3 were monitored for radiation exposure. So
4 with this card, therefore that indicates you
5 were monitored for radiation exposure. And
6 then the question becomes where were you
7 monitored. Does that clarify that?

8 CHAIRMAN GRIFFON: Yes, yes, that's
9 helpful. That's helpful.

10 I would also wonder if any -- I
11 mean if SC&A has any response to this.

12 DR. MAKHIJANI: Yes, yes, Mark,
13 could I ask a clarifying question?

14 CHAIRMAN GRIFFON: Yes, go ahead.

15 DR. MAKHIJANI: And let me make a
16 remark first and then I'll ask a question.

17 I also was involved in the Rocky
18 Flats analysis. And this is sort of a
19 different case because the gaps that were
20 identified there were was there a plutonium
21 bioassay for every period. And the question

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1 was of dose reconstruction in which
2 interpolation for missing periods for things
3 like plutonium was pretty in how dose re
4 construction is done or a coworker dose is
5 assigned.

6 In this particular case, the
7 dosimetry code indicates presence and presence
8 is the only thing that determines whether a
9 person is in or not, in or out. So that there
10 would have to be zero gaps.

11 So that my interpretation, and I
12 stand to be corrected obviously in how NIOSH
13 is proposing it, is that if there were one gap
14 in somebody's record and, you know, there are
15 lots and lots of gaps, they would have to be
16 presumed to have been present because it
17 wouldn't be claimant-favorable otherwise.

18 And lastly I'd like to remark that
19 the one case in which there may have been
20 military service was actually indicated in the
21 records. And in the other cases the gaps are

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1 kind of intermittent with people actually
2 being present and having a record. So they
3 are interspersed throughout a person's
4 presence there -- not in all cases but in
5 several of those cases.

6 And I find it, you know, obviously
7 we have to wait for NIOSH's analysis of how
8 these gaps might have arisen and we haven't
9 done that, but I find it very hard to believe
10 that every one of those gaps can be explained
11 by an absence or, you know, a long sickness or
12 military service, something like that.

13 There are just so many of them. If
14 you look at Table Two, you get an idea of how
15 many gaps we're actually talking about. And
16 this is a completely different case than Rocky
17 Flats, in which, in my opinion, my question
18 for Tim is what -- you didn't propose anything
19 about an unfillable gap in your proposed SEC
20 definition. What would be done in those
21 cases?

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1 DR. TAULBEE: Okay. Let me clarify
2 a couple of points here, Arjun. The Rocky
3 Flats particular one, the information that
4 Brant gave me yesterday indicates an analysis
5 of both external and internal data. So that's
6 one point.

7 But regardless of that --

8 DR. MAKHIJANI: But basically you
9 made the point that you would fill in the gaps
10 with coworker data and so on. You have to
11 have a code for that worker. You can't fill
12 in a gap with any other worker's data.

13 DR. TAULBEE: Let me clarify some
14 of these gaps, okay? Now we are going through
15 and evaluating, and I'm not saying that we
16 won't find some that have gaps that maybe we
17 can't explain, but I can tell you that some of
18 these gaps we have found where the quarterly
19 reports, they are actually listed with a
20 location code.

21 When Savannah River had sent some

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1 of the dosimetry information, if there was not
2 an entry, they always print out that
3 particular page and send it to us.

4 Now some people might say well why
5 wouldn't they do that. Well, if the person
6 was monitored for that month or during that
7 year and the total dose didn't change, we
8 assign during data construction a full
9 complement of missed dose. So we didn't
10 actually need the blanks.

11 Now we are going back through all
12 the quarterly reports that are in the SRDB for
13 each of these ten people that you've got
14 listed there and looking to see during these
15 gaps is there a dosimetry report. And we'll
16 print it out and we'll include this back in
17 our analysis.

18 So some interpretation of what
19 these gaps are is important. It's very
20 important.

21 Now like I said, I don't that we'll

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1 be able to find for all of these. But a
2 significant number of these, especially in the
3 post-1958 time period, I believe we will be
4 able find.

5 The earlier time periods, there
6 appears to be some difference of
7 interpretation of the record between ourselves
8 and SC&A as to when you have a dosimetry card
9 for a person and they were monitored for one
10 cycle or maybe five cycles in a row and then
11 there's a gap. And then they were monitored
12 for an additional five cycles in a row, I
13 don't consider that a gap.

14 The interpretation of the site
15 records based upon their monitoring is that
16 they didn't go into a radiological area during
17 that time period. So to us, that would not be
18 a gap.

19 MS. AYERS: Excuse me. Tim?

20 DR. TAULBEE: Yes, sir? Or yes,
21 ma'am.

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1 MS. AYERS: I'd just like to
2 interrupt at that point. You just mentioned
3 if -- it sounded like if there was no data
4 entered, that we considered that as missing
5 data. We did not. On the cards, it was
6 considered blank or missing if the area code
7 was not filled in on the card or had been
8 scratched out with or without a replacement.
9 If it was scratched out, we thought that was
10 at least a partial gap or uncertainty.

11 DR. TAULBEE: Okay.

12 MS. AYERS: But not -- I did not
13 analyze the cards to the detail of was there
14 information recorded on the card.

15 DR. TAULBEE: Okay. I'm sorry.
16 That's my misinterpretation then.

17 DR. MAKHIJANI: Mark, could I ask
18 Tim a follow up please?

19 CHAIRMAN GRIFFON: Yes, please.

20 DR. MAKHIJANI: Yes, I mean, Tim,
21 I'm not saying that you won't find

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1 explanations for these gaps. I think you
2 misunderstood my question.

3 My question was that, you know,
4 this is a non-random sample, as we all
5 acknowledge and we said so in our report. If
6 you find that there are residual gaps for
7 which there is no explanation, are you
8 proposing to include a gap as a dosimetry code
9 that would correspond to a thorium area or are
10 you proposing some other way to deal with a
11 period for which no dosimetry code information
12 is available.

13 I didn't hear you say how you are
14 proposing to deal -- so you're obviously
15 assuming that you'll have an explanation for
16 100 percent of the gaps.

