

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

+ + + + +

81st MEETING

+ + + + +

THURSDAY  
DECEMBER 8, 2011

The meeting convened at 8:30 a.m.,  
Eastern Standard Time, in the Tampa Marriott  
Westshore, 1001 N. Westshore Blvd., Tampa,  
Florida, James M. Melius, Chairman, presiding.

PRESENT:

- JAMES M. MELIUS, Chairman
- HENRY ANDERSON, Member
- JOSIE BEACH, Member
- BRADLEY P. CLAWSON, Member
- R. WILLIAM FIELD, Member
- MARK GRIFFON, Member
- JAMES E. LOCKEY, Member
- WANDA I. MUNN, Member
- JOHN W. POSTON, SR., Member
- DAVID B. RICHARDSON, Member
- GENEVIEVE S. ROESSLER, Member
- PHILLIP SCHOFIELD, Member
- PAUL L. ZIEMER, Member
- TED KATZ, Designated Federal Official

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

2 8:31 a.m.

3 CHAIRMAN MELIUS: Good morning,  
4 everybody. We'll reconvene. Everybody is  
5 prepared here this morning for that.

6 So, and with that, welcome, Mark  
7 Griffon, who has joined us today, and let me  
8 turn it over to Ted, for the preliminaries.

9 MR. KATZ: Sure, thank you, Jim.  
10 Let me check on the line, to see if we have  
11 Member Mike Gibson. Are you on the line with  
12 us, this morning?

13 (No response.)

14 MR. KATZ: Okay, then just a  
15 couple of things. Welcome, everyone, here and  
16 on the line, for day two of our Board meeting.

17 There is no public comment session  
18 today. Just a couple of things.

19 We have several presentations  
20 today. Those presentations, you should find  
21 on the NIOSH website, under the Board section.  
22 So, you can follow along from wherever you

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1 are.

2 I'll just ask folks on the phone  
3 to please mute your phones while you're  
4 listening. Press \*6 if you don't have a mute  
5 button, and then press \*6 again to come off of  
6 mute, if you're going to address the Board, if  
7 you're a petitioner for one of these  
8 presentations.

9 Please don't put the phone on hold  
10 at any point, but hang up and dial back in, if  
11 you have to leave the call for a while, and  
12 that's it. I think we're ready to go. Thanks.

13 CHAIRMAN MELIUS: Okay, the first  
14 item on our agenda this morning is the Linde  
15 Ceramics Plant, the SEC petition, and we have  
16 a request from Senator Schumer's office to  
17 read a statement into the record. Laura  
18 Monte, are you on the line?

19 MS. MONTE: Yes, I am.

20 CHAIRMAN MELIUS: Okay, go ahead.  
21 Welcome.

22 MS. MONTE: Okay, thank you. Good

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1 morning.

2 I wanted to briefly address the  
3 Advisory Board regarding this issue that  
4 concerns Senator Schumer and Senator  
5 Gillibrand.

6 Today, the Board will be  
7 discussing and voting on the Linde SEC  
8 petition. Senator Gillibrand joins Senator  
9 Schumer in expressing great pleasure and  
10 relief that this second and final Linde  
11 Ceramics SEC petition has been recommended for  
12 approval by NIOSH.

13 Sickened Linde Ceramics workers  
14 and their families have been waiting for many  
15 years for not only the final disposition of  
16 these two SEC petitions, but also for a  
17 complete and accurate Site Profile that will  
18 provide the basis for the evaluation of  
19 individual dose reconstruction claims for  
20 those workers that do not meet the SEC  
21 requirements for fair compensation.

22 NIOSH has been using a wholly

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1 incomplete and fundamentally inaccurate Site  
2 Profile to evaluate individual dose  
3 reconstruction claims for Linde Ceramics  
4 workers since 2005.

5 Senator Schumer and Senator  
6 Gillibrand find this extended degree of delay  
7 to be both unreasonable and unconscionable, in  
8 light of the paramount interest in NIOSH  
9 providing timely evaluation and disposition of  
10 all claims.

11 Senator Schumer and Senator  
12 Gillibrand strongly urge NIOSH and the  
13 Advisory Board to work together to expedite  
14 the much needed and long delayed revision of  
15 the Linde Ceramic Site Profile, to ensure that  
16 those Claimants that do not meet the SEC  
17 requirements may finally receive the full,  
18 fair and Claimant-favorable evaluation of  
19 their individual dose reconstruction claims  
20 that they have been denied for far too long.

21 Senator Schumer and Gillibrand  
22 would also respectfully request that our

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1 offices receive a full listing of those  
2 Claimants that will have their previously  
3 denied individual dose reconstruction claims  
4 re-evaluated and re-dosed as soon as  
5 practicable.

6 If you have any questions or need  
7 further information, Senators Schumer and  
8 Gillibrand would ask that you please contact  
9 Ms. Antoinette Bonsignore, who has been an  
10 advocate and representative for the Linde  
11 Ceramics workers and their families for the  
12 past eight years.

13 Both Senators' offices will be in  
14 contact with Dr. Howard in the near future, to  
15 discuss this matter.

16 Senator Schumer and Gillibrand  
17 hope that NIOSH and the Advisory Board will  
18 seriously consider the consequences of this  
19 policy today when voting on the Linde SEC  
20 petition, and for all SEC petitions going  
21 forward.

22 Thank you for your attention to

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1 this critical request.

2 CHAIRMAN MELIUS: Okay, thank you.

3 MS. MONTE: Thank you.

4 CHAIRMAN MELIUS: And now, we'll  
5 proceed with our discussion on Linde, and I  
6 believe Gen Roessler would like to say a few  
7 words of introduction. Gen is Chair of the  
8 Work Group.

9 MEMBER ROESSLER: Thank you, Jim.  
10 I thought I'd bring the Board up to date on  
11 our Work Group activities.

12 We're considering the Linde SEC-  
13 00154 petition, which covers the dates  
14 November 1, 1947 through December 31, 1953.

15 We had a Work Group meeting with  
16 regard to this period, just before our last  
17 Board meeting, and at that meeting, we met  
18 face-to-face in Cincinnati.

19 We identified a number of things  
20 that we had to discuss, utility tunnels. There  
21 was a new TBD at that time, which SC&A hadn't  
22 looked at, and we talked a lot about uranium

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1 progeny, and we decided that we wanted SC&A to  
2 look at a number of these things, and then  
3 we'd meet again.

4 We scheduled a meeting for October  
5 24<sup>th</sup>. We thought we were ready to begin the  
6 evaluation that NIOSH had prepared at that  
7 time, that they could do dose reconstruction,  
8 but then we learned that there was -- that  
9 DCAS had re-evaluated the information in quite  
10 a bit of depth.

11 They presented it to us that Work  
12 Group meeting, and in their re-evaluation,  
13 they had decided that there wasn't sufficient  
14 information to do dose reconstruction.

15 This was kind of a -- it came upon  
16 us rather quickly, and although Jim Neton made  
17 a very good presentation, when I read back  
18 over the transcript, I see it's all really  
19 there, but it came kind of quickly.

20 So, we decided we needed a little  
21 time to think about it. We wanted to see the  
22 new ER from DCAS. They promised that to us by

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1 late November. We received it on November  
2 22<sup>nd</sup>.

3 Monday after Thanksgiving, I took  
4 out the old ER and the new ER, and I'm sitting  
5 there, trying to compare them and that -- you  
6 just can't get the gist out of that.

7 So, I asked DCAS and Chris  
8 Crawford, could he prepare a written brief  
9 summary itemizing why they had revised their  
10 petition.

11 He did a very good job of that,  
12 and it's in your packet. If you want to look  
13 at the details, you can read that.

14 So, then the Work Group met again  
15 by teleconference, and we had this good  
16 summary. We recognize a lot of work was done,  
17 not only by DCAS, but SC&A in looking at all  
18 the new information.

19 So, that is the background. Jim  
20 is going to present the PER, and then I'll  
21 give you the conclusions of the Work Group,  
22 and I'm hoping we can have a vote this

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1 morning.

2 CHAIRMAN MELIUS: Okay, and just -  
3 - because I believe the Petitioners are on the  
4 line, also, just to clarify what our  
5 procedures are, we'll hear from Jim Neton. Gen  
6 will provide some further comments, and we'll  
7 have some -- any questions for Jim, sort of  
8 technical questions, comments on the report  
9 and so forth, and then before we take any  
10 action or propose any action, we'd like to  
11 hear from the Petitioners, also.

12 So, at that point, we'll call on  
13 the Petitioners. So, go ahead, Jim.

14 DR. NETON: Okay, thank you, Dr.  
15 Melius. That was a pretty good introduction  
16 by Gen.

17 I am going to talk about Revision  
18 1 of the Evaluation Report, where NIOSH has  
19 come to a conclusion to reverse our previous  
20 position, that dose reconstruction can be  
21 done, that was I think, presented to the Board  
22 a little over a year ago, November 2010, Rev

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1 0, I think it was at the Redondo Beach  
2 meeting, although I'm not certain of that.

3 I have some background slides,  
4 just to refresh your memory about Linde and  
5 what has transpired, and then I'll have a few  
6 slides to detail, and hopefully I can convey  
7 to you the rationale behind our change of  
8 opinion here.

9 The petition has been around for a  
10 while. It was received, as you see here,  
11 November 2009, and the Class here was all  
12 employees who worked at the Linde Ceramics  
13 Plant from November 1, 1947 to December 31,  
14 1953. It's a discrete six-year -- almost six-  
15 year interval, and it qualified in 2010,  
16 January.

17 NIOSH has evaluated the same Class  
18 that was petitioned for, which is that same  
19 time interval, 1947 to 1953.

20 The covered period, I'll remind  
21 the Board, runs from October 1, 1942 through  
22 December 31, 1953. That's the AEC contract

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1 period.

2 Then there is a residual  
3 contamination period that extends from that 53  
4 date, all the way through October 2009, and  
5 it's actually still contaminated.

6 That date is there because that's  
7 the latest update of NIOSH's residual  
8 contamination report, or the latest non-draft  
9 version of NIOSH's residual contamination  
10 report.

11 The last bullet here I think is  
12 fairly important. There were two previously  
13 added Classes to the SEC, and those were from  
14 October 1, 1942 to October 31, 1947, the very  
15 beginning period of Linde, that was -- became  
16 an SEC based on an 83.14 petition by NIOSH,  
17 and then there was another Class added more  
18 recently, from January 1954 through December  
19 1969.

20 If you recall, that was after the  
21 covered period was over. We were in the  
22 residual period, but there was some renovation

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1 activities going on, that the Board felt that  
2 we couldn't reconstruct with sufficient  
3 accuracy.

4 So, the bottom line is, this --  
5 the Class that we're talking about today is  
6 right smack in the middle of those two other  
7 Classes.

8 I've talked about this, the  
9 original proposal that was presented to the  
10 Board in November 2010, and our belief that we  
11 could reconstruct doses with sufficient  
12 accuracy was largely tied to these  
13 approximately 600 urine samples that we had  
14 that were collected between 1947 and 1950.

15 The fair amount of urinalyses data  
16 available, it seemed to us that we could use  
17 those, like we always do in modeling, to come  
18 up with exposures for workers in those areas.

19 But during the review, as Gen  
20 suggested, we went back and took a fairly  
21 detailed look at what those urine samples  
22 represented and how they could or could not be

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1 used to reconstruct doses in a couple of  
2 different situations that I'll talk about  
3 later.

4 This just more -- by way of more  
5 background information. I think we're all  
6 familiar that the plant is in Tonawanda and it  
7 wasn't unique -- it wasn't new to Linde that  
8 they were handling uranium. They actually  
9 worked with uranium to make dyes and ceramic  
10 tableware and such.

11 But in 1942, the Manhattan  
12 Engineer District contracted to make uranium  
13 oxide and later, green salt.

14 There were a number of buildings  
15 erected by the Manhattan Engineering District,  
16 and these are actually DOE facilities, as  
17 such, and they constructed several buildings.  
18 The ones that we're going to talk about today  
19 are Building 30 and 38. So, keep those in  
20 mind.

21 There was a three-step process.  
22 They started originally with just raw ore. I

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1 think I have some slides here.

2 The three-step process, the first  
3 process, which happened very early on in the  
4 contract period, was the conversion of uranium  
5 ore, which included Belgian Congo ore and some  
6 tailings, ores, all kinds of varieties of ores  
7 that were unpurified, if you will, and  
8 converted that ore to U3O8, also known as  
9 black oxide.

10 We all know, this is very much  
11 like the operation that occurred at  
12 Mallinckrodt, where you end up with a lot of  
13 raffinate material, that is residual extracted  
14 material that contains the uranium progeny.

15 Most of the raw ores that came,  
16 for instance, from the Belgian Congo, are  
17 pretty much assumed, and I think this is true,  
18 to be in 100 percent equilibrium, all the  
19 long-lived progeny are there, you know, the  
20 radium, in particular.

21 And so, in that process, you end  
22 up extracting a lot of these and concentrating

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1 a lot of these progeny in various steps and in  
2 various pieces of equipment.

3 If you remember, the Mallinckrodt  
4 SEC was added because of the -- I think it was  
5 the Sperry filter cakes, or something like  
6 that, where there was a thorium concentrate or  
7 they had no monitoring data for those workers.  
8 So, keep that in mind.

9 Step two, which also occurred in  
10 Building 30, was the conversion of the black  
11 oxide to brown oxide UO<sub>2</sub>, with UO<sub>3</sub> as an  
12 intermediate.

13 So, these two steps were in  
14 Building 30. We all recall that Building 30  
15 was the, quote-unquote, most contaminated  
16 building onsite, primarily because of these --  
17 the ores that were processed through there.

18 Step three is a slightly different  
19 situation, though. They converted the UO<sub>2</sub>,  
20 the brown oxide to green salt, uranium tetra  
21 fluoride, and that was done solely in Building  
22 37 and 38, mostly in 38.

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1                   Because the ore had been --  
2 because the uranium had been extracted and  
3 purified, you don't have the raffinate  
4 problem, the residual long-lived radioactivity  
5 issue in Building 38 that you would have in  
6 Building 30.