17 And why I'm distinguishing from
18 Rocky Flats is at Rocky Flats it didn't matter
19 because you could still fill in some gaps at
20 least with coworker models and we went through
21 that. Here you need the individual data, at

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1 least in my opinion.

2 DR. TAULBEE: I guess it is
3 premature for me to answer that question
4 because until I see some examples as to what
5 the gaps that can't be assumed, I really can't
6 answer as to whether we can do something about
7 that or not at this time.

8 Mark, can I give a little bit of a
9 preview of the evaluation we did of the CATIs
10 simultaneous while SC&A was working on this
11 work?

12 CHAIRMAN GRIFFON: Yes, yes, go
13 ahead.

14 DR. TAULBEE: Okay. While -- since
15 the last Board Meeting, you indicated you were
16 interested into whether any of the CATI
17 information could be used to try and verify
18 inclusion in this particular Class.

19 We went through and did, I guess,
20 an electronic query of the CATI system. And
21 granted this is self-reported data, so it's

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1 not random either, which has its own concerns
2 because it only represents people who were
3 alive that we interviewed, that indicated work
4 in 773-A or CMX.

5 And we identified 171 people in
6 NOCTS that indicated that they worked in 773-
7 A. Seventeen of these we excluded from our
8 analysis because their work in 773-A was post-
9 1972. So they wouldn't be part of this Class.
10 And their dosimetry codes are different, by
11 the way, post-1972.

12 So the remaining 154 claims, we
13 went through using the definition I described
14 to you above of the individual cases, the
15 original one, I guess, including the dosimeter
16 code 000 as part of that group. And we found
17 that 151 of the 154 claims would be included
18 in the SEC. So that's 98 percent based upon
19 self-reported data.

20 We looked carefully at the three
21 that would not. And one of them was a typist

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1 who initially worked in the typing pool and
2 then as an insurance clerk and moved to data
3 processing. So this would be a person who is
4 unmonitored but didn't need to be monitored
5 working in the A wing of 773-A.

6 Another was a computer program who
7 indicated in their CATI that they did not work
8 with radioactive materials.

9 The final was a power operator who
10 -- his dosimetry indicates worked in H area.
11 And in his CATI he indicated that he went to a
12 large number of other on-site buildings to
13 check power equipment. And 773-A was one of
14 the large numbers of buildings that he
15 mentioned.

16 So what I want to try and emphasize
17 here is that we went through and tested this
18 Class Definition based upon self reports,
19 again that's not random, but based upon self
20 reports. And we found that for the most part,
21 this Class Definition works.

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1 CHAIRMAN GRIFFON: Okay, Arjun, you
2 also looked at some CATIs. But it was only
3 for the ten cases, correct?

4 DR. MAKHIJANI: Yes, we looked at
5 the CATIs for the ten cases. And the point
6 that I want to make about CATIs and this SEC
7 definition is there's not an issue with how
8 you include people, which is what Tim was just
9 now addressing. There's an issue with how you
10 exclude people. Whether the excluded people -
11 - whether there is some uncertainty with the
12 excluded people and whether the exclusion
13 mechanism is certain enough to be called
14 claimant-favorable.

15 So it doesn't, in my opinion, help
16 to know that those who identified as 773 were
17 actually thorium workers. You've got a big
18 problem with 50 percent or more in the '53 to
19 '72 period. I would suspect that a majority
20 of claimants would be survivors.

21 If you actually look at survivor

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1 CATIs, there are, at best, very broad
2 definitions of where people worked and
3 certainly not by year let alone by period. So
4 then I think looking at CATI records that to
5 use CATI records to exclude people -- for
6 instance somebody said mostly I worked in the
7 200 area.

8 To use that statement excludes
9 somebody from this say if they have ten gaps
10 or, you know, in their records but they said
11 they worked in the 200 area in their CATIs, I
12 think would not be claimant-favorable. That's
13 obviously my own personal opinion from having
14 looked at lots and lots of CATIs.

15 And especially I think you'll not
16 be able to deal with the question of
17 survivors. I think the survivor problem has
18 been an issue that I have raised in regard to
19 CATIs and how they are used almost from the
20 very first involvement of my technical support
21 to the Board.

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1 CHAIRMAN GRIFFON: Okay. I'm
2 trying to figure out --

3 DR. MAKHIJANI: Oh, yes, there's
4 one other thing I wanted to say, Mark, is that
5 even if you could explain all the gaps in
6 these ten, I think in order to conclude that
7 gaps can be left out of the analysis of the
8 SEC definition safely without being not
9 claimant-favorable, I think you would have to
10 do a statistically valid sample of workers,
11 which would have to be sufficiently large and
12 sufficiently random, covering the two periods
13 and/or at least the second period.

14 Because in this particular
15 instance, I think, you know, we all agree it
16 is a small sample that is not random. I don't
17 think you can draw any general references even
18 if all the gaps are explained, which I would
19 be very interested to see. I have no opinion
20 one way or another about that.

21 CHAIRMAN GRIFFON: All right. I

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1 think at this point, it would be useful to
2 hear from the petitioner. Knut Ringen put
3 together a memo on this topic. And I note
4 it's not really our public comment time yet
5 but I think I'd like to hear what Knut has to
6 say on this since he had a proposed
7 modification to the Class Definition.

8 And then I think we might want to -
9 - I would really, by the end of this, try to
10 figure out a path forward. But let's try to
11 see -- Knut, if you're on the line, please
12 give us your suggestion.

13 DR. RINGEN: Well, I can comment on
14 this, what we've said. And Bob Warren and
15 Gordon Rowe can add to it.

16 What we said in our letter was that
17 -- and I told Tim that after the last Board
18 Meeting and out at the Tri-Cities, that I was
19 impressed with his effort in this regard. And
20 I thought that his proposed Class Definition
21 would solve a problem for many petitioners,

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1 but certainly not for all. It would enable
2 some petitioners to be included in the SEC.

3 But the criteria that he developed
4 -- and I said we had to look at this in some
5 more detail, his proposed Class Definition
6 since we hadn't seen it before it was
7 presented at that Board Meeting. And so we
8 went back and looked at that. And Bob Warren
9 was able to dig out these cases which he
10 represents and, therefore, could file FOIAs
11 and that kind of thing to obtain their dose
12 records.