7                   Okay, that kind of sets the stage.  
8 This is just talking a little bit about the  
9 production of UF4 in Building 38. The time  
10 period was from November 1947 through the  
11 middle of 1949, and that particular process,  
12 they fluorinated UO2 to produce the UF4 and  
13 the fluorine will become important as I talk,  
14 in a little bit.

15                   But as I mentioned, it started  
16 with purified uranium, so, there was no  
17 progeny.

18                   The D&D operations, the major  
19 operations, again, I forget the topic of the  
20 next slide here, which is the major  
21 operations. I want to focus on what happened  
22 between 1947 and 1953.

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1           So, here we have in 1947 and to  
2 the middle of 1949, the production of UF4 in  
3 Building 38, but we also have somewhat  
4 simultaneously ongoing, the D&D of Building  
5 30, it had all the raffinate material in it.

6           There was the step two process  
7 equipment that was removed. A lot of step one  
8 equipment was being decommissioned, et cetera,  
9 and we recall from the last SEC, there was  
10 extensive activity, sand blasting, removal of  
11 contaminated parts, jackhammering, torching, a  
12 number of things they tried to clean up that  
13 building, and as I mentioned, this created a  
14 large potential for exposure to uranium and  
15 progeny.

16           So, you've got two buildings here,  
17 Building 30 and 38.

18           Building 38, after they stopped  
19 production of the uranium tetrafluoride, is a  
20 little less uncertain as to what happened.

21           The decontamination efforts --  
22 there certainly was a lot of contamination

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1 there. They produced a fair amount of UF4,  
2 but the decontamination efforts were not able  
3 to find any significant amount of  
4 documentation as to what occurred, although it  
5 is fairly clear from a memo trail, that  
6 various attempts had been made to clean it up.

7 There was a minor clean-up that we  
8 identified at the end of operations. Equipment  
9 was placed in stand-by. As I mentioned, if  
10 you go through these memos, it's almost sort  
11 of an implied thing. They would survey it,  
12 and then a couple of years later, they would  
13 survey it again, and say, well, it's still not  
14 clean enough. How clean does it need to be?

15 It wasn't until 1954 that they  
16 finally cleaned it to the point where they  
17 felt it was available for release.

18 We have absolutely no internal  
19 monitoring data for these efforts. I  
20 mentioned at the onset that 1947 to 1950, we  
21 have about 600 urine samples. After 1950,  
22 there is nothing. We have no air sample data.

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1 We have no urine sample data.

2 So, we took a look at the 1947 to  
3 1950 urine sample data, fairly took a hard  
4 look at it, and to see what we could do with  
5 it, based on these two conditions that  
6 existed.

7 The uranium was, as usual in this  
8 time period, a fluorometric analysis, meaning  
9 it measured only mass of uranium. You had no  
10 isotopic information from that measurement.

11 Looking at the details, and I  
12 spent some time looking at the individual  
13 results. They appear to almost -- not almost  
14 -- not exclusively, but almost exclusively,  
15 then collected the monitored workers in  
16 Building 38.

17 That was the building that did not  
18 have the raffinate material. It was purified  
19 uranium, and it makes some sense, and part of  
20 the reason I believe that, is that most of the  
21 urine samples had a fluorine result associated  
22 with them.

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1           If you remember, they used  
2 hydrofluoric acid as part of the process, and  
3 I'm forgetting what the biological effect of  
4 hydrofluoric acid is on the body, but I'm sure  
5 it's not good.

6           So, they were keeping track of the  
7 amount of fluorine that people were excreting  
8 to make sure that they didn't incur a health  
9 hazard from that chemical.

10           So, anyway, that kind of  
11 corroborated that these samples were really  
12 not taken for any -- were primarily taken for  
13 monitoring workers in Building 38, and  
14 remember, we had the ongoing operation of the  
15 clean-up of Building 30, with the raffinate  
16 material.

17           We have no evidence that the  
18 workers that were doing the clean-up were  
19 monitored in Building 30 and in fact, even if  
20 they were, you remember, this is a uranium  
21 mass measurement.

22           It gives you no information about

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1 the thorium-230, the radium-226, all the other  
2 long-lived progeny that could have been there  
3 from the uranium, and by nature of the  
4 chemical process, there would have been  
5 various pieces of equipment that had  
6 concentrated levels of different  
7 radionuclides.

8 So, we really don't know what  
9 those workers were breathing and being exposed  
10 to during the D&D of Building 30.

11 There are air sample data from  
12 that period, but they are gross alpha  
13 measurements. We have no isotopic-specific  
14 activity.

15 So, as I indicate here, mass  
16 measurements are incapable of evaluating  
17 intakes of long-lived progeny present in  
18 Building 30, and since we have no bioassay or  
19 air sample data after 1950, we really don't  
20 feel that we can bound the -- any of the D&D  
21 activities that had occurred in Building 30 --  
22 38, which is the purified uranium processing

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1 building, but we have no bioassay samples.

2 If there was D&D activities going  
3 on, what do you use to bound those exposures?

4 So, this is sort of -- I think  
5 sort of summarizes what I just said. Building  
6 38 was decontaminated after July 1949. So,  
7 they were either unmonitored or the monitoring  
8 records have been lost.

9 Building 38 was contaminated with  
10 raffinate material that included some  
11 raffinates of unknown concentration, and it is  
12 now our opinion that the available bioassay  
13 data are incapable of quantifying exposures in  
14 either of those plants. That is, the entire  
15 time period between 1947 and 1953.

16 I'll talk a little bit about  
17 radon, that's been an issue here. It's our  
18 favorite exposure pathway, I believe.

19 In the Linde site exposure -- or  
20 the Site Profile, it is assumed that all  
21 workers were exposed to 10 picocuries per  
22 liter radon in above-ground structures.

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1           That value was arrived at by  
2 looking at the values of radon that were  
3 measured during the processing of the ores  
4 that had long-lived progeny in them, and what  
5 we did was, we took the lowest concentrations  
6 that were measured in the era, and said, well,  
7 we don't know what they are, but they're  
8 certainly no higher than what -- the lowest  
9 concentration that was measured during the  
10 processing era, and that ended up being 10  
11 picocuries per liter.

12           So, in dose reconstructions, we  
13 will assume that all workers, since we don't  
14 know where people really ended up being, you  
15 know, during the plant production era, all  
16 workers will be exposed to 10 picocuries per  
17 liter.

18           There has been some discussion  
19 about these tunnels, these underground tunnels  
20 that are there. Our documentation, we feel  
21 fairly strongly indicates that the utility  
22 tunnels near the plant were not built until

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1 after 1956. That is, 1957 and 1961.

2 So, and we also -- there is some  
3 conflicting -- we have a couple of conflicting  
4 pieces of worker input on this issue, but we  
5 feel that the weight of the evidence is that  
6 these tunnels weren't there.

7 So, we don't believe that there  
8 should be any radon assigned from the  
9 underground tunnels during this time period.

10 That is the subject of some debate  
11 still within the Working Group, I believe, and  
12 in our opinion, that rises to the value of the  
13 level of a Site Profile issue.

14 External dose, we still believe  
15 that we can reconstruct. We haven't changed  
16 our opinion on this.

17 There are direct beta/gamma  
18 measurements -- I mean, there is about 6,000  
19 weekly film badge results that we have, that  
20 we can use to correlate job category and  
21 measured dose, and there are a few gaps in the  
22 records where film badge data are not

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1 available, but we have some fair --  
2 significant amount of radiation area survey  
3 data that we can use to supplement the film  
4 badge readings.

5 So, we feel fairly comfortable  
6 that we can still bound the external exposures  
7 to workers between 1947 and 1953, and those  
8 would be included in dose reconstructions for  
9 those folks with non-presumptive cancers.

10 Okay, the evaluation process,  
11 we've already determined that it's not  
12 feasible to estimate the radiation dose with  
13 sufficient accuracy, so, by definition, in  
14 this case, health has been endangered, we  
15 believe, as this slide indicates.

16 So, once health has been  
17 endangered, then we need to determine if -- is  
18 it based on just presence or is it 250 days,  
19 and our review of that, like many other sites,  
20 indicates that there was no individual  
21 incident that we could use -- we could point  
22 to, that would have endangered health, but

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1 these essentially were the result of chronic  
2 exposures incurred over a period of time and  
3 therefore, we will use the 250-day parameter  
4 to -- for workers to be -- you know, 250 days  
5 is required to have worked there to be a  
6 member of the Class.

7 Our final recommendation here is  
8 all NIOSH employees who worked in any area of  
9 Linde Ceramics Plant in Tonawanda, New York  
10 from November 1, 1947 through December 31,  
11 1953, for a number of work days aggregating at  
12 least 250 days, and this is our summary of our  
13 recommendations here.

14 We cannot do uranium and progeny  
15 exposure. It's not feasible for the entire  
16 time period. We will assign 10 picocuries per  
17 liter radon exposures for those not in the  
18 Class.

19 We can do external exposure.  
20 Medical, I should have made a little note on  
21 that.

22 Medical exposures, we came across

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1 some records that indicated that the medical  
2 x-rays were taken offsite between 1947 and  
3 1959, I believe, at the Blackrock Clinic, is  
4 what I'm remembering.

5 Since they were taken offsite,  
6 then they're not covered exposure under this  
7 program. After 1950, they were taken onsite.

8 So, we will assign medical  
9 exposures between 1950 and 1953, for those not  
10 in this Class, and that is it. I'll be happy  
11 to answer any questions.

12 CHAIRMAN MELIUS: Thank you, Jim.  
13 Wanda?

14 MEMBER MUNN: Jim, do I understand  
15 correctly from what you said, that the major  
16 factor here in our lack of information centers  
17 around the scarcity of air samples and our  
18 ability to determine what, other than uranium,  
19 was being kicked up during the D&D period; is  
20 that correct?

21 DR. NETON: That would be correct,  
22 between 1947 and 1950.

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1                   MEMBER MUNN: No, this period, the  
2 early period.

3                   DR. NETON: The early period.  
4 After 1950, the D&D operations were over in  
5 Building 30.

6                   We don't know what really occurred  
7 in there, either, that well, but principally,  
8 you have indications that D&D occurred in  
9 Building 38, where there was uranium  
10 contamination, no long-lived progeny, but  
11 uranium, purified uranium, and we have zero  
12 bioassays.

13                   I mean, no samples. No air  
14 samples. Nothing, in that three-year period.

15                   MEMBER MUNN: Okay, fine, just  
16 wanted that clarification. Thank you.

17                   CHAIRMAN MELIUS: Anybody else  
18 with -- yes, David?

19                   MEMBER RICHARDSON: You talked us  
20 through issues regarding Building 38 and some  
21 of the issues regarding Building 30.

22                   There were two other buildings

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1 that were related to step three, if I'm  
2 understanding this.

3 DR. NETON: Yes.

4 MEMBER RICHARDSON: I mean, you  
5 pointed to 37, and there's also --

6 DR. NETON: Yes.

7 MEMBER RICHARDSON: -- what wasn't  
8 measured is 31 --

9 DR. NETON: Yes.

10 MEMBER RICHARDSON: -- which I  
11 wondering if you could tell us about that.

12 DR. NETON: Yes, 31, I had  
13 originally on my slide 31, and it's really not  
14 clear to me. It appeared to be more of a  
15 warehouse-type structure, than anything, a  
16 very small block building.

17 So, yes, I don't think it was a  
18 major player. It certainly could have had  
19 contamination, as well, and added to the  
20 confusion that we would see.

21 But 38, in my opinion, is by far  
22 and away, the largest source of potential

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1 exposure.

2 MEMBER RICHARDSON: And 37 is the  
3 same?

4 DR. NETON: Thirty-seven is  
5 similar. I think it's sort of intermediate  
6 between the cinder-block building and 38.

7 MEMBER RICHARDSON: Okay.

8 CHAIRMAN MELIUS: Anybody else  
9 with questions?

10 I think, Gen, you wanted to say a  
11 few words in follow-up?

12 MEMBER ROESSLER: Well, why don't  
13 we hear from Antoinette first?

14 CHAIRMAN MELIUS: Okay. Well,  
15 now, if no more questions or comments, we'll  
16 now turn to the Petitioners, and I believe  
17 Antoinette, are you on the line?

18 MS. BONSIGNORE: Yes, I am, Dr.  
19 Melius. Can everybody hear -- can you hear  
20 me?

21 CHAIRMAN MELIUS: Yes, we can,  
22 very well. Thank you.

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1 MS. BONSIGNORE: Okay, great.  
2 Thank you. Thank you very much.

3 Good morning, Dr. Melius, Members  
4 of the Board. I want to thank you on behalf  
5 of the Linde workers and their families for  
6 this opportunity to address the Board this  
7 morning.

8 I would also like to thank the  
9 Linde Work Group for their efforts during the  
10 Linde SEC evaluation process.

11 I will be providing the Board with  
12 a copy of my presentation later this morning.

13 This morning, I am going to  
14 address three main points. First, I will  
15 recap the very long journey the Linde workers  
16 and their families have traveled since the  
17 initial filing of their SEC petitions in March  
18 of 2008.

19 Second, I will discuss some  
20 ongoing problems and concerns within the post-  
21 SEC Evaluation Process regarding the re-  
22 evaluation of previously denied individual

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1 dose reconstruction claims.

2           Lastly, I will discuss what can be  
3 done moving forward to provide greater  
4 oversight to the SEC and post-SEC evaluation  
5 processes.

6           I wish to also express how  
7 grateful I am that NIOSH has finally  
8 recommended the approval of Linde Ceramics  
9 SEC-154.

10           More importantly, I would like to  
11 express how grateful the Linde community is,  
12 that NIOSH decided to delve more deeply into  
13 the critical data that they have been relying  
14 upon for this SEC during these past six weeks  
15 to discover that their initial evaluation  
16 recommendation was incorrect, and calling for  
17 a wholesale reversal and recommendation for  
18 SEC approval.

19           NIOSH's decision has brought a  
20 great deal of relief and solace to many  
21 families that have been waiting for the final  
22 conclusion to this long process.

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1           To begin, I would like to briefly  
2 recap this SEC history for the Board.

3           Linde workers and their families  
4 started this SEC petition process in March  
5 2008, when two SEC petitions were filed, one  
6 covering the residual period, which was  
7 eventually recommended for approval by this  
8 Board, over NIOSH's objection. The second  
9 SEC, which we are discussing today, was not  
10 initially qualified for review.

11           As the Linde SEC representative, I  
12 appealed that denial and that appeal was  
13 rejected.

14           NIOSH denied qualification  
15 initially on June 26, 2008. I then appealed  
16 that denial, to a three-member panel, which  
17 quickly affirmed NIOSH's refusal to qualify  
18 this SEC petition.

19           In order to discover what  
20 reasoning the three-member panel had used to  
21 justify the qualification denial, I was forced  
22 to go into federal court, to get a copy of the

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1 panel's August 2008 report, which the CDC FOIA  
2 Office initially refused to disclose pursuant  
3 to my FOIA request.

4           Eventually, the CDC FOIA Office  
5 released that report, which turned out to be a  
6 mere one-page document that contained nothing  
7 more than a boilerplate and perfunctory review  
8 of the SEC qualification denial.

9           After some additional information  
10 that the Petitioners gathered from SC&A's many  
11 reviews of the Linde Site Profile issues, this  
12 current SEC petition was refiled on November  
13 5, 2009, and it finally qualified for review  
14 on January 22, 2010, nearly two years after  
15 the initial filing of this SEC petition in  
16 March 2008.

17           NIOSH's first November 2010  
18 Evaluation Report recommended the denial of  
19 this SEC, then quite unexpectedly, NIOSH  
20 announced during the October 24<sup>th</sup> Linde Work  
21 Group meeting that, after combing through the  
22 available data over the past six weeks, NIOSH

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1 had discovered that they had been  
2 misidentifying the most critical data that  
3 they needed -- that they had been relying  
4 upon, presumably since the issuance of the  
5 first Linde Site Profile in 2005, that NIOSH  
6 needed to reconstruct dose for this Class of  
7 workers.

8 So, after a very long journey,  
9 that has been highly complex, opaque and mind-  
10 bending at times, the Linde workers and their  
11 families have come to the end of a long road  
12 that officially began for the Linde community  
13 in March 2008, but in reality, started in  
14 April of 2003.

15 The second issue I want to address  
16 this morning brings me to the post-SEC  
17 evaluation process, and what can be done to  
18 provide more consistent and claimant-favorable  
19 outcomes during the post-SEC evaluation  
20 process.

21 Individual claimants that have  
22 never and will never meet the SEC requirements

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1 are still being denied their most fundamental  
2 rights under this reparatory compensation  
3 program.

4 It is in my opinion, one of the  
5 most critical and fundamental underpinnings of  
6 why EEOICPA was enacted and what it was  
7 intended to accomplish, that being the timely  
8 and fair compensation of sickened workers.

9 In this post-SEC evaluation  
10 process, details and accuracy matter, because  
11 those details affect the lives of aggrieved  
12 and sickened workers, which brings me to the  
13 Linde Site Profile and the newly revised and  
14 recently issued ER.

15 NIOSH has been using a wholly  
16 incomplete and fundamental -- fundamentally  
17 inaccurate Site Profile to evaluate individual  
18 claims for Linde workers since the issuance of  
19 the very first Linde Site Profile in 2005.

20 There have been four additional  
21 revisions since 2005. This extraordinary  
22 degree of delay is both unreasonable and

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1 unconscionable, in light of paramount interest  
2 NIOSH has in providing for timely evaluation  
3 and disposition of all claims. Some of these  
4 claims date as far back to the inception of  
5 this program.

6 But my concern is twofold. First,  
7 at the last Linde Work Group meeting, held  
8 last Thursday, when I first received a copy of  
9 the revised ER and a copy of a simplified  
10 explanation of what data NIOSH has been  
11 misidentifying for so many years and why that  
12 data could no longer be used to reconstruct  
13 dose for this Class of workers, I raised this  
14 very issue, regarding those claimants that are  
15 still waiting for the proper and fair  
16 evaluation of their claims.

17 Some members of the DCAS team  
18 seemed to indicate, rather quickly, after I  
19 expressed my concerns about the Site Profile,  
20 that my concerns were unfounded and somewhat  
21 irrelevant because hardly any previously  
22 denied claims would be affected by the ensuing

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1 Site Profile revision to the degree that would  
2 result in the approval of those claims.

3 Admittedly, there was some push-  
4 back about the impact of Site Profile  
5 revisions from other members of the DCAS team.

6 However, I cannot remain anything  
7 but troubled, by the -- about the integrity of  
8 the eventual program Evaluation Report, and  
9 claims re-evaluation process, after having  
10 that meeting.

11 The second concern I have deals  
12 with my review of the revised ER of this past  
13 weekend, where I discovered some rather  
14 troubling problems within the revised ER, that  
15 were not -- I would like to now briefly  
16 outline for the Board, and specifically, for  
17 the Linde Work Group.

18 First, regarding the ongoing issue  
19 of when the underground tunnels were  
20 constructed under the main uranium ore  
21 processing building. NIOSH still maintains  
22 that those tunnels did not exist under those

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1 uranium ore processing buildings during the  
2 operational time period.

3           What concerns me is that there is  
4 zero mention of the written memoranda that I  
5 supplied to NIOSH and the Linde Work Group in  
6 December 2010, regarding this specific issue  
7 in the revised ER, and along with that memo, I  
8 also supplied a number of original Linde  
9 memoranda from 1945 and 1948, regarding the  
10 diversion of effluents from overflowing  
11 injection wells near the ore processing  
12 buildings, to injection wells located near the  
13 Tonawanda building and Building 8, which is  
14 also known as Plant 1.

15           That memo and accompanying  
16 documents are not listed in the revised ER  
17 references and were never noted in the second  
18 revised ER, discussing the tunnel issue.

19           Moreover, that same memo and  
20 documentation is also never mentioned in the  
21 most recent version of the Linde Site Profile  
22 issued on July 15, 2011.

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1           In my opinion, those documents  
2 clearly demonstrate that effluence was averted  
3 from wells near Building 30 or the ceramic  
4 wells, at the northwest end of the site, to  
5 the wells near Building 8, or the Plant 1  
6 wells at the southeast end of the site.

7           Furthermore, no mention is made  
8 that Steve Ostrow from SC&A has recommended,  
9 after reviewing this information along with  
10 all of the information that NIOSH has supplied  
11 to date about the tunnel construction issue,  
12 and here, I'm just going to briefly quote Mr.  
13 Ostrow from our Linde Working Group meeting  
14 from October 24<sup>th</sup>, where he said, SC&A's  
15 position on the tunnels is that we reviewed  
16 everything that NIOSH supplied, reviewed  
17 everything that Antoinette Bonsignore  
18 supplied, various things, and we really can't  
19 -- we think there is no definitive answer,  
20 when the tunnels were built. So, our  
21 conclusion is that there really is  
22 insufficient hard evidence to say when the

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1 tunnels were built, and that I guess a  
2 claimant-favorable conservative assumption  
3 would just be assuming that the tunnels were  
4 there all the time. There is too much doubt  
5 about when they were actually built.

6 You can review Mr. Ostrow's  
7 complete comments and further details about  
8 this issue in my written materials.

9 Again, I would remind the Board  
10 and the Linde Work Group that none of this  
11 petitioner-submitted information is noted in  
12 the July 2011 revised Site Profile or the  
13 newly revised ER.

14 Consequently, I cannot help but  
15 question whether NIOSH -- whether the NIOSH  
16 team has seriously considered this  
17 information.

18 I find this to be yet another  
19 example of an extremely troubling pattern of  
20 Petitioners' and workers' arguments and  
21 statements, being disregarded time and again,  
22 as wholly irrelevant to the SEC and Site

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1 Profile revision discussions.

2 A second serious problem within  
3 the revised ER is the continued use and  
4 reliance upon discredited interviews conducted  
5 by the ORAU team, with some Linde workers in  
6 March 2010.

7 All of the ORAU March 2010  
8 telephone interviews are noted in the revised  
9 ER's reference section. These interviews had  
10 been repeatedly discredited because the ORAU  
11 failed to verify the statements noted in those  
12 transcript summaries with the workers they  
13 interviewed, before releasing the transcripts  
14 of those interviews for use by the Linde Work  
15 Group.

16 One of those workers was then re-  
17 interviewed by SC&A in May 2010 during the  
18 Niagara Falls Board meeting.

19 Mr. Hinnefeld was kind enough to  
20 apologize to that worker for the fact that he  
21 was materially misquoted and misrepresented in  
22 that ORAU interview transcript and needed to

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1 attend an interview session with SC&A in  
2 Niagara Falls to rectify that misinformation,  
3 much of which dealt with misinformation  
4 regarding the occupancy and the use of the  
5 tunnels by workers.

6 I must ask why these interviews  
7 are still being referenced by NIOSH when, to  
8 my knowledge, they are not referenced in the  
9 July 2011 revised Site Profile?

10 Furthermore, none of the documents  
11 that were produced by SC&A from that May 2010  
12 re-interview of that particular misrepresented  
13 worker, along with a number of other workers,  
14 have been referenced in the revised ER, or for  
15 that matter, in the July 2011 revised Site  
16 Profile.

17 Consequently, issues that SC&A  
18 resolved and noted in their two reports from  
19 May and July 2010 that were produced from  
20 those interviews have now once again been  
21 materially misrepresented in this newly  
22 revised ER.

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1           Some of those issues deal with  
2 occupancy and detailed descriptions of the  
3 tunnels. I have noted all of the errors I  
4 have found so far, in the revised ER, in my  
5 written presentation, along with the SC&A  
6 documentation demonstrating those errors in my  
7 written statements.

8           Two of the more prominent and  
9 worrisome examples include, for instance, that  
10 the revised ER notes that none of the records  
11 indicate that it was a general practice for  
12 employees to use the tunnels to get from one  
13 building to another. Such a practice was not  
14 condoned by the company and was against  
15 company policy. That quote is in the revised  
16 ER.

17           NIOSH then specifically references  
18 the transcript of a misrepresented worker that  
19 was re-interviewed SC&A to support that  
20 statement.

21           This theory has been wholly  
22 refuted time and again by many of the workers

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1 present at the SC&A interviews in Niagara  
2 Falls, and more importantly, SC&A clearly  
3 delineates that fact in their May and July  
4 2010 reports, detailing the Niagara Falls  
5 interview sessions.

6 Additional misinformation within  
7 the revised ER that continues to be  
8 perpetuated and misrepresented dealing with  
9 worker occupancy issues within the tunnels is  
10 also referenced in the May 2010 SC&A report  
11 that the Board Members can also review in my  
12 written presentation materials.

13 I point out these ongoing serious  
14 discrepancies because of the lack of attention  
15 to timeliness and Site Profile accuracy that  
16 has plagued the Linde SEC and Site Profile  
17 revision process for far too many years now.

18 NIOSH has known about worker  
19 radiation exposure issues in the Linde tunnels  
20 since January 2006.

21 However, this exposure issue was  
22 never addressed in any of the Site Profile

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1 issues, until the most recent July 2011 Site  
2 Profile, which notably represents the fifth  
3 time NIOSH has needed to revise and issue a  
4 new Site Profile since May 2005, this despite  
5 the fact that the workers detailed that they  
6 had worked in the utility tunnels to SC&A  
7 interviewers in January 2006.

8 NIOSH never followed up on this  
9 issue and SC&A never questioned NIOSH at any  
10 time after they issued their own July 2006  
11 audit report of that 2006 Linde Site Profile,  
12 calling for further investigation of the  
13 tunnel occupancy issue.

14 The third and final issue I would  
15 like to address deals with constructive  
16 questions that need to be asked in order to  
17 provide greater oversight to the SEC and post-  
18 SEC evaluation processes.

19 I find no -- I find no explanation  
20 within this revised ER explaining or detailing  
21 how NIOSH finally discovered that they had  
22 misidentified this data after so many years of

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1 claiming that they had sufficient data to  
2 reconstruct dose for this Class of workers.

3 The workers that have waited for  
4 so many years for a resolution of these issues  
5 deserve an explanation of how this critical  
6 mistake was finally discovered and rectified.

7 Why did NIOSH suddenly begin a,  
8 quote, more detailed review of the site data  
9 and what prompted NIOSH to do so, and why, as  
10 Dr. Neton explained during the October 24<sup>th</sup>  
11 Linde Work Group meeting, did NIOSH decide to  
12 begin to, and I'm quoting here, comb through  
13 this data, quite meticulously in the last, you  
14 know, six weeks or so?

15 I believe these are important  
16 questions that must be addressed, not only for  
17 the Linde community, but also with respect to  
18 needed reforms that will be implemented as a  
19 result of the ten-year NIOSH review.

20 So many questions remain  
21 unanswered. How will the Site Profile  
22 revision and re-evaluation of previously

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1 denied claims be accomplished in a timely  
2 manner? How long will Claimants that do not  
3 qualify for either of these two SECs need to  
4 wait to have their claims reevaluated?

5           These workers and their families  
6 remain in an ongoing state of limbo, waiting  
7 for the bare minimum from NIOSH: the fair and  
8 timely disposition of their claims, using  
9 accurate and appropriate information from the  
10 Linde Site Profile.

11           The post-SEC evaluation processes  
12 and PER review is -- are far too opaque.

13           Yesterday, Mr. Hinnefeld discussed  
14 the implementation goals of the NIOSH ten-year  
15 review.

16           One aspect dealt with adopting  
17 aggressive timeliness objectives for dose  
18 reconstruction. A significant part of those  
19 objectives should deal with the Site Profile  
20 revision process that occurred within the  
21 post-SEC evaluation and the associated PER  
22 process whereby previously denied claims are

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1 identified for reevaluation and re-dosing.