13 And based on that, we concluded
14 that while you could use the criteria that Tim
15 had come up with include workers, you couldn't
16 use them to exclude workers. In other words,
17 if you look at the screening criteria as a --
18 you know, the inclusion criteria as a
19 screening test, you would get too many false
20 negatives if you were to use it.

21 And for that reason, we concluded

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1 that during that period of time when these, in
2 this case, the thorium period up to the end of
3 1972, there was no way to really exclude
4 anybody here. And, therefore, you would have
5 to include everybody on the site. I don't see
6 how you can do anything otherwise.

7 And listening to what the
8 modification that Tim has proposed today
9 doesn't lead me to any different conclusion.
10 It leads me to a greater concern that first of
11 all suddenly we discover oh yeah, there's
12 another area that should have been included
13 that we hadn't noticed before.

14 And so we'll just go and add that
15 to the Class Definition at this point in time.
16 Maybe we now -- if you accept that or if
17 that's the new proposal, then we will have to
18 go back and evaluate that. And I don't know
19 how many times we're going to go around with
20 all of this.

21 I think the problem remains that as

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1 many of the workers at Savannah River have
2 said, since 2003, the dose records are not as
3 reliable as NIOSH has thought they were. And
4 you cannot use them to exclude, in this case,
5 to exclude workers from the SEC. And that's
6 our big concern.

7 Not that you can't use them to
8 include but you can't use them to exclude. And
9 I don't see how you get around that.

10 Bob Warren or Gordon, do you want
11 to add to that?

12 MR. WARREN: Yes, this is Bob
13 Warren. I would like to clarify the question
14 about military service.

15 We put in there the dates that he
16 was gone for military service. What is
17 missing is the quarter after he had come back.
18 He worked in July of '64, I believe. And that
19 would be the third quarter. That's missing.

20 He came back in December of '63.
21 That would be the fourth quarter of '63. And

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1 that's missing. So there's no -- we weren't
2 saying there was a gap because of his military
3 service. We have the dates of his military
4 service so we weren't trying to do anything
5 with that.

6 But in his records that we got that
7 said after we were denied several times, we
8 finally got these records. And these records
9 were missing two quarters.

10 The other thing is on these CATI
11 interviews, you know, examples of people
12 filing claims when they're elderly, trying to
13 remember 45 years ago, they may remember 773
14 but they may not. So I just don't see how you
15 can exclude people that didn't remember 773.

16 If they remember 773, it seems to
17 me that ought to be an addition to the Class.
18 But it wouldn't exclude anybody that didn't
19 remember that. And the people that worked in
20 773-A and the lab, you're saying that you are
21 going to exclude three of them because they

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1 might have been exposed but they didn't have a
2 job that might have exposed them.

3 And the one thing I wanted you to
4 remember about 773-A and the lab, it backed up
5 on the administrative building in an A area.
6 And way back in 2002 or 2003, there were two
7 ladies that came in about a problem they had
8 in the administrative area when they had fumes
9 coming up from the fabrication lab.

10 And it turns out that they didn't
11 have any barrier between that lab and the
12 administrative offices. After they found that
13 out, they put the barrier. But that was in
14 1990-something.

15 So all of these years, people
16 working in that administrative building backed
17 up from that 773-A lab without a barrier and
18 it went right into the offices. So there are
19 a lot of things that are missing about records
20 and all of this. But we've been trying to get
21 this thing since almost eight years, even

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1 though we've been working on this one since
2 2007.

3 I would just ask that we not have
4 another delay after they had 180 days to get
5 the response and they've taken over four
6 years.

7 DR. RINGEN: Mark, can I make one
8 more point?

9 CHAIRMAN GRIFFON: Yes, go ahead.

10 DR. RINGEN: I'd first like to
11 address the general issue. There's also a
12 specific issue that we have a concern with in
13 the Class Definition. And that is we believe
14 that the current petition is in error when it
15 says that construction workers can be
16 identified completely by the use of the HP
17 codes 12D through 12H and 12J through 12Z. In
18 other words, those codes that correspond to
19 the central shops.

20 It is our understanding that
21 construction workers at Savannah River got

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1 their security badges through central shops
2 but not necessarily the radiation badges. And
3 that a large number of construction workers
4 got their radiation badges out on the site.

5 CHAIRMAN GRIFFON: Thank you. Thank
6 you.

7 Yes, I'm trying to think of a
8 possible path forward. I mean I really would
9 -- we put this off until the next full Board
10 Meeting with the hopes that we can come -- you
11 know, weigh in. And if we need to modify this
12 Class Definition, we can do it.

13 Because we certainly want to -- as
14 Knut said, it would be nice to move on this so
15 that we can, at the very least, get some
16 people the compensation they are entitled to.

17 I'm actually, you know -- so I
18 certainly am concerned about the data gaps as
19 identified. Listening to both sides of this
20 argument, I mean I also wonder if there's any
21 other possibility between the all-worker

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1 option and this code by code.

2 I almost wonder if -- that's why I
3 asked the question earlier, Tim, of the gaps
4 because I was wondering if you could set up
5 something where you could have criteria saying
6 that if workers had complete records that
7 indicate that they were not in those areas and
8 were not in those certain badge codes, you
9 know, in other words that would then exclude
10 them from the SEC Class rather than using the
11 reverse criteria of they have to have the
12 code.

13 But, you know, then you run into
14 the situation where, you know, you could have
15 a fair amount of -- well, I mean, that would
16 basically treating gaps as if they were in one
17 of those areas or one of those badge classes.

18 DR. RINGEN: That still wouldn't
19 resolve the issue of the construction workers
20 and other workers who --

21 CHAIRMAN GRIFFON: Yes, I know,

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1 right, right, right. Yes, so that's still in
2 there. I was writing that before you brought
3 up that point on the construction workers.

4 So -- but do any other Board
5 Members have any opinions about this plan? I
6 mean where I'm at right now is I feel like we
7 have sort of two possibilities.

8 And I would like to bring this to
9 the Board next week. And I'm hoping that -- I
10 know Tim indicated they want longer to look at
11 this gap analysis. But I would hope they can
12 do the best they can by next week because I
13 would like to bring this to some kind of
14 closure next week at the Board meeting.