2 As I noted earlier, I remain very  
3 concerned about the immediate reaction and  
4 posture from some members of the DCAS team,  
5 that post-SEC Site Profile revisions and PER  
6 analysis would yield an insignificant degree  
7 of reversals of previously denied claims.

8 This statement was made just this  
9 past Thursday, before the post-SEC evaluation  
10 review even began between the DCAS and SC&A.

11 Another aspect of the ten-year  
12 implementation guide discussed yesterday. I  
13 think it is critical to utilize staff other  
14 than health physicists, when appropriate, to  
15 guard against professional orientation toward  
16 accepting adequacy of techniques and to take a  
17 critical look at the post-SEC evaluation  
18 procedures in place for Site Profile revisions  
19 and PER development that could include a  
20 formal peer review of the process to ensure  
21 consistency, claimant-favorability and  
22 transparency for Claimants and advocates

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1 representing those Claimants.

2 The Linde community strongly urges  
3 NIOSH and the Advisory Board to work together  
4 to expedite this process and to set specific  
5 time-sensitive goals.

6 The much needed and long delayed  
7 revision of the Linde Site Profile is critical  
8 to ensure that those Claimants that do not  
9 meet the SEC requirements may finally receive  
10 the full, fair and claimant-favorable  
11 evaluation of their individual claims, that  
12 they have been denied for far too long.

13 I would further ask that the  
14 request set forth by Senator Schumer and  
15 Senator Gillibrand, in their recent letter to  
16 Dr. Howard, Dr. Melius and Mr. Hinnefeld and  
17 noted earlier by Laura Monte in her statement,  
18 be approved, so that their respective offices  
19 can receive a full listing of those Claimants  
20 that will have their previously denied claims  
21 reevaluated and re-dosed.

22 I will provide a copy of that

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1 letter for the Board's review along with my  
2 written statement.

3 I would like to express my sincere  
4 gratitude and appreciation to Dr. Melius, the  
5 Advisory Board, Dr. Wade, Mr. Katz and Mr.  
6 Kinman for their time and patience. I very  
7 much appreciate the opportunity to present  
8 these very important issues for the Board's  
9 review during this final Linde SEC  
10 presentation.

11 I would also like to thank Senator  
12 Schumer and Senator Gillibrand for their  
13 tireless effort.

14 More importantly -- most  
15 importantly, I would like to thank all of the  
16 Linde workers and their families who have  
17 waited so patiently for so many years, for a  
18 semblance of justice and for their years of  
19 support and help while pursuing these SEC  
20 petitions.

21 I had truly been an honor  
22 representing the Linde community. Thank you.

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1 CHAIRMAN MELIUS: Okay, thank you.  
2 Okay, now, Gen.

3 MEMBER ROESSLER: I hope,  
4 Antoinette, you're going to provide us a  
5 written --

6 CHAIRMAN MELIUS: Yes.

7 MEMBER ROESSLER: -- document  
8 because you speak a lot faster than I can  
9 think, and we're going to need that.

10 CHAIRMAN MELIUS: Yes, now, she  
11 has indicated that she was sending in all --  
12 all of what she said would be in writing, to  
13 us.

14 MEMBER ROESSLER: Okay, thank you  
15 so much. I think the next order then, would  
16 be to consider the -- this SEC Class.

17 At the Work Group meeting, I made  
18 a statement that my conclusion was that we  
19 need to be consistent with other similar  
20 situations at Linde, and where other SECs have  
21 been recommended.

22 Because of that and all the new

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1 information, my personal opinion is that I  
2 agree with NIOSH that this Class should be  
3 recommended for an SEC.

4 The other Board -- or the other  
5 Work Group Members present, Josie Beach and  
6 Jim Lockey, agreed with that and we decided  
7 then to bring it to the Board for a vote.

8 I will present a motion, and then  
9 I guess we could have discussion.

10 The motion is that this Class,  
11 this Linde Class, should be recommended for an  
12 SEC.

13 MEMBER BEACH: I will second it.

14 CHAIRMAN MELIUS: Thank you,  
15 Josie. Any further discussion?

16 So, if I can find the right slide  
17 here, yes, okay.

18 So, we would be making a  
19 recommendation that all employees working in  
20 the -- any area of the Linde Ceramics Plant,  
21 November 1, 1947 through December 31, 1953, be  
22 added to the SEC Class.

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1                   So, if there are no further  
2 questions or comments, Ted, do you want to do  
3 the role?

4                   MR. KATZ: Yes, thank you. Dr.  
5 Anderson?

6                   MEMBER ANDERSON: Yes.

7                   MR. KATZ: Ms. Beach?

8                   MEMBER BEACH: Yes.

9                   MR. KATZ: Mr. Clawson?

10                  MEMBER CLAWSON: Yes.

11                  MR. KATZ: Dr. Field?

12                  MEMBER FIELD: Yes.

13                  MR. KATZ: Mike Gibson, are you on  
14 the line? Mr. Gibson?

15                  (No response.)

16                  MR. KATZ: Okay, I will collect  
17 his vote. He's absent. Mr. Griffon?

18                  MEMBER GRIFFON: Yes.

19                  MR. KATZ: Dr. Lemen is absent.  
20 Dr. Lemen, are you on the line? We didn't  
21 check this morning.

22                  (No response.)

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1 MR. KATZ: Okay, I'll collect his  
2 vote. Dr. Lockey?

3 MEMBER LOCKEY: Yes.

4 MR. KATZ: Dr. Melius?

5 CHAIRMAN MELIUS: Yes.

6 MR. KATZ: Ms. Munn?

7 MEMBER MUNN: Yes.

8 MR. KATZ: Dr. Poston?

9 MEMBER POSTON: Yes.

10 MR. KATZ: Dr. Richardson?

11 MEMBER RICHARDSON: Yes.

12 MR. KATZ: Dr. Roessler?

13 MEMBER ROESSLER: Yes.

14 MR. KATZ: Mr. Schofield?

15 MEMBER SCHOFIELD: Yes.

16 MR. KATZ: And Dr. Ziemer?

17 MEMBER ZIEMER: Yes.

18 MR. KATZ: And it's unanimous, all  
19 in favor, two absentee votes. The motion  
20 passes, and I'll collect the rest of the  
21 votes.

22 CHAIRMAN MELIUS: Okay, very good.

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1           Our next agenda item would be the  
2 -- what I'll -- do you want to say something?

3           MEMBER ROESSLER: I think we need  
4 to comment that the Work Group will be meeting  
5 again. We need to discuss the items brought  
6 up by Senator Schumer's office and by  
7 Antoinette, to talk about the workers not  
8 covered by this SEC, and we will do that.

9           We'll need to have some things in  
10 place, before we do it. But I just wanted to  
11 assure people that we will be meeting again.

12           CHAIRMAN MELIUS: Yes, yes. I  
13 think -- yes, my understanding was, the Work  
14 Group had still not resolved some of the Site  
15 Profile issues and -- on that, and will be  
16 continuing to work with NIOSH on those, and do  
17 that.

18           Yes, I think we need to hold off  
19 on Fernald for a little bit, Stu. So, you can  
20 get ready, but don't go, okay?

21           MR. HINNEFELD: Okay, I was just -  
22 - I wanted to --

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1                   CHAIRMAN MELIUS:     Getting ready?  
2     Okay, Mark, you can sit down for a little too,  
3     because we had told the Petitioner at 9:30  
4     a.m. So, we need to start that at 9:30 a.m.,  
5     and do that. Yes?

6                   MEMBER ZIEMER:       Just for our  
7     information, can any of the DCAS people tell  
8     us how many claims have previously been  
9     handled for Linde, and do we have some idea --  
10    some questions raised about the PER and time  
11    tables?

12                   What can you tell us right now,  
13    about sort of the status of claims and what --  
14    do we know enough now, to know what the time  
15    table might be, understanding that some of  
16    these issues -- all of these issues that have  
17    been raised by the Petitioners have to be  
18    addressed?

19                   But what are we looking at, in  
20    terms of numbers of claims already that will  
21    have to be looked at, particularly those  
22    previously denied?

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1 DR. NETON: I can't speak to that  
2 particular number, but there are 273 total  
3 claims submitted for dose reconstruction from  
4 Linde as of November 15<sup>th</sup>.

5 There was 144 who meet the  
6 definition of the Class under evaluation that  
7 you just voted on.

8 Now, presumably those 144 also --  
9 many of them also had employment in the other  
10 periods that SECs were granted.

11 So, it's some number less than  
12 144, is all I can say, at this point.

13 As far as the process moving  
14 forward, I think the -- I believe that the  
15 only real outstanding issue is this tunnel,  
16 the -- you know, getting our hands around --  
17 our heads around when the tunnels were there,  
18 and some agreement to that effect.

19 Interestingly, the tunnels is a  
20 radon-exposure situation, which would  
21 principally affect lung cancers. Lung cancers  
22 are covered under the SEC, although there will

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1 be some subset of workers who have less than  
2 250 days that would be affected.

3 So, it would be, I think -- I  
4 think, at the end of the day, it will be a  
5 fairly small number, but I can't predict.

6 CHAIRMAN MELIUS: Thanks, Jim, for  
7 that.

8 We have a few work groups left  
9 over that we didn't get a chance to talk  
10 about, so, we'll do some of those, while we  
11 have time, and as soon as I thought of that,  
12 Mark ran, left for the -- he had to make a  
13 call.

14 But we have the Science Work  
15 Group. Dave, do you want to give us a brief  
16 update on that?

17 MEMBER RICHARDSON: The Science  
18 Issues Work Group had a phone conversation,  
19 during which we --

20 MR. KATZ: David, can you speak  
21 more directly into your microphone, please?

22 MEMBER RICHARDSON: Yes, I'd be

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1 happy to.

2           The Science Issues Work Group had  
3 a phone meeting, and we made a listing of  
4 topics that should be covered by the Work  
5 Group.

6           We kind of gave them an order of  
7 priority for tackling. We agreed on sort of a  
8 process by which we would take one and --  
9 pretty much, one topic at a time, and moving  
10 through the list, not try and divide the group  
11 into working simultaneously on several issues.

12           The aim is to produce a brief  
13 report back to the full Committee as we work  
14 through these topics, on this kind of status  
15 and open questions and perhaps, suggestions on  
16 ways to move forward on issues.

17           The first issue that we're  
18 tackling is dose and dose rate effectiveness  
19 factors.

20           We've received a very large report  
21 from NIOSH, about 400 pages, prepared by a  
22 contractor on this issue, and will be

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1 producing, in the near future, what I hope  
2 will be a very brief synopsis of the topics --  
3 of the issues raised within that report, and  
4 we'll see how that process goes.

5 CHAIRMAN MELIUS: Okay, good, and  
6 good participation and interest there. I  
7 mean, there is a lot of issues there. I just  
8 --

9 MEMBER RICHARDSON: Yes, yes, good  
10 participation.

11 CHAIRMAN MELIUS: And we're behind  
12 on dealing with this.

13 MEMBER RICHARDSON: Yes.

14 CHAIRMAN MELIUS: So, I urge you,  
15 and I think one of the other things to think  
16 about, in terms of Stu's presentation, is how  
17 do we handle some of the -- there are some  
18 scientific issues -- scientific issues that  
19 are a part of the ten-year review and so  
20 forth, how do we handle those, also?

21 Do we try to fit them in or, you  
22 know, what are relative priorities?

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1                   Buy anyway, I am glad that is  
2 moving along and so forth.

3                   Okay, our other missing Work Group  
4 reports are Mark's, so, we'll wait and why  
5 don't we go ahead and get ready on Fernald. Go  
6 ahead, Mark. We're close enough.

7                   MR. KATZ:     Just to note for the  
8 record, Dr. Lockey is recusing himself for  
9 this session.

10                  CHAIRMAN MELIUS:     We will come  
11 find you.

12                  MR. ROLFES:     Okay, thank you, Dr.  
13 Melius. Good morning, ladies and gentlemen. I  
14 am Mark Rolfes. I'm a health physicist from  
15 NIOSH Division of Compensation Analysis and  
16 Support.

17                  I'm here today to provide a brief  
18 update on the status of the discussions of the  
19 Feed Materials Production Center Special  
20 Exposure Cohort review.

21                  There has been six main topics of  
22 discussion with the Work Group of the Advisory

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1 Board for Fernald.

2 The first main topic that has been  
3 discussed was the coworker model for uranium  
4 internal exposures for unmonitored employees.

5 We developed the coworker intake  
6 model and published that in OTIB-78. However,  
7 there were some concerns that subcontractor  
8 data may not have been entered into the HIS-20  
9 database which was used to produce this  
10 intake, this coworker intake model.

11 So, NIOSH went back and looked at  
12 the data that were used to develop the  
13 coworker intake model, and found that prior to  
14 1985, late 1985, some of the subcontractor  
15 data was not entered.

16 And so, NIOSH has recently  
17 proposed a White Paper to adjust subcontractor  
18 intakes, and this White Paper was provided to  
19 the Work Group in November of 2011.

20 The second topic of discussion was  
21 the validation of the HIS-20 database. NIOSH  
22 has completed a full validation of the HIS-20

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1 database, and I believe this issue was closed  
2 at the February 8, 2011 Work Group meeting.

3 The third topic was recycled  
4 uranium, and NIOSH recently delivered another  
5 revision of a White Paper on bounding the  
6 duration of potential exposures to the  
7 unblended Paducah Tower Ash.

8 We were asked, basically, to  
9 quantify how much time a person could have  
10 been exposed to the worse case scenario  
11 recycled uranium contaminants, and this White  
12 Paper was delivered in November of 2011 to the  
13 Work Group.

14 The fourth topic was the use of  
15 radon breath data for reconstructing doses  
16 from the inhalation of radium-226 and thorium-  
17 230. NIOSH has completed its work and this  
18 issued was closed at the April 19, 2011 Work  
19 Group.

20 The fifth topic was the review of  
21 radon emissions from the K-65 silos and  
22 associated exposures. We have agreed to move

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1 this to the Site Profile discussions.

2 We've determined that radon doses  
3 to employees can be bounded, and we had  
4 decided to move this to the Site Profile  
5 portion of discussions at the Work Group  
6 meeting that occurred on February 8, 2011.

7 The last issue that has been  
8 discussed was the reconstruction of internal  
9 exposures from the inhalation of thorium-232.  
10 NIOSH has proposed to use daily weighted  
11 exposure data from 1953 through 1967, and this  
12 has been accepted and closed at the April 19,  
13 2011 Work Group meeting.

14 The chest counts, which were used  
15 from 1968 through 1989, NIOSH recently  
16 provided a revised White Paper on the Mobile  
17 In Vivo Radiation Measurement Laboratory  
18 Calibration and also, an evaluation of the  
19 data completeness.

20 Both of these White Papers were  
21 provided to the Work Group for their input in  
22 November of 2011.

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1                   That concludes my presentation,  
2                   but I know that John Stiver has some  
3                   additional information and a lot of additional  
4                   details in his slides.

5                   So, if you'd like to ask questions  
6                   after he has given his presentation, I'd be  
7                   happy to answer any questions.

8                   CHAIRMAN MELIUS:     Okay, that is  
9                   fair, good. Thank you, Mark.

10                  MR. ROLFES:            Thank you, Dr.  
11                  Melius.

12                  CHAIRMAN MELIUS:    Yes.

13                  MR. STIVER:            Thank you, Dr.  
14                  Melius. Good morning, ladies and gentlemen.

15                  My name is John Stiver. I am a  
16                  health physicist with SC&A, and in the last  
17                  year, I've been leading the SC&A efforts on  
18                  the Fernald SEC Petition review.

19                  I'm giving a slightly more  
20                  detailed overview of our progress today. We  
21                  have -- as Mark indicated, we have received  
22                  the four White Paper responses from NIOSH, and

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1 we are now in the process of reviewing those,  
2 and today, I'm going to present kind of a  
3 recap of where we stood, as of the August  
4 meeting, Work Group meeting, and also, our  
5 initial impressions on the new NIOSH  
6 responses.

7 I'd like to give just a -- this  
8 slide here is really just to kind of give an  
9 overview of the history of the Fernald SEC  
10 process.

11 I believe it is the longest  
12 standing SEC, going on about five and a half  
13 years, at this time.

14 As you can see, this just  
15 summarizes the various steps in the process. I  
16 note that from August 2007 to August 2011, we  
17 have had a total of 11 Work Group meetings.

18 In May of 2011 at the St. Louis  
19 meeting, I presented a detailed summary of our  
20 position on all of the SEC issues, as of that  
21 date.

22 At this point, we have come to a

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1 place where I believe we are in a position  
2 where the remaining SEC issues can probably be  
3 decided in one more Work Group meeting, after  
4 we provide our responses to NIOSH.

5 Basically, I think we are at a  
6 place where we can either move issues into the  
7 Site Profile discussions or bring them before  
8 the Board for an SEC determination.

9 These are the issues, which Mark  
10 briefly touched on. From the SC&A  
11 perspective, the coworker model for uranium  
12 internal exposures remains open. Validation  
13 of the HIS-20 database has been closed, based  
14 on our recommendation. Recycled uranium  
15 remains open. The radon breath data from  
16 raffinates is closed. The radon emissions  
17 from the K-65 silos has been moved to the Site  
18 Profile discussions.

19 Issue 6A, which is the  
20 reconstruction of internal exposures from the  
21 inhalation of thorium-232 from 1953 to 1967,  
22 the DWE data that are comprised of breathing

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1 zone samples, we recommended closure in the  
2 April meeting, of this year, and the chest  
3 count model from 1968 to 1989 remains open.

4 In addition, there is a seventh  
5 issue. This is the issue of recycled thorium.  
6 This first came to our attention, the Savannah  
7 River Site discussions, in August 2011, as a  
8 potentially significant SEC issue. However,  
9 our sense at this point is, this may be  
10 tractable for Fernald for a number of reasons,  
11 which I will get into later in the  
12 presentation.

13 The open issue number one, this is  
14 the coworker model for internal exposure from  
15 uranium.

16 Our basic concern is regarding the  
17 completeness and adequacy of the uranium  
18 bioassay data, which were used in coworker  
19 modeling, which is put forth in OTIB-78.

20 Our concerns have been largely  
21 resolved, except for matters related to the  
22 applicability of the coworker model for the

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1 construction workers.

2 NIOSH was to perform the analysis  
3 of the construction worker versus non-  
4 construction worker bioassay data and then  
5 provide a report, which they did in November  
6 of this year.

7 We're currently reviewing that  
8 report, and we'll prepare a response before  
9 the next Work Group meeting.

10 Our preliminary observations are  
11 summarized here. NIOSH basically has  
12 concluded most of these type-50 bioassay data  
13 records are, indeed, for contractors. They  
14 are termed special records and were not  
15 included in the original coworker model  
16 because they were presumed to be incident-  
17 related.

18 However, the new analysis shows  
19 that when these records are considered, and  
20 basically, they are pooled together, the  
21 coworker model estimates go up by about a  
22 factor of 1.25 to 1.6, depending on whether

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1 we're looking at annual or quarterly data.

2 This next bullet point should be  
3 revised, and basically, it is clear that the  
4 data were pooled, based on our most recent  
5 investigations.

6 And so, NIOSH did not compare the  
7 two samples of the type-50 separately to the  
8 population of the original model, but will --  
9 they pool them together and then looked at the  
10 overall distribution.

11 I believe the reason for that was  
12 that they felt the type-50 data was really  
13 indicative of short-term acute exposures,  
14 whereas, the original model was based on this  
15 assumption of chronic intakes over long  
16 periods of time.

17 So, they didn't feel that the data  
18 should be compared separately. They were  
19 basically not compatible populations for that  
20 kind of comparison.

21 However, we note that when the  
22 data are compared alone, the differences are

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1 considerably higher than 1.25 and 1.6. I  
2 believe they ranged from about 2 to 4, and in  
3 1972, they were even higher than that.

4 Two other concerns was the paper  
5 really doesn't have any details of the  
6 analysis, only a graph. The final results  
7 were presented, whereas, most of the White  
8 Papers we've seen have more thorough analyses,  
9 sample sizes, fitted distributions, time  
10 periods and that sort of thing.

11 So, we would like to -- we would  
12 recommend that a new revision be provided that  
13 has that kind of detail provided.

14 Open issue number three: recycled  
15 uranium. This is a very long standing issue.  
16 We started making progress on this, about this  
17 time last year, in the November Work Group  
18 meeting.

19 The main concern here is the  
20 default concentrations of plutonium-239 and  
21 neptunium-237, technetium-99 and fission  
22 products that were associated with recycled

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1 uranium at Fernald may not be bounding for  
2 certain Classes of workers and certain  
3 activities and time periods.

4 Numerous White Papers have been  
5 exchanged, where NIOSH presents their stance  
6 on why they believe the defaults are bounding  
7 and we present our concerns regarding whether  
8 they may not be bounding for certain workers.

9 As of August 11, 2011, there was  
10 considerable progress made on this issue,  
11 mainly in response to our comprehensive review  
12 of recycled uranium that we submitted in  
13 February of this year.

14 Basically, NIOSH is looking at  
15 three different time periods. These are the  
16 new proposed default values. The 1953 to  
17 1960, they're recommending no constituent  
18 intakes, based on the fact that a very small  
19 amount of material is being stored onsite, and  
20 had not been introduced into the process yet.  
21 It's believed that most of this material is  
22 very low in recycled contaminant levels.

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1                   From 1961 to 1972, they proposed  
2 the original defaults from the original model,  
3 which were 100 parts per billion on a uranium  
4 mass basis for plutonium-239, 3,500 parts per  
5 billion for neptunium and 9,000 parts per  
6 billion for technetium.

7                   Then for 1973 to 1989, they  
8 proposed increasing the default values, based  
9 on a re analysis of the DOE mass-balance  
10 report data, which really looked at -- they  
11 footed the data to a log-normal distribution  
12 and then picked out the 95<sup>th</sup> percentile.

13                   And so, basically, that result was  
14 that plutonium went up by a factor of four, to  
15 400 parts per billion. Neptunium went up to  
16 11 parts per million and technetium, up to 20  
17 parts per million, and for plutonium-239,  
18 which is the isotope of the most dosimetric  
19 significance, this is increase was based on  
20 the concentration of magnesium fluoride that  
21 was used in the induction pot liners in the  
22 metal production Plant 5, and we have very

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1 good reasons to believe, this was the highest  
2 continually exposed group of workers at  
3 Fernald.

4 Our position, as of August 2011,  
5 was that from 1953 to 1960, the intakes can  
6 certainly be bounded. However, we have  
7 concerns that a default of zero may not be  
8 adequate in an SEC context.

9 From 1961 to 1972, we feel that  
10 the -- that the intakes can be bounded. It's  
11 really become a Site Profile issue.

12 During this period of time, I  
13 believe this was mainly group 6A material,  
14 which was less than 10 parts per billion,  
15 typically in about the two to five parts per  
16 billion range, and so, even with the  
17 magnesium-fluoride concentration mechanisms  
18 being considered, we believe that the 100 part  
19 per billion -- that data does support 100  
20 parts per billion as bounding for chronic  
21 intakes.

22 From 1973 to 1989, we certainly

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1 believe that the 400 parts per billion chronic  
2 intake is likely bounding for the highest  
3 continuously exposed subgroup, which would be  
4 Plant 5 metal workers and associated  
5 millwrights.

6           However, we did have concerns  
7 regarding subgroup 10A. This was the highest  
8 contaminated material that came from the  
9 Paducah Gaseous Diffusion Plant in 1980. There  
10 were about 24 metric tons of this that ranged  
11 for about 100 up to 7,000 parts per billion in  
12 plutonium.

13           So, our concern was with the  
14 people who were handling this material and up  
15 front, before it was blended down, say, the  
16 repackaging operations and then the front-end  
17 dumping operations and that sort of thing, and  
18 so, we believe this was an SEC issue, from  
19 about 1973 to 1985, but particularly, from  
20 1980 to 1985.

21           From 1986, when Westinghouse came  
22 in and took over the operation from the NLO,

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1 we have good reason to believe that the  
2 industrial hygiene and the health physics  
3 programs were robust and that the data are  
4 acceptable during that period of time.

5 The important points here to take  
6 home in this is that the -- you have a small  
7 sub-set of workers. We all agree on that,  
8 that it can't be identified, based on the work  
9 records.

10 The real issue that came out on  
11 this in August was that you have intermittent  
12 exposures, fairly short-term, over a well  
13 defined period of time.

14 So, our concern was, is the 400  
15 parts per billion chronic intake bounding?

16 Certainly, from a common sense  
17 standpoint, you could make a subjective  
18 argument, that yes, it has to be.

19 However, we wanted more from an  
20 SEC perspective, and we would like to see if  
21 these intervals could be quantified.

22 So, that was NIOSH's action item

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1 to quantify these down-blended intervals, if  
2 at all possible and assess the impact, and of  
3 course, we were to review the report when it  
4 became available.

5 This report here, what we call the  
6 down-blender assessment, is the title provided  
7 there. We have several preliminary  
8 observations here.

9 Basically, NIOSH is estimating  
10 that any single worker would have spent at  
11 most eight percent of their time, of their  
12 work hours, annual work hours, handling this  
13 unblended plutonium out-of-specification, or  
14 POOS material, as it was called, the sub-group  
15 material.

16 However, no data were located that  
17 defined the down-blending and front-end  
18 handling operations, although it can be  
19 narrowed to about 82 to 85, based on process  
20 knowledge.

21 What they do have, and what we had  
22 discovered earlier in the summer, prior to

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1 August, the August meeting, was that the time  
2 necessary to repackage five of the most highly  
3 contaminated hoppers is available. It took  
4 place from April through May of 1982.

5 Those five hoppers are identified.  
6 We know what the contents were. They're all  
7 above 400 parts per billion, average values,  
8 and one was, I believe, up in the thousands  
9 parts per billion.

10 So, they have the number of shifts  
11 that were required to repackage this material,  
12 that was kind of a burn-as-you-go process.  
13 There were a lot of problems, and so, NIOSH is  
14 relying on this data as bounding for all the  
15 subsequent steps.

16 After the material is packaged in  
17 the barrels, then it would be, for the most  
18 part, remotely handled, whether it was being  
19 sent directly to the refinery that produced  
20 brown oxide, or whether a certain amount of  
21 it, actually, the five hoppers were initially  
22 sent to be calcined in the plant, and then

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1 were blended down at a later step.

2           So, they're relying --  
3 unfortunately, what we -- we do have some  
4 concerns about these assumptions that were  
5 used to drive this eight percent value,  
6 regarding the number of hoppers that were  
7 considered and the time per shift.

8           Our main concern here was they  
9 didn't really consider the variability in the  
10 plutonium concentration in these hoppers, and  
11 that the -- the period assigned per shift was  
12 -- it was kind of a subjective judgment.

13           So, we feel that an alterative set  
14 of assumptions that were equally valid could  
15 result in a higher time for action.

16           The bolded line here, though, I  
17 guess the take-home message here is that we do  
18 feel that, based on this analysis, it's a  
19 well-reasoned argument and we feel that this  
20 problem is probably tractable at this point.

21           We are in the process of preparing  
22 a response for the Work Group, which we plan

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1 to have ready in time for the next Board  
2 meeting.

3 Six-B is probably the one issue  
4 that is remaining a problem, from an SEC  
5 standpoint.

6 Issue 6B was the use of the chest  
7 counts to reconstruct thorium intakes from  
8 1968 to 1989.

9 After 1968, when this Mobile In  
10 Vivo Radiation Monitoring Laboratory was  
11 introduced, the DOE -- or the DWE program was  
12 essentially terminated and so, we're  
13 completely dependent on the integrity of these  
14 chest count data from 1968 to 1989.

15 We do believe there are large  
16 uncertainties in the data that may render them  
17 inadequate for dose reconstruction.

18 White Papers have been exchanged,  
19 again, as of the -- the first time this issue  
20 was really looked at in detail was in April of  
21 this year, and during that period of time,  
22 NIOSH was to provide formal responses to our

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1 concerns on data adequacy and completeness.