15 Do other Board Members have any
16 comments?

17 MEMBER CLAWSON: Well, Mark, this
18 is Brad. You know just in reading these
19 reports and stuff, I really -- you know, I
20 understand what Tim has done and he has done a
21 good job.

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1 But it all comes back to if we
2 don't have the data for these people,
3 including where they were at or anything else
4 like that, it creates quite a problem for us.
5 I know that we're -- you know we're trying
6 everything we can to be able to place these
7 people where they're at. But if we can't, we
8 can't.

9 But, you know, we'll give it the
10 best shot. But this basically comes down to
11 the full Board.

12 CHAIRMAN GRIFFON: Yes. And I want
13 an opportunity to fully look at the new
14 proposal by NIOSH. But I also have concerns.
15 But at the Rocky Flats Site, I was going to
16 bring that up as well, Arjun, I was pretty
17 involved with that as well.

18 And, I mean, but it was done for a
19 totally different purpose. I mean here we're
20 trying to determine eligibility and an SEC
21 Class. There we were trying to see if the

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1 data was adequate for coworker models. And,
2 you know, it was for different purposes.

3 So in this case I think we really
4 have to get it right all the time. You know
5 we can't just say well, we've got 95 percent
6 of the people that deserve to be in the Class.
7 We missed five percent of the individual
8 claimants.

9 So I think this is our goal for
10 those kinds of decisions, we want to get it
11 right every time in my opinion anyway.

12 MEMBER CLAWSON: Well, and, Mark,
13 this is Brad again. Looking at the
14 information that we've got so far, we have
15 only looked at 10 cases. This is to give us
16 just kind of a filling spot. We're -- there's
17 thousands of cases out there that, you know,
18 this could be affecting.

19 Then, too, to get into this meeting
20 and we're changing parts of the definition and
21 so forth like that, I really haven't had any

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1 time to be able to look at how that would
2 effect us.

3 CHAIRMAN GRIFFON: Well, Tim, can
4 you forward that new information around to the
5 -- I would think the entire Board in the next
6 couple days?

7 DR. TAULBEE: Which new information
8 are you talking about?

9 CHAIRMAN GRIFFON: Well, at least
10 the new proposed definition.

11 DR. TAULBEE: That we can certainly
12 send.

13 CHAIRMAN GRIFFON: And then to the
14 extent that you go further on this gap
15 analysis, I would think as much as you can
16 have on that would be appreciated.

17 DR. TAULBEE: Okay.

18 MEMBER SCHOFIELD: Mark, this is
19 Phil. I'm concerned about the way they're
20 using these codes because that's an
21 administrative paper thing, whether a person -

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1 - whether these codes are put to a person's
2 record at the time they're working there. That
3 could easily be missed. You know they might
4 spend several months there or they may be
5 going in or out of that area but typically
6 they're assigned to some other area. So they
7 aren't given a code that shows them in that
8 area. That would obviously exclude a lot
9 people who have been in those areas and worked
10 in those areas. You know that's just my
11 observation.

12 CHAIRMAN GRIFFON: Thanks, Phil.

13 MEMBER LOCKEY: Mark?

14 CHAIRMAN GRIFFON: Yes?

15 MEMBER LOCKEY: This is Jim Lockey.

16 One of my concerns is, is this something that
17 is unique to this particular site? Or is this
18 an issue that may apply to other sites,
19 particularly during the earlier years.

20 So I know this is not a -- these
21 ten cases are not a random sample. But I

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1 think we probably should discuss an approach
2 to look at this on a more objective basis to
3 see if, in fact, this is an ongoing problem
4 not only at this site but it may be a
5 potential ongoing problem at other sites where
6 things are just so illegible or there's data
7 missing that you can't do dose reconstruction.

8 I'm concerned that we need to --
9 this sort of raises an issue like a pilot
10 study -- this would serve as a pilot study on
11 how we needed to find out, in fact, can we
12 confirm, in fact, this is a universal problem
13 at this site and maybe at other sites.

14 CHAIRMAN GRIFFON: Yes. Yes, I
15 would agree with that, Jim. I think that -- I
16 do listen, you know. I mean Tim's point that,
17 you know, when they do the data requests, they
18 may leave out certain quarters intentionally
19 because there were no positive readings or
20 whatever. So there could be some explanations
21 for some of these gaps. But I would agree

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1 with you overall.

2 The other thing I would point out
3 is that -- and I think Arjun raised this in
4 the original presentation -- was that often
5 times the illegible records that we have on
6 the O: drive, when you go -- when we did our
7 quality assurance visit to the ORAU offices,
8 they often have the original records and they
9 are, you know, illegible. So, you know, it's
10 not always -- yes, a that is a limitation of
11 your analysis, which I think you've mentioned,
12 Arjun.

13 Go ahead.

14 MEMBER MELIUS: This is Jim Melius.
15 I've been listening in.

16 CHAIRMAN GRIFFON: Excuse me? Who
17 is that? Jim?

18 MEMBER MELIUS: Melius.

19 CHAIRMAN GRIFFON: Oh, okay.

20 MEMBER MELIUS: Yes, remember me?

21 And my only comment would be just to follow up

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1 with -- one, I would urge you to bring this to
2 the Board. I think this has gone on a long
3 time.

4 And I think, you know, it is hard
5 for me to see doing -- that trying to do this
6 through some sort of random sampling of all
7 records is going to take many, many months.
8 And I don't think that's -- you know, and a
9 large commitment of resources and so forth.
10 And I think we need to, you know, carefully
11 think about that.

12 I would just only add that, you
13 know, if we look back at the history and
14 following up on Jim Lockey's comment is, you
15 know, what we've generally found and what
16 NIOSH has found, because they've come forward
17 with, in terms of recommendations to change,
18 you know, restrictive Class Definitions or
19 very specific Class Definitions is that, you
20 know, the records don't support specific Class
21 Definitions by area very well. Or by, you

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1 know, monitored, not monitored, all the other
2 attempts that have been made.

3 Because particularly in the earlier
4 years, there's just so many gaps in the record
5 systems. Again, you know, not -- the record
6 systems weren't designed for someone to go
7 back, you know, 50, 60 years later and do dose
8 reconstruction.