2 Those responses were delivered,  
3 again in November, and we're in the process  
4 now of reviewing those, and providing our  
5 final responses to the Work Group.

6 I put in a couple of slides to  
7 kind of recapture our concerns. The issue of  
8 most concern to us is the data integrity from  
9 1968 to 1978.

10 This is the data that was reported  
11 in milligrams thorium. This was during the  
12 period of thorium processing.

13 We have a whole series of these  
14 concerns that came out of our White Paper. I'm  
15 not going to go through every one of them.  
16 They're available for review.

17 But number three is a very  
18 important one, and this is the questionable  
19 method to evaluate the age of the source and  
20 transform the actinium-228 and lead-212  
21 daughter emissions, the activity back to  
22 milligrams of thorium-232.

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1           There are no raw data available,  
2           just milligrams thorium reported, and there  
3           are considerable uncertainties in the age of  
4           the source, the times of the intakes.

5           If you look at a closed system and  
6           you're only looking at lead-212, you've got an  
7           uncertainty of maybe two, which is tractable.  
8           It's something that can be dealt with.

9           However, you're looking at  
10          actinium-228 from the radium-228 buildup,  
11          after thorium is separated, depending on the  
12          age of that material, you can have an  
13          uncertainty of up to a factor of 200, if you  
14          don't know the age of that material after  
15          separation.

16          The bottom line here is that the  
17          inconsistencies between thorium and lead-212  
18          for the period of overlap -- excuse me, I kind  
19          of got behind myself. The print is very  
20          small, here.

21          The bottom line is really here,  
22          the very last bullet point, the large

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1 variability and uncertainty in the data and  
2 the lack of knowledge on the derivation we  
3 believe precludes -- or may preclude the  
4 ability to bound the intakes from 1968 to  
5 1978.

6 So, we do believe this is a  
7 continuing SEC issue.

8 Also, this is another recap of the  
9 data adequacy. This is for the next period,  
10 the next ten-year period from 1979 to 1988,  
11 and during this time, the data reported in  
12 nanocuries of thorium, based on both lead-212  
13 and actinium-228 activity levels, and this was  
14 a period of stewardship.

15 Basically, most of the processing  
16 was done. Fernald became the thorium --  
17 national thorium repository, and so, much of  
18 this material was just being stored during  
19 this time frame.

20 The important thing to take home  
21 here is that the raw data are available, and  
22 so, it's possible then, based on the relative

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1 ratios of the activities of the daughter  
2 products, to estimate the age of the thorium.

3 So, we do believe that these data  
4 may be adequate to bound intakes, and would  
5 possibly be a Site Profile issue, but we do  
6 note that the coworker model for this period  
7 uses a GSD of seven, a geometric standard  
8 deviation of seven, which is a very large  
9 value.

10 However, we don't -- we believe  
11 that it doesn't really address the  
12 measurement, the individual measurement  
13 uncertainties.

14 However, it may be adequate, when  
15 it's applied to an annual distribution of  
16 multiple workers, that have not yet been  
17 quantified.

18 We're looking at observations  
19 regarding data adequacy. We really sum these  
20 into two groups.

21 First is the variability and  
22 uncertainty of milligram of thorium. Our

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1 original position has been stated. Our  
2 interpretation of NIOSH's position is that  
3 they basically state that they believe our  
4 arguments regarding the lack of usefulness of  
5 the milligram data are unfounded.

6 The large uncertainties in the  
7 data, they claim, will just result in larger  
8 GSDs and higher upper-bounds in the model, and  
9 they also stated that the large proportion of  
10 the sub-MDL data are indicative of minimal  
11 exposure potential to thorium.

12 We believe that last statement can  
13 be misinterpreted and -- but it really -- our  
14 interpretation of that is that the high MDL of  
15 six milligrams is really indication of a --  
16 limitations of the counting system, and our  
17 basis for that is that chronic intakes of MDL  
18 can result in very high doses to organs, up  
19 into the sievert level, which could be in the  
20 100 rem level, at the worse case.

21 We do note that the GSD for this  
22 period was 3, and it's -- our concerns remain

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1 as they did with the later period of time in  
2 that the individual measurement uncertainties  
3 are not necessarily being accounted for.

4 The second big issue is the  
5 appropriateness of the Mobile In Vivo method  
6 for quantitative estimates versus just a  
7 screening estimate, and the basis for this is  
8 this SRDB reference 011596, which is a fairly  
9 detailed paper by Hap West from 1965.

10 Our original position, which was  
11 essentially taken from this report, was that  
12 the method was used to determine the thorium  
13 burdens, carries many uncertainties and should  
14 only be used for qualitative assumptions about  
15 thorium burden.

16 NIOSH disagrees with that  
17 position. We agree to disagree on this. They  
18 believe that they take excerpts from the same  
19 paper to bolster their position, and they also  
20 cited our data completeness report as evidence  
21 of tacit acceptance of the quantifiability of  
22 this data.

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1           We note that at this point, our  
2 position stands on the limitations of this  
3 method, and we also would like to note that  
4 our completeness study was based on the  
5 assumption of adequate data.

6           What we did was, we did the two --  
7 the adequate -- the adequacy and the  
8 completeness study in parallel. The  
9 completeness study is written -- a set-aside  
10 adequacy for the time being.

11           So, let's just assume for now,  
12 that the data are good. Let's look at --  
13 there is enough of it available to bound the  
14 most highly exposed group of workers.

15           So, our summary position is, in  
16 plain language, is that our opinion on this is  
17 that NIOSH wants to use the results of  
18 milligram thorium without really knowing what  
19 the results mean.

20           We don't know which daughters were  
21 measured. We don't know how the results from  
22 the daughters were transformed into thorium

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1 lung burdens. We don't know the sensitivity  
2 of the measurements, and there were very few  
3 number of individuals in 1979 who had  
4 measurements in both milligram thorium and in  
5 nanocuries, and based on the NIOSH  
6 methodologies, those two -- those values don't  
7 match up.

8 We'd also like to bring up, there  
9 is a precedent from the NIOSH Evaluation  
10 Report for Weldon Springs, that provides  
11 guidance to disregard the chest counts for  
12 that site, due to uncertainties as to when the  
13 intakes occurred, which is essentially a  
14 disequilibrium argument, and this quote here  
15 came right out of that report.

16 Since the cases were such use of  
17 the in vivo data, would be necessary -- would  
18 be limited to those with very specific  
19 circumstances and information.

20 So, we do believe an SEC issue  
21 remains for milligrams for thorium for 1968 to  
22 1978.

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1 I'd like to move on to the data  
2 completeness study.

3 Basically in April, we were tasked  
4 to look at three different aspects of data  
5 completeness. The first were whether the  
6 thorium workers and their associated exposures  
7 were adequately represented in the data set.  
8 If they were not, could chemical operators  
9 provide a reasonable surrogate for thorium  
10 workers, for use in a coworker model, and  
11 finally, were the workers with the highest  
12 exposure potential to thorium targeted more  
13 frequently for monitoring?

14 Our preliminary observations on  
15 the latest NIOSH response is that -- well, let  
16 me just back up here.

17 We brought this -- broke this up  
18 until three different sub-issues.

19 The first being the identification  
20 of thorium workers and their relative exposure  
21 potential.

22 Our original position on this was

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1 that there were certain workers identified in  
2 the 1968 memo as being thorium workers, and we  
3 looked at that group and we looked at chemical  
4 operators and then we looked at all workers.

5 We were able to demonstrate that  
6 the thorium workers did, indeed, have higher  
7 lung burdens than chemical operators who were  
8 not associated with thorium, as well as the  
9 all-worker group and, to characterize years  
10 after 1968, we made an assumption, and this is  
11 kind of what we call a constancy assumption,  
12 and that was that workers who were identified  
13 in this memo or in the log sheets had thorium  
14 worker or former thorium worker identified.

15 We assume that that sub-group,  
16 that cohort was involved in thorium work  
17 during that whole ten-year period, from 1968  
18 to 1978, and based on that, that assumption,  
19 we were -- reached similar conclusions as we  
20 did with the 1968 data alone.

21 NIOSH's position on this, our  
22 interpretation of it, NIOSH's position, is

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1 that they analyzed this empirical 1968 data  
2 using a different approach. They used this  
3 Kolmogorov-Smirnov test statistic, and they  
4 concluded that thorium workers did not come  
5 from different parent population than the  
6 other worker population, and they did not feel  
7 the comparisons assuming constant thorium  
8 worker population were valid.

9 We agree that they don't  
10 necessarily constitute in the independent  
11 population, however, we do believe, based on  
12 the empirical evidence -- and let me also say  
13 that NIOSH's data adequacy response provided  
14 some nice probability plots and quantile plots  
15 and they show that in most cases, most of the  
16 data, which you would expect below the MDL,  
17 would kind of be normally distributed, but  
18 about five percent is way up above the allowed  
19 plot line.

20 And so, this indicates that there  
21 is kind of a -- maybe bimodal distribution,  
22 with a sub-set of workers who are -- have a

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1 higher exposure potential to thorium, and we  
2 believe that that particular sub-set needs to  
3 be captured in any model that NIOSH is going  
4 to put out.

5 Issue number two is the number of  
6 positive results identified during the  
7 production period.

8 We noted that 97 percent of the  
9 chest count data in milligrams thorium were  
10 less than the detection limit, and this kind  
11 of called into question in our minds,  
12 reliability of any model based on this data.

13 We also noted that the percentage  
14 of samples greater than the MDL for workers  
15 who handled thorium was greater by a factor of  
16 two. So, they were more represented in that  
17 upper tail of the distribution, seven percent  
18 versus three percent for the non-thorium  
19 workers.

20 NIOSH's position on this  
21 particular sub-argument was that the model was  
22 used, using uncensored -- they used uncensored

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1 data, and the number of records below the MDA  
2 is irrelevant for this type of model.

3 We do note that OTIB-44, put out  
4 in 2009, addresses this very issue of, what do  
5 you do when you have a large fraction of data  
6 less than MDA?

7 However, the NIOSH model predates  
8 OTIB-44 and instead, relied on OTIB-95, and  
9 so, we have concerns that, you know, if this  
10 data were to be deemed usable in a coworker  
11 model, that it might be a good idea to go back  
12 and check and make sure that the OTIB-44  
13 methods had, indeed, been applied.

14 We also noticed the large  
15 proportion of lung burdens, greater than the  
16 MDL for thorium workers who just -- for  
17 workers who handled this material had a higher  
18 exposure potential than workers who did not,  
19 and then as a result of that -- I'll just jump  
20 ahead.

21 We feel that some upper-bound  
22 value, whether it be the 95<sup>th</sup> percentile or

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1 some other value, is appropriate to actually  
2 capture those workers who did, indeed, handle  
3 thorium more frequently than the other non-  
4 thorium workers.

5 Issue three was the monitoring  
6 criteria for inclusion in the Mobile In Vivo  
7 Lung Counting Program.

8 Basically, what we looked at was  
9 whether there was any correlation between the  
10 -- those who had higher lung burdens in the  
11 sampling frequency.

12 We noted that chest counts, one  
13 was coupled with uranium counts, but not  
14 always the reverse was true.

15 We also noticed that the in vivo  
16 monitoring results showed no bias towards  
17 plants where thorium operations took place.

18 NIOSH's position and our  
19 observation on this is that specific -- let me  
20 back up here.

21 NIOSH did go back in their  
22 response, and provided the specific site

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1 interviews, with site experts, and they  
2 definitively indicated that there was no  
3 preferential sampling conducted for thorium  
4 workers after 1968.

5 They were basically chosen for  
6 overall exposure potential, not necessarily  
7 thorium exposure potential.

8 We agree with that position. We  
9 also concluded there is not correlation  
10 between workers' monitoring frequency and the  
11 thorium lung burden. We also agree with that.

12 This is our summary of our  
13 position on this issue, is that the -- we feel  
14 that the in vivo monitoring records are  
15 essentially complete. There are no  
16 significant chronological gaps.

17 There is no evidence that the  
18 highest exposed worker was systematically  
19 excluded from the monitoring program.

20 As I said earlier, though, we  
21 believe that NIOSH -- it's incumbent upon  
22 NIOSH to assign a sufficiently bounding intake

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1 rate to assure claimant-favorability, that the  
2 most highly exposed group of workers is  
3 captured adequately.

4 We note that the original model,  
5 what we call ORAUT 2008, didn't provide any  
6 guidance as to how coworker model should be  
7 applied. Basically, what they did was, they  
8 calculated the geometric means and geometric  
9 standard deviations.

10 However, the new response does set  
11 a floor below which no one should be assigned  
12 a lower dose, and they're going to assign the  
13 50<sup>th</sup> percentile, but there is no guidance as  
14 to how to determine upper bounds in that  
15 particular response.

16 I'd like to move on to this last  
17 issue: recycled thorium.

18 As I said, we first became aware  
19 of recycled thorium at Fernald at the Savannah  
20 River Site teleconference in August 2011.

21 Our SRDB review has indicated that  
22 hundreds of metric tons of this material was

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1 received at Fernald from the mid 60s to the  
2 late 1970s, mostly from Savannah River.

3 Our principle concern here is  
4 exposures to U-233, U-232, as well as short-  
5 lived isotopes, thorium-234 and protactinium-  
6 233, as well as fission products during the  
7 processing, handling and storage.

8 It's kind of analogous to recycled  
9 uranium problem, only we're dealing with the  
10 contaminants in the thorium instead.

11 I'd like to also note that our  
12 previous investigations of thorium intakes had  
13 focused on the coworkers models, the DWE model  
14 and chest count model. So, any ability to  
15 reconstruct intakes of recycled thorium  
16 constituents are kind of dependent and  
17 predicated on the veracity of those coworkers  
18 models, and as we said, we have serious  
19 concerns regarding the milligram thorium data  
20 during that ten-year period, from 1968 to  
21 1978.

22 We note that the data on source-

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1 term configurations and the periods of concern  
2 is somewhat sparse, may require data capture  
3 trip.