9 So I think, you know, in some ways
10 in order to use this type of Class Definition,
11 my feeling is sort of the onus is on NIOSH to
12 prove that it is workable. And, you know,
13 frankly I'm pretty skeptical, particularly
14 after hearing that they just discovered
15 another area that, you know, code that should
16 have been included.

17 But we can -- we should all talk
18 about this at the Board Meeting next week.

19 CHAIRMAN GRIFFON: Yes, I agree.
20 And that was my intention, Jim. I didn't know
21 you were on the line.

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1 But my intention is that we
2 definitely have some things. And we sort of
3 have two proposals out here to modify NIOSH
4 or, you know, I would think, you know, the all
5 workers based on SC&A's review of this. And
6 the concerns that have been raised throughout
7 the call.

8 So that is why I was saying NIOSH
9 can elaborate on this, their gap analysis or
10 whatever argument they can bring out, I think
11 that would be useful. Because I really think
12 we do need to come to closure on this. So
13 that's my intention.

14 I don't know if there is any more
15 discussion from the Work Group but my
16 intention would be to bring -- have NIOSH give
17 us this new proposed language and bring this
18 topic for a discussion to the Board Meeting
19 next week if that's okay?

20 MEMBER CLAWSON: Sounds good with
21 me, Mark. I agree with you on that. This is

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1 Brad.

2 CHAIRMAN GRIFFON: I guess I'm
3 going to stop short of making a Work Group
4 recommendation to bring to the Board Meeting
5 but rather just bring it as the topic here is
6 what we've heard and here's where we're at,
7 report on it, and have a Board discussion on
8 it.

9 MR. HINNEFELD: Mark?

10 CHAIRMAN GRIFFON: What's that?

11 MR. HINNEFELD: Mark, this is Stu
12 Hinnefeld.

13 CHAIRMAN GRIFFON: Yes?

14 MR. HINNEFELD: I just wanted to
15 offer a couple of things. One, with respect -
16 - can everybody hear me okay?

17 CHAIRMAN GRIFFON: Yes.

18 MR. HINNEFELD: With respect to
19 additional work on the gap analysis, I think
20 we should probably feel like for next week
21 we're going to have what we have today. I

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1 think -- it's Friday now. As a general rule,
2 we're traveling on Tuesday.

3 CHAIRMAN GRIFFON: Right.

4 MR. HINNEFELD: I don't know how
5 much additional can be accomplished in terms
6 of that for next week although I think there
7 have been a number of points raised by Tim
8 that point out -- that would lead me to
9 believe that that analysis is an important
10 part of understanding exactly what we are
11 facing here in the administration, what would
12 be faced in defining this Class as we're
13 discussing.

14 I think it is not a fact that there
15 is sufficient information presented to the
16 Board that would indicate that this approach
17 is not appropriate, you know the approach of
18 defining where people worked by this
19 particular record.

20 To Knut's point, I don't believe
21 we've ever taken the position that all

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1 construction workers reported to central
2 shops. I believe we agree that some
3 construction workers reported to that the
4 point -- got their dosimetry at the place
5 where they worked.

6 And so that was, you know, the way
7 we originally designed the Class. And then we
8 added people who reported to a central
9 location and worked all over the site in order
10 to make sure we didn't miss those people.

11 The issue I'm having with this is
12 the thorium work that we've identified so far
13 as being infeasible occurred in two small
14 areas of a 300-square mile site. So an
15 attempt or a suggestion now that because of
16 this small amount of thorium work that dose
17 reconstruction is not feasible for anybody on
18 the site during those years, when, in fact,
19 there may, in fact, be this credible record
20 that there is, in fact, a way to identify the
21 people who were even potentially exposed to

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1 this, I think that's kind of a hazardous route
2 to go down, to be honest.

3 DR. MAKHIJANI: Mark, could I say
4 something about that?

5 CHAIRMAN GRIFFON: Arjun, go ahead.

6 DR. MAKHIJANI: This is Arjun. Am
7 I on mute?

8 CHAIRMAN GRIFFON: No, you are
9 fine.

10 DR. MAKHIJANI: Okay. The one
11 point I would like to bring up is that apart
12 from this proposed SEC, we have established
13 there was thorium work in lots and lots of
14 other places in Savannah River Site. And
15 there are -- NIOSH has proposed those
16 reconstruction methods say for the 200 area,
17 for the 300 M area, and so on. And we have
18 produced reports and there are a large number
19 of outstanding issues on many of them.

20 And then still the full scope of
21 thorium work is not definitely defined as yet.

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1 We know that it was there in the 200 area and
2 it was there in the 300 area. And in some
3 parts of the 100 area outside the reactors,
4 like one of the reactor-associated
5 laboratories and so on.

6 So -- and those issues would still
7 all have to be resolved. So I think what Stu
8 said, I don't disagree with that. However, it
9 has to be complemented by the fact that we're
10 not talking about two small areas of thorium
11 work. We're talking about lots of areas where
12 the dose reconstruction method is still at
13 issue.

14 MR. HINNEFELD: I understand.

15 DR. MAKHIJANI: Yes, yes.

16 MR. HINNEFELD: That's not what I
17 intended. I did intend -- I said we have a
18 recommendation that we can pay some people
19 with an action here with the Class we've
20 recommended. Some of those people can start
21 getting their compensation with this

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1 recommendation.

2 I understand there are outstanding
3 issues. In fact, that's what you called them,
4 outstanding issues, meaning they haven't been
5 resolved.

6 DR. MAKHIJANI: Sure, right.

7 MR. HINNEFELD: So I understand
8 that completely.

9 CHAIRMAN GRIFFON: I think we're in
10 agreement. Yes, I think Arjun was just
11 emphasizing that point.

12 DR. MAKHIJANI: Yes, no, I wouldn't
13 disagree with that, no.

14 MR. ROWE: Mark, this is Gordon
15 Rowe. Can you hear me?

16 CHAIRMAN GRIFFON: Yes, Gordon. Go
17 ahead. You have comments to add?

18 MR. ROWE: This is Gordon Rowe. Can
19 you hear me?

20 CHAIRMAN GRIFFON: Yes, I can, sir.
21 Go ahead if you want to make a comment.

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1 MR. ROWE: Yes, I do. I'm
2 concerned with this coding on badges,
3 different subcontractors had different codings
4 than DuPont's employees did. And so I don't
5 think this coding can be considered as
6 accurate.