4           However, our sense at this point  
5 is that accommodating the recycled thorium  
6 will likely result only in changes to the TBD.

7           The main reason for that is that  
8 at Fernald, there is an abundance of uranium  
9 bioassay data, and the principle constituents  
10 of concern are uranium isotopes, and so, what  
11 this may involve then is a review of the  
12 neutron dose potential from the U-233 and U-  
13 232, as well as maybe a re-investigation of  
14 the internal DCFs to accommodate U-232.

15           We plan to deliver a paper for  
16 discussion at the next Work Group meeting,  
17 before the Board meeting in California.

18           So, in summary, few main issues  
19 remain to be dispositioned between NIOSH and  
20 SC&A, one being the recycled uranium from 1973  
21 to 1985.

22           NIOSH has quantified the front-end

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1 handling intervals to bound the periods during  
2 which down-winders and bystanders may have  
3 been exposed to the sub-group 10A material.

4 Our concerns, are the new defaults  
5 significantly bounding for that, and if so,  
6 which we believe they may be, we can move this  
7 to a Site Profile discussion.

8 The other issue being chest count  
9 data. We need to provide formal response to  
10 NIOSH on their November 2011 adequacy and  
11 completeness reports, and as I said, SEC  
12 concerns remain for 1968 to 1978.

13 We need to provide also a paper on  
14 our findings on recycled thorium.

15 We believe that the remaining SEC  
16 issues should be resolvable in one final Work  
17 Group meeting, and it may be optimistic, but I  
18 think we can probably do this before the  
19 February final Board meeting, the Work Group  
20 meeting, and that is it.

21 Do you want me to take any  
22 questions you may have at this time?

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1                   CHAIRMAN MELIUS:     Any questions  
2     for Mark or John?

3                   David and then Bill, or Bill and  
4     then David, either one.

5                   MEMBER FIELD:     I just had a  
6     question about a topic that wasn't discussed  
7     in your presentation, as far as the radon from  
8     the silos.

9                   Can you just talk a little bit  
10    about that, that potential for exposure,  
11    estimating where a person may have been for  
12    exposure, from that source?

13                  MR. STIVER:     The radon from the  
14    silos, we basically came to a point where we  
15    agreed to disagree with NIOSH, and this was  
16    the K-65 silos.

17                  During a period of time, when they  
18    had not been capped, we felt that the radon  
19    concentrations that were emanating from these  
20    silos could have been -- silos 1 and 2, could  
21    have been up to a factor of 10 higher than  
22    what NIOSH had predicted.

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1           We did an extensive review of  
2 their transport model, as well as the  
3 emanation model, and essentially came to  
4 different conclusions on that.

5           I know Bob Anigstein -- Bob, are  
6 you on the line? Bob was going to join us.

7           DR. ANIGSTEIN: Yes, I am.

8           MR. STIVER: Bob did the final  
9 analysis on the transport model.

10          Could you say a few words to Dr.  
11 Field, and answer his questions on that  
12 particular concern?

13          DR. ANIGSTEIN: Is this -- I'm  
14 sorry, I'm having -- the reception is kind of  
15 bad, here. I think I'm misunderstanding you.

16          This is the analysis of the N/P  
17 ratio?

18          MR. STIVER: No, this would be the  
19 radon emanation in the transport model, the --  
20 basically --

21          DR. ANIGSTEIN: Radon inhalation,  
22 I did not do.

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1 MR. STIVER: No, I believe that  
2 you did the transport model for --

3 DR. ANIGSTEIN: The transport  
4 model of radon --

5 MR. STIVER: Of radon from the K-  
6 65 --

7 DR. ANIGSTEIN: -- from the K-65  
8 silos.

9 MR. STIVER: It's been a while,  
10 sorry to put you on the spot, Bob.

11 DR. ANIGSTEIN: Is that what we're  
12 talking about?

13 MR. STIVER: Yes, that's the  
14 issue.

15 DR. ANIGSTEIN: Well, the -- yes,  
16 well, we disagreed with the -- basically, with  
17 the model used -- oh, I really hadn't expected  
18 to talk about this, it's been quite a while.

19 But to the best of my  
20 recollection, bear with me a minute.

21 CHAIRMAN MELIUS: Why don't we  
22 just follow up, then? This is --

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1 DR. ANIGSTEIN: What we disagreed  
2 on --

3 CHAIRMAN MELIUS: Bob, please, why  
4 don't we just follow up and when you're more  
5 prepared and so forth --

6 DR. ANIGSTEIN: Okay.

7 CHAIRMAN MELIUS: It's very hard  
8 for us to hear, also.

9 MR. ROLFES: Dr. Field, I believe  
10 I might have an answer.

11 I think you asked about the  
12 placement of the employees in different  
13 positions around the site.

14 That was actually done as part of  
15 a research project with the University of  
16 Cincinnati, that was led by Susan Pinney, an  
17 epidemiologist.

18 She had done about 3,000  
19 interviews with workers and basically, placed  
20 people into various positions on the site, to  
21 determine how much radon they could have been  
22 exposed to.

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1           Now, she asked the individuals --  
2           this was also a cigarette smoking assessment,  
3           because they were looking for, basically, any  
4           kind of change in lung function, as a result  
5           of working at the Fernald site.

6           So, it necessarily wasn't a cancer  
7           outcome, but it was -- there were some other  
8           lung problems that they were looking into.

9           She had interviewed these  
10          individuals and when there was uncertainty as  
11          to whether the employee was working in one  
12          area versus another, they were put into the  
13          higher exposure category.

14          They also entered -- the interview  
15          questions also included, you know, what shift  
16          they were working, to determine whether or not  
17          they could have been subjected to inversions,  
18          atmospheric inversions.

19          That was the basis for our  
20          approach to use -- that is the approach that  
21          we have adopted to complete dose  
22          reconstructions for radon, because we have

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1 employee specific radon dose estimates in  
2 working level months by year.

3 MEMBER FIELD: But Susan's study,  
4 the -- I believe she had like -- she had  
5 information on about one-third of the workers,  
6 good information, and the rest, sort of like  
7 surrogate location, based on job  
8 classification, work shift, is that right?

9 MR. ROLFES: I believe so.

10 MEMBER FIELD: Okay.

11 MR. ROLFES: I believe that is  
12 correct, and in addition to that -- in  
13 addition to the K-65 silos, her research also  
14 included in-process materials, the radon being  
15 released from the Q-11 ore silos and in-  
16 process in the plants.

17 CHAIRMAN MELIUS: David, I believe  
18 you had the next question.

19 DR. ANIGSTEIN: This is Bob  
20 Anigstein.

21 My comment on this last statement  
22 was, we don't -- we did not question the

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1 positioning of the workers in the various  
2 facilities.

3           What we did question was both the  
4 release model from the K-65 silos and the  
5 transport model, and the research done by the  
6 University of Cincinnati, using the etching of  
7 the window panes, it seemed that the model was  
8 valid and they used actually, the transport  
9 model to validate and to calibrate their --  
10 the etching measurements.

11           But if the transport model itself  
12 was not correct, then -- and the release model  
13 was not correct, then the results, the  
14 validation and the calibration is not correct.

15           So, there was a gap in the logic  
16 that was -- you know, obviously, you know, we  
17 had no quarrel with the technical part, at the  
18 far end of it, that the University of  
19 Cincinnati did.

20           But the in between part left --  
21 was open to a lot of questions.

22           CHAIRMAN MELIUS: David, you still

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1 have a question?

2 MEMBER RICHARDSON: Yes, I am --  
3 I'm trying to think about what you mean by  
4 bounding with the use of the in vivo data, and  
5 maybe -- maybe you could help me try to  
6 understand.

7 There is a -- you described that  
8 there is a mobile unit which arrives for in  
9 vivo counting. It comes on a periodic  
10 schedule. There are a number of workers, and  
11 there is some probability that a worker is  
12 drawn in to visit the van and have an in vivo  
13 count.

14 And so, you could imagine that the  
15 information available for a worker has --  
16 there are large time gaps between one in vivo  
17 counting and the next.

18 The timing of the visits of the  
19 van is not incident driven, if I'm  
20 understanding correctly. It's one of  
21 convenience or some sort of schedule.

22 MR. STIVER: I believe that is how

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1 it was done, although in 1968, there was an  
2 effort to count the thorium workers in that  
3 particular time, up front.

4 MEMBER RICHARDSON: But for a lot  
5 of the period, it sounds like there is, let's  
6 say, 100 measurements performed in a calendar  
7 year, and so, that there is large time gaps  
8 between when these counting's are occurring  
9 and there -- the bounding that is -- so, what  
10 is happening, in terms of the bounding?

11 I mean, for me, now, it seems like  
12 that is -- there is a lot of history that  
13 could happen between measurements for a person  
14 and the --

15 MR. STIVER: Well, certainly, you  
16 could have an intake at any time, you know,  
17 from the end of the last measurement, all the  
18 way to the day or the day before the next one.

19 MEMBER RICHARDSON: Right, and so,  
20 what's being proposed is -- is the bounding  
21 based -- I mean, you were talking about the  
22 bounding based on the -- we draw a sample of

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1 workers. We've got a limited detection and  
2 we'll think that, well, workers may have had  
3 something up to that limited detection, and  
4 there is uncertainty about the -- this is the  
5 question about the dates of the intake and how  
6 large actually --

7 MR. STIVER: No, it's the --

8 MEMBER RICHARDSON: It seems to me  
9 like there is -- you know, actually, you could  
10 have intakes and the gap between these  
11 measurements is so long as to create a very  
12 large --

13 MR. STIVER: Well, you could have  
14 -- I guess the problem is, we don't know, for  
15 that milligram thorium data, what was  
16 measured. All we have is one number  
17 milligrams thorium.

18 We have a period of overlap for  
19 some workers, where the two data sets don't  
20 match up, using the NIOSH approach.

21 We also note that the one  
22 measurement or the one set of calculations we

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1 were able to locate did indeed use actinium-  
2 228, and this is the one that -- you know,  
3 depending on when that material was separated,  
4 you could have huge variability's in that  
5 number.

6 And so, we just don't think those  
7 are credible values to use.

8 MEMBER RICHARDSON: And it's --  
9 the variability, there, you're talking about --  
10 -

11 MR. STIVER: In an individual  
12 measurement. For one particular worker,  
13 you've got a value of milligrams thorium, we  
14 don't really know what that means, and we also  
15 have -- you know, like I said, we did have  
16 concerns about so much of it being less than  
17 the detection limit, although after reading  
18 the --

19 MEMBER RICHARDSON: But there is --  
20 - is the variability -- the variability you're  
21 talking about is characterization of the age  
22 of the material that was taken in, but it's --

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1 is it -- what about the variability related to  
2 the time between intake and the measurements?

3 MR. STIVER: Well, that's also a  
4 concern.

5 MEMBER RICHARDSON: Because there,  
6 you need multiple measurements, I would think,  
7 or --

8 MR. STIVER: We do.

9 MEMBER RICHARDSON: -- information  
10 on the date of intake.

11 MR. STIVER: And multiple intakes,  
12 you know, because this was periodic work.

13 MEMBER RICHARDSON: That is what  
14 I'm not understanding from the description of  
15 the process of the individual monitoring, how  
16 you're -- what are the assumptions there?

17 MR. STIVER: Joyce, are you on the  
18 line? Joyce Lipsztein has looked into -- did  
19 most of the --

20 DR. LIPSZTEIN: Sorry, I was on  
21 mute.

22 MR. STIVER: Yes, Joyce, I know

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1 you looked at this in considerable detail,  
2 about all the different uncertainties that  
3 could result in huge variations in these  
4 milligram thorium measurements.

5 I know one was the time of the  
6 intake relative to separation, also the length  
7 of time the material was in the lung before  
8 the count, multiple intakes, things of that  
9 sort.

10 Could you provide Dr. Richardson  
11 with kind of a summary of what your concerns  
12 were?

13 DR. LIPSZTEIN: Yes, we -- let me  
14 just get this here.

15 Yes, we have a lot of concerns,  
16 especially on the thorium measurements that  
17 were reported in milligrams, where concerns  
18 refer to -- we don't know how the results in  
19 milligrams were obtained.

20 There were several papers that  
21 were -- where NIOSH has tried to respond to  
22 us, and -- but there is no definite. Sometimes

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1 it changes from one paper to the other, and we  
2 don't know how the thorium was -- how the  
3 measurements in milligrams were derived.

4 We don't know what was the minimum  
5 detection level, and we don't know the  
6 uncertainties that were related to the  
7 calibration of the -- of the counter.

8 So, we have too many uncertainties  
9 on the information of what was really  
10 measured, because thorium cannot be measured  
11 by itself. It has to be measured through the  
12 daughters.

13 We know that the daughters that  
14 were properly measured were either actinium-  
15 228 or lead-212, or a combination of the two,  
16 and we don't know how they used this  
17 combination, if they used the combination or  
18 if they used just one of the nuclides.

19 What happens is that depending on  
20 the time, some separation of thorium from the  
21 daughters and the time that the measurement  
22 took place, then the activity of the daughters

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1 will vary a lot.

2           The other thing that we don't know  
3 is that what happens is that the daughters  
4 have a different behavior in the lung, so,  
5 what they mean is that thorium is less soluble  
6 than the daughters, so, thorium remains longer  
7 in the lung than the daughters.

8           So, when you measure the  
9 daughters, you have to know in relation to the  
10 exposure time, how long has it been there,  
11 even if you know the age of the source, you  
12 don't know how much time has passed since the  
13 worker was monitored and the measurement was  
14 made.

15           MEMBER RICHARDSON: Yes, that was  
16 the --

17           DR. LIPSZTEIN: So, to relate to  
18 this uncertainty in the lung, you have to know  
19 if the worker was engaged in that thorium  
20 work, at that time, in a continuous thorium  
21 work, or if, you know, he worked and was  
22 measured six months after or eight months

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1 after. So, we don't know this, also.