7 And also the issue of the building
8 numbers. You were talking about 773 in
9 particular. Some people identified it and
10 some people didn't. There were a lot of
11 construction workers that were carried to a
12 building and dropped off to do work. They
13 didn't even know what the building numbers
14 were. All they knew is they were told to go
15 in this building and do work and come out.

16 And so a person could work in 773
17 and any of these buildings without having
18 reported it. A lot of them, when you
19 interview them, they will tell you right off
20 they can't remember names of buildings and so
21 forth.

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1 And there is another concern that I
2 have that I would like to talk about. This
3 petition, I submitted this petition years and
4 years ago. And it was for -- the thorium
5 issue was an add on later. It was because of
6 monitoring situations.

7 And having working on the site, I
8 know that there was records falsified and not
9 kept and changed. And there was a lot of
10 discrepancies in records. And there was a lot
11 of stuff, well, it was not even reported.

12 And so NIOSH has dragged this
13 petition out for years. They have come up
14 with everything, every issue they can,
15 gathering information, gathering information.
16 I think according to the law, they should have
17 in a year or two years, they should have made
18 a decision on this. And it has been dragged
19 out for six years or more now.

20 And I think that they need to stop
21 dragging the issues out. And I think this

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1 petition should have been approved years ago.

2 I appreciate this opportunity to
3 talk.

4 CHAIRMAN GRIFFON: Thank you,
5 Gordon. Thank you. And I think we do --
6 that's part of the reason we want to move on
7 this particular piece as quickly as we can. So
8 we hear you.

9 Are there any other -- I think we
10 have a fast forward on bringing this to the
11 Board. Any other comments before I -- there's
12 only one other agenda item, which is sort of
13 an update from NIOSH on the other matrix
14 items. And mainly the -- I'd focus on the
15 internal dose coworker models that are in
16 various stages of development, I think.

17 I'm not expecting a big discussion
18 on those but rather just a sort of check in on
19 the timeline, where NIOSH is, et cetera.

20 But are there any other comments on
21 -- before we leave the thorium issue?

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1 MR. JERNIGAN: This is Charles
2 Jernigan. May I speak to you a moment?

3 CHAIRMAN GRIFFON: Oh, Charles,
4 what is your last name for the record?

5 MR. JERNIGAN: Jernigan, J-E-R-N-I-
6 G-A-N.

7 CHAIRMAN GRIFFON: All right. Thank
8 you. Go ahead, Charles.

9 MR. JERNIGAN: I'm a construction
10 worker. I'm an electrician. And I worked a
11 number of years on plant.

12 And while I was there I was the
13 union steward for the electricians. And so
14 I'm very familiar with all crafts that worked
15 out there and how we obtained our badges and
16 security and all that.

17 If you went on that project on what
18 we call a new construction, you were never
19 issued any kind of radiation monitor badges at
20 all. And we've had people go out there and
21 stay three, and four, or five years on new

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1 construction, never was issued any kind of
2 radiation monitor. So you would not have any
3 record at all on those people.

4 The work they were assigned to was
5 adjacent to H Area, F Area, some highly
6 irradiated areas. And the only thing dividing
7 them from radiation areas was a fence. But
8 you have no record at all on those people.
9 They were out there for several years.

10 Those people at times were asked to
11 go to other areas of the plant to retrieve
12 materials or to do other chores. And they had
13 no radiation monitors at all on them.

14 They didn't even go to central
15 shops to get their security badges. They were
16 issued at the area where they reported to work
17 for the new project.

18 And once the project was finished,
19 they may go to work with another contractor.
20 And you were issued a security badge at
21 central shops. But you were not issued a

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1 radiation monitor instrument until you went to
2 your area that you were assigned to, such as F
3 area or H area or one of the 100 areas.

4 And that radiation monitor
5 instrument was issued in that area but if they
6 needed you to go to another area to perform
7 work such as a weekend overtime to assist
8 other workers, you took that badge with you to
9 the other areas, even though it was assigned
10 to you say in H area or the area you worked
11 in.

12 You would move all over that plant
13 doing work with that same badge. So there is
14 no record showing that you were in other areas
15 with that badge because it came out of the
16 area you were assigned to. And this was
17 commonplace.

18 I just feel like you cannot use --
19 for construction workers, you cannot use that
20 dose badge to determine where they worked. And
21 in a lot of cases, you were not monitored

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1 properly.

2 So I just wanted to interject that
3 as a worker on that plant and being out there
4 for like 14 years through the '80s and '90s.
5 We were used all over the plant. And in a lot
6 of cases -- for instance, if you were told to
7 go to another area for weekend work, they
8 would tell you to take your badge home with
9 you and bring it back with you the next day so
10 you wouldn't have to go back to the area to
11 retrieve it.

12 So it was pretty loose rules. And
13 you can't -- you just can't place a
14 construction worker in any particular area and
15 say this is all his records and they are
16 complete.

17 CHAIRMAN GRIFFON: Thank you,
18 Charles. That's a good point.

19 Anything else on the thorium? And
20 then --

21 DR. TAULBEE: Mark, this is Tim.

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1 CHAIRMAN GRIFFON: Yes?

2 DR. TAULBEE: I've got a -- just
3 real quick question I want to know. We will
4 send out to you our proposed revised Class so
5 that all the Work Group Members and I imagine
6 we'll send this to the whole Board, can see
7 that.

8 CHAIRMAN GRIFFON: And hopefully to
9 the petitioner as well, right?

10 DR. TAULBEE: I'm sorry?

11 CHAIRMAN GRIFFON: Hopefully to the
12 petitioner as well?

13 DR. TAULBEE: Oh, yes, yes.

14 CHAIRMAN GRIFFON: Yes.

15 DR. TAULBEE: And then for the gap
16 analysis, we will do the best we can to get as
17 far along as we can. But I don't think we
18 will be complete because this does take a
19 little bit of time. But we will certainly try
20 and get as far as we can and give you a bit of
21 an analysis from that standpoint.

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1 CHAIRMAN GRIFFON: That's all we
2 can expect.

3 DR. TAULBEE: Okay.

4 DR. MAKHIJANI: Mark, I have a
5 question, too. Do you want slides or
6 something for presenting this on our report?
7 Or the report is sufficient?

8 CHAIRMAN GRIFFON: I think you
9 might want to have a few slides, Arjun,
10 because I think just to walk through those,
11 what you've found with the tables and stuff,
12 it might be useful, yes, to do B

13 DR. MAKHIJANI: Sure, we'll do
14 that. We'll do that.

15 CHAIRMAN GRIFFON: Yes, all right.

16 And last topic on the agenda is the
17 -- just an update, Tim, if you have the list
18 on that agenda. If you can maybe run down for
19 us -- and for some of these, the status may
20 not have changed. But it has been a while
21 since we've discussed them. So if you can

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1 just give us an update of, you know, where
2 you're at with -- where you're at and what the
3 projected time for completion is to bring the
4 Work Group back for discussion.

5 DR. TAULBEE: Okay. I'll certainly
6 do so. Thank you.

7 CHAIRMAN GRIFFON: Thank you.

8 DR. TAULBEE: For the post-1972
9 thorium work, we conducted a review of the
10 records in the classified vault back in
11 September. And selected several records. And
12 we have received -- I guess, let's see, we
13 went back in October and actually captured
14 those after they cleared ADC review.

15 Where we're at with this is that
16 now that we've identified some work in the
17 post-1972 time period on the thorium fuel
18 cycle study that DOE and AEC were conducting,
19 there is some small work that was conducted
20 post-'72.

21 We want to go back the week of

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1 January 9th to review the radiological records
2 for that building during that time period. I'm
3 currently trying to coordinate with the site
4 first to make sure the week of January 9th is
5 okay. And then I'll get with SC&A to see if
6 they're okay with that particular date. And so
7 we're tentatively planning for that.

8 We're trying to get that letter out
9 to the site so they can pull some of these
10 radiological records back. And we can look at
11 that post-1972 time period.

12 The trivalent actinides --

13 CHAIRMAN GRIFFON: And one more
14 thing before you move on, Tim, on the thorium,
15 as Arjun just mentioned, there's other thorium
16 questions for the earlier period. Is that
17 correct? Other areas I mean that you're still
18 working on? Or have you submitted a complete
19 model to us and where is that? I'm trying to
20 remember.

21 DR. TAULBEE: From my

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1 interpretation, we had submitted a complete
2 model.

3 CHAIRMAN GRIFFON: That's right,
4 okay.

5 DR. TAULBEE: Yes, we were
6 proposing for the 200 area to bound dose with
7 the 300 area metal work since it was a liquid
8 scenario.

9 CHAIRMAN GRIFFON: Okay.

10 DR. TAULBEE: And there is clear
11 indication of the radiological monitoring.
12 Now if the Work Group has concerns with that,
13 you know, let us know and, you know, we can
14 discuss that further. But at this point, we
15 won't be addressing any of that.

16 CHAIRMAN GRIFFON: Now that we're -
17 - now that you're saying that, I think we --
18 it is sort of an open item in the Work Group
19 under discussion I believe.

20 Arjun, did you have an action on
21 that topic?

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1 DR. MAKHIJANI: Well, we don't have
2 an action on that, you know, because when we
3 had done our report on the 300 M area where
4 the uranium bioassay was proposed to be used,
5 and we suggested that that was not an
6 appropriate way to do it for a number of
7 reasons, and had several findings -- I don't
8 remember now how many. Joyce was involved in
9 helping me with that.

10 And so I think NIOSH did a report
11 and we did. So and we found it inappropriate
12 for the 300 M area where the bioassay was
13 taken, I think.

14 We haven't analyzed its
15 applicability for the 200 area. We certainly
16 could do that. But my suggestion would be
17 that the Working Group makes some
18 determination whether it is appropriate to use
19 uranium for thorium, given the fact that the
20 thorium bone dose for thorium per unit of mass
21 is about 100 times bigger than uranium. So

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1 that, you know, a ten percent error would
2 produce a ten times error in the bone dose.
3 That's one of the considerations.

4 I would suggest that we resolve
5 that. But if you want us to do analysis,
6 present it for the 200 area, we have not done
7 that nor have we been tasked to do it.

8 CHAIRMAN GRIFFON: Right. I am not
9 sure that that would be necessary at this
10 stage. That's what you're saying. I mean
11 until we resolve the first question, right?

12 DR. MAKHIJANI: Yes, I think so. I
13 think our conclusion was that the proposed
14 method did not hold up from a number of points
15 of view for the 300 M area. I would -- you
16 know, I obviously haven't done the analysis.
17 But I would just infer that extending an
18 unacceptable method to another area would also
19 be unacceptable.

20 CHAIRMAN GRIFFON: Well, let's
21 leave that for a face-to-face Work Group

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1 discussion. But I think we have enough on the
2 table that we can continue that discussion.

3 Okay, go ahead on with those
4 trivalent actinides, Tim.

5 DR. TAULBEE: Okay. For the
6 trivalent actinides analysis, if you will
7 recall this is the comparing construction
8 trades workers to non-construction trades
9 workers. Our draft report is in final review.
10 DCAS's comments are being finalized, sent back
11 over to ORAU.

12 I expect that this report will be
13 released in mid-January time frame such that
14 we could have a face-to-face meeting the
15 first, second week of February time frame,
16 give you guys some time to review it.

17 The stratification report of the
18 methodology has already been approved. And it
19 is within our documents. And you guys should
20 have access to that. And I believe that's
21 Report 53, ORAUT Report 53. And that was

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1 released on October 28th of this year that was
2 just approved.

3 So using that methodology, we have
4 compared construction trades workers, non-
5 construction trades workers, and are
6 finalizing that particular report. So I think
7 mid-January you should have that first
8 analysis.

9 The neptunium-237 evaluation is
10 underway as the trivalent actinides is being
11 completed. Each of these are going along in
12 series. And then once we finish the
13 neptunium, then we'll move on the fission
14 products, cobalt-60.

15 The exotics, a draft report has
16 been --

17 CHAIRMAN GRIFFON: Do you have any
18 projection for the neptunium-237?

19 DR. TAULBEE: Give me a minute. I
20 don't have that off the top of my head. I
21 know you won't have it by the end of January.

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1 So let me put it that way from a next Work
2 Group standpoint. Does that help any?

3 CHAIRMAN GRIFFON: Sure.

4 DR. TAULBEE: Okay. I believe it
5 is mid-February for that to be released, maybe
6 the end of February. But I'd have to check
7 the actual dates on our project plan. I don't
8 have that available right now. Okay?

9 All right. Thank you.

10 At that point, then we move on to
11 the fission products, activation, cobalt-60
12 will be done at the same time. Those two are
13 actually being done in parallel.

14 The exotics, we have a draft report
15 that is in final review. The DCAS comments
16 are being incorporated by ORAU. And this
17 should also be released by mid-January.

18 So I guess from my standpoint, I
19 fully expect that if we were to meet the first
20 or second week of February, we could discuss
21 the trivalents. We could discuss the exotics.

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1 And I'd be able to give you a better update on
2 the post-'72 thorium at that time.

3 CHAIRMAN GRIFFON: Okay. Thanks.

4 I think -- I'm not -- I don't have
5 my calendar in front of me. But I think next
6 week in Tampa maybe we can talk about a date.
7 And then that probably does make sense to have
8 it in February sometime, maybe mid-February.
9 The Work Group Members, we can talk when we're
10 in Tampa next week.

11 DR. TAULBEE: The only reason I was
12 mentioning that particular time period is that
13 I'll be at Savannah River hopefully the week
14 of January 9th. And then I will be out
15 January 23rd through February 1st.

16 CHAIRMAN GRIFFON: Okay. All
17 right.

18 Any comments or reactions to that -
19 - the timelines, Arjun or anyone?

20 (No response.)

21 CHAIRMAN GRIFFON: Okay, then --

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1 DR. MAKHIJANI: Hi, I guess I was
2 on mute. Sorry about that Mark.

3 No, no, I have no comment. I guess
4 there is a lot coming down the first part of
5 the year. And my only suggestion, Mark, would
6 be at the Board Meeting we kind of set forth
7 some kind of a schedule if you wanted
8 responses. And maybe that will come at the
9 Work Group Meeting.

10 CHAIRMAN GRIFFON: No, that's fine.
11 Yes, we can talk about that.

12 DR. MAKHIJANI: Yes.

13 CHAIRMAN GRIFFON: Are there any
14 other -- are there public comments? We're
15 getting ready to close the meeting out but I
16 know a bunch of folks commented already,
17 mainly on the primary topic of interest, the
18 thorium SEC Class.

19 But is there any other comments
20 from the members of the public or the
21 petitioner?

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1 MR. WARREN: Mark, this is Bob
2 Warren. I wondered if we could also get what
3 you all had before you today? Some kind of
4 report from SC&A. We didn't have that yet.

5 CHAIRMAN GRIFFON: Okay.

6 Ted, we can make that available,
7 correct?

8 MR. KATZ: Hi, Mark, if it is PA
9 cleared, it should have been made available.
10 So I don't know what the status of that is.

11 CHAIRMAN GRIFFON: All right. We
12 will work on that for you, Bob, and get that.
13 That was PA cleared, right, Arjun?

14 DR. MAKHIJANI: Yes, yes, it has. I
15 have a PA-cleared version.

16 Ted, do you want me to send it to
17 you?

18 MR. KATZ: No, I have asked for the
19 PA-cleared version to be sent to the
20 petitioner. So I mean maybe -- I don't
21 remember the timing of when I received it or

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1 whatever. But that has already been asked for
2 so it should already be on its way to the
3 petitioner.

4 CHAIRMAN GRIFFON: Okay. All
5 right.

6 MR. WARREN: Thank you very much.

7 CHAIRMAN GRIFFON: Yes, sorry about
8 that, Bob. And we'll get that to you and it
9 will be discussed in the next week's meeting
10 at Tampa. So if you want to dial in during
11 the Savannah River time frame, it will be
12 discussed there as well.

13 DR. RINGEN: Mark, as you think
14 about your time schedule, it is fair to say
15 that all of the three petitioners are in very
16 precarious health here. And two of them are
17 too sick to participate at this point in time.
18 And ' identifying information redacted' health
19 is also not very good.

20 So I would encourage you to think
21 about, as you move forward, that there is more

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1 to this than just the technical issues
2 involved. There is something about the
3 timeline here that you all need to think
4 about.

5 CHAIRMAN GRIFFON: Thank you. And
6 yes, I agree. We do have to act on this.

7 Okay. Any other comments?
8 Otherwise --

9 MEMBER CLAWSON: Hey, Mark? Mark,
10 this is Brad. On this status that DCAS just
11 gave us on the post-'72 thorium and neptunium
12 and all this, they're saying when the report
13 is going to be out. But is SC&A set up to be
14 able to review these reports as soon as they
15 come out? Or do we need to ask them for that?

16 CHAIRMAN GRIFFON: Arjun, I mean
17 our existing condition here, I think was that
18 if NIOSH comes out with their report on the
19 coworker models, they are on the matrix. So I
20 would think that you would be able to, under
21 the general tasks, initiate your review,

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1 correct? Is that correct? Ted might be able
2 to answer that, too.

3 MR. KATZ: Yes, this is Ted. That's
4 fine. It is understood that when these
5 reports come out, that SC&A will review them.

6 MEMBER CLAWSON: Okay. I just
7 wanted to make sure so we don't have confusion
8 or any kind of a time --

9 CHAIRMAN GRIFFON: Delay, right,
10 right, right, yes. Good point, Brad. Thank
11 you. Okay. If that's everything, I think
12 we're ready to adjourn. And we'll have
13 further discussion on this obviously next
14 week. So thanks to everyone. And I know
15 these phone call meetings are not ideal but
16 thanks to everyone for dialing in. And we'll
17 see most of you next week in Tampa.

18 (Whereupon, the above-entitled
19 matter was concluded at 11:44 a.m.)

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