2 MEMBER RICHARDSON: Yes, it was  
3 the last point that I was particularly  
4 interested in, and whether you've had an  
5 opportunity to look at some illustrative  
6 records for workers and consider how long the  
7 timing is between when they had an in vivo  
8 count and when the next in vivo count  
9 occurred.

10 So, the description here is that  
11 there was not specific targeting of thorium  
12 workers, which means that each time the van  
13 visits, there is some sort of random draw of  
14 workers from the full population in, and it  
15 means that the gap -- the timing gap then, for  
16 the thorium workers, is not each time the van  
17 visits the facility --

18 DR. LIPSZTEIN: Yes.

19 MEMBER RICHARDSON: -- and it's  
20 not incident driven, which means that you've  
21 potentially got long gaps between when you  
22 have one in vivo monitoring and when you have

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1 the next.

2 DR. LIPSZTEIN: Yes, sometimes.

3 MEMBER RICHARDSON: And I would  
4 imagine that becomes a very large --

5 DR. LIPSZTEIN: For the workers,  
6 you have several measurements, depending on  
7 the year, also.

8 So, it's very valuable and we  
9 don't know who were the workers that  
10 specifically were working with thorium, and if  
11 it was a continuous work with thorium.

12 So, there are too many  
13 uncertainties, and we don't even know which  
14 side was -- which daughter was measured.

15 So, you know, it's too many  
16 uncertainties on this transformation -- on the  
17 data on milligrams, and we have a bunch --

18 CHAIRMAN MELIUS: Okay, thank you.

19 DR. LIPSZTEIN: You know, we have  
20 some --

21 CHAIRMAN MELIUS: Excuse me, we  
22 need to move along here. We've got a

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1 petitioner waiting to speak and other issues,  
2 and I think we understand the point.

3 DR. LIPSZTEIN: Okay, okay.

4 CHAIRMAN MELIUS: Thank you.

5 DR. LIPSZTEIN: My point is that,  
6 that many uncertainties is related to the  
7 measurement in milligrams.

8 CHAIRMAN MELIUS: Yes, that's the  
9 point we understood. Thank you.

10 DR. LIPSZTEIN: And I don't think  
11 we know exactly which -- what each measurement  
12 means, in terms of the dose.

13 MR. STIVER: All right, thank you  
14 very much, Joyce. I think you've clarified  
15 this, to the extent that we can, at this  
16 point.

17 CHAIRMAN MELIUS: Mark, do you  
18 have a brief comment?

19 MR. ROLFES: Yes, I do. Dr.  
20 Richardson, to address the issue of the  
21 intermittent measurements on site.

22 The mobile in vivo monitoring

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1 laboratory did come on a regular basis of  
2 about six month intervals. They did focus on  
3 the employees with the highest potential for  
4 exposure, and we have no reason to believe  
5 that those people with the highest potential  
6 for exposure for uranium versus thorium were  
7 any different. We believe that they were the  
8 same Class of workers, the chemical operators.

9 If you have one point of in vivo  
10 data in time, the incident issue that you  
11 brought up is more significant than if you  
12 have multiple data points.

13 When you have more data, you're  
14 able to get a better understanding of how much  
15 thorium that worker was exposed to over their  
16 entire work history.

17 And so, that is one of the reasons  
18 that we've agreed to assign a baseline of a  
19 coworker intake at the 50<sup>th</sup> percentile for  
20 everyone.

21 So, we believe that one point by  
22 itself may not be meaningful, but as a whole,

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1 the data that have been collected, the  
2 thousands of measurements that have been  
3 conducted, are meaningful in a coworker intake  
4 model.

5           Regarding the incidents, there  
6 have been incidents where employees from  
7 Fernald were sent to other facilities to have  
8 lung counts done, because of that incident,  
9 and the same mobile in vivo unit also serviced  
10 the Paducah Gaseous Diffusion Plant, as well  
11 as the Portsmouth Gaseous Diffusion Plant.

12           There has also been instances of  
13 employees from Fernald going to those two  
14 facilities, as well as to Oak Ridge, to have a  
15 lung count conducted.

16           CHAIRMAN MELIUS: Thank you, Mark.  
17 John?

18           MR. STIVER: Okay, I was just  
19 saying that, you know, what Mark says may be  
20 valid. We did make that point in our  
21 presentation, that when multiple workers are  
22 considered over a long period of time, over an

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1 annual -- interval, that a lot of those  
2 uncertainties may cancel each other out.

3 We do still have concerns  
4 regarding the individual measurements and what  
5 they really mean. I guess that is really  
6 where I wanted to be at this point, and we'll  
7 take this up in the Work Group, the next time.

8 CHAIRMAN MELIUS: Okay, John,  
9 thank you. Can we hear -- is the Petitioner  
10 on the line, and do they wish to speak?

11 MS. BALDRIDGE: Yes, this is  
12 Sandra.

13 CHAIRMAN MELIUS: Thank you,  
14 Sandra.

15 MS. BALDRIDGE: I've prepared a  
16 statement, and I thank the Board for the  
17 opportunity to express some of my concerns  
18 about thorium.

19 As a reminder, the Fernald  
20 petition was filed because of discrepancies  
21 between the Site Profile prepared by NIOSH,  
22 and the historic Federal Fernald documents

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1 that I was able to obtain, in particular, it  
2 involved thorium processing in Plant 6.

3 Section 5.2.3 of the Technical  
4 Basis Document for the occupational internal  
5 dose states, "A comprehensive effort to  
6 reconstruct the effluent of uranium and  
7 thorium from the Fernald Plant in 1988  
8 discovered that a large number of records and  
9 files were destroyed in the early 1970's,  
10 during the declassification efforts." This is  
11 according to Dolan and Hill, 1988.

12 Review of Atomic Energy Commission  
13 records in Oak Ridge and Atlanta failed to  
14 uncover additional details. Thorium processes  
15 had been shut down and most of the thorium  
16 processing equipment had been removed, prior  
17 to the effluent data reconstruction, which  
18 made the reconstruction more difficult.

19 The data reconstruction was based  
20 on information that was gathered from FMPC,  
21 Oak Ridge, the Atomic Energy Commission and  
22 FMPC customers, in addition to interviewing

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1 current and retired Fernald workers.

2 The questions that workers were  
3 asked are noted in the Technical Basis  
4 Document.

5 I find it strange that they were  
6 not asked if they had knowledge of additional  
7 plant locations where thorium had been  
8 processed.

9 So, the records discovered  
10 presented incomplete picture of thorium at  
11 Fernald. The attempt to reconstruct data is  
12 flawed. NIOSH missed three and a half years  
13 of thorium processing, in Plant 6. The  
14 question is, what else has been missed?

15 What was in the records that were  
16 destroyed? Was it so incriminating that it  
17 had to be destroyed?

18 In June 1989, Federal Court  
19 documents from a trial entitled 'Fernald One  
20 Summary Jury Trial' indicate the Defendants,  
21 that's National Lead of Ohio, represented that  
22 there was no thorium-230 at the Feed Materials

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1 Production Center.

2 It was not until August 1990, that  
3 the plaintiff learned that the thorium-230 had  
4 been leaking from the K-65 silo.

5 This would suggest that workers  
6 may not have been aware that they were  
7 processing thorium. I'd like to note that  
8 this trial proceeded the lawsuit that  
9 established the medical monitoring program for  
10 Fernald workers.

11 Shortly after filing the SEC  
12 petition, I met a former supervisor from Plant  
13 6, who was working there while thorium was  
14 being processed. He insisted that I was wrong  
15 and that thorium was never in Plant 6.

16 The historic documents, however,  
17 included monthly and weekly reviews of the  
18 processing over the three and a half year  
19 period.

20 Based on my experience, I can  
21 assume that some of those workers interviewed  
22 by NIOSH may have also been limited or had no

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1 knowledge of the thorium being processed at  
2 Fernald.

3 I feel NIOSH established a mind  
4 set about Fernald at the onset of dose  
5 reconstruction process, and have manipulated  
6 information to reinforce this mind set.

7 For example, Fernald documents  
8 revealed one of the dirtiest operations in the  
9 nation, yet NIOSH, according to the TBD, would  
10 have us believe they followed strict good  
11 housekeeping practices.

12 NIOSH acknowledges that Fernald  
13 was the official national repository for  
14 thorium, beginning in 1972, but failed to  
15 acknowledge petition documentation that  
16 Fernald was requested to begin stock piling  
17 thorium as early as the late 1950s, thereby,  
18 lessening the potential impact from this  
19 thorium stock piling information.

20 When you were discussing the radon  
21 report by Dr. Pinney, I'd like to also point  
22 out that that did not include thoron, and I

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1 thank you for the opportunity that I've had to  
2 present my perspective on the thorium problem  
3 at Fernald, and I feel based on the lack of  
4 information and the way in which it was found,  
5 that there is probably more to the story than  
6 has been revealed. Thank you.

7 CHAIRMAN MELIUS: Thank you,  
8 Sandra, appreciate it.

9 Brad, you had a comment, and then  
10 --

11 MEMBER CLAWSON: Yes, I just  
12 wanted to make sure that everybody understood  
13 that on several of these, SC&A has felt that  
14 it's bounding, but it hasn't come to the Work  
15 Group yet. That is their recommendation at  
16 this time. But the Work Group has not  
17 addressed those.

18 But what I do want to bring up is,  
19 all of you are starting to see the complexity  
20 of this plant. In one side, it's tried to tie  
21 it up into a nice little box and a nice little  
22 bowl, and my personal feeling is, is it's not

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1 that way.

2 As you can see by the complexity  
3 of this, we are going to have one more Work  
4 Group, and then -- because many of these, we  
5 can -- we differ on.

6 So, it's going to be coming to us.  
7 So, in the part of -- end of January, we're  
8 going to have our final Work Group meeting,  
9 and what I would ask the Board to do is if  
10 they have specific questions on this, that we  
11 get them kind of in advance, so that we can  
12 try to address these out.

13 This is a complex plant. Part of  
14 the problem too is they have good urinalysis.

15 So, you've got some good  
16 information, not others, and this plant did a  
17 lot of work and produced a lot of stuff out of  
18 it, and it's difficult.

19 So, if there any of these things,  
20 if you could send them to us, so, we can try  
21 to have these addressed, so that we can come  
22 to the Board, and I apologize.

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1 I know there is a lot of  
2 information on there, but I requested John to  
3 go into great detail on it, because I wanted  
4 you to see the complexity of what we're  
5 dealing with. Thank you.

6 CHAIRMAN MELIUS: Thank you, Brad.  
7 We need to wrap up here, because we need a  
8 break, and then we need to move on.

9 But I would urge the Work Group to  
10 also think about how this can best be  
11 packaged.

12 I have some concerns, whether  
13 given that you are in different places, in  
14 terms of reviewing issues, and I'm not totally  
15 confident you'll resolve everything in the  
16 next Work Group, that you think about how to  
17 package and bring it forward.

18 It seems to me that the 1967 to  
19 1978 period is close, and you know, frankly,  
20 I'd be ready after today, to vote on that, and  
21 I think certainly, bring it to some sort of  
22 decision by the Board, and may make more

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1 progress, or if there is other -- there is a  
2 lot of other areas there of concern. I think  
3 what we heard presented raised a number of  
4 issues.

5 So, those -- some of those issues  
6 may be brought forward. I may remind, we keep  
7 hearing about something being bounded, but it  
8 has to be a plausible bond, and some of those  
9 bonds, at least to me, based on what little I  
10 heard was -- don't appear to be necessarily  
11 plausible, and other issues.

12 But let's -- we need to try to  
13 really -- it's gone on long enough. We really  
14 need to try to resolve, as best we can. Maybe  
15 we can't, by the next Board meeting. But we  
16 should at least be trying.

17 But what the Work Group can bring  
18 forward, if it's too complicated, or certain  
19 issues aren't ready, maybe we need to split  
20 them up somehow, in terms of how they're  
21 presented.

22 We will try to leave a significant

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1 amount of time at the Board meeting, to deal  
2 with this. It may be longer than our usual  
3 hour or whatever, if that's what I think may  
4 be necessary, because I'm not sure that  
5 everyone can anticipate all of their questions  
6 by the Work Group meeting, or they'll end up  
7 having more afterwards. That is a -- it's  
8 hard to do from a distance.

9 We also will do our best to get a  
10 good package of information out to the -- with  
11 key documents and so forth, to Board Members  
12 ahead of time, that are pertinent to what  
13 needs to be addressed.

14 So, is that satisfactory with  
15 everybody?

16 Okay and you'll notice, I didn't  
17 mention radon, Wanda.

18 Let's take a break. Let's try to  
19 be back here about ten of, and we'll get  
20 started.

21 (Whereupon, the above-entitled  
22 matter went off the record at 10:33 a.m. and

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1 resumed at 10:57 a.m.)

2 CHAIRMAN MELIUS: Okay, I think  
3 we're ready to resume, and we're going to be  
4 talking about the Savannah River Site, and I  
5 think that we all know that at our last  
6 meeting, NIOSH had recommended that a Class be  
7 added to the SEC for Savannah River.

8 We had had some questions on  
9 there. There were questions on the Class  
10 Definition, and so, the Work Group has been  
11 following up on that, as has NIOSH, and I  
12 believe Mark is going to give us a  
13 presentation on --

14 MR. KATZ: Yes, just to start.

15 CHAIRMAN MELIUS: To start, so,  
16 Mark Griffon.

17 MR. KATZ: So, just -- I'd said  
18 earlier, I had distributed some material from  
19 Tim Taulbee, to Mark and the rest of the Board  
20 Members, by email, just to let you know, some  
21 slides that he prepared, just delivered this  
22 morning.

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1                   MEMBER GRIFFON:    Yes, I'll -- I  
2 think the way I'd like to do this is to sort  
3 of introduce this, and then have NIOSH do  
4 their presentation, and then I'll give a brief  
5 introduction on what the Work Group has done  
6 and SC&A is going to fill in some of the  
7 details on what they've done.

8                   We had looked at this initial  
9 proposed Class Definition in a Work Group  
10 phone call meeting. Out of that phone call  
11 meeting, there were some questions about how  
12 NIOSH, or actually, how DOL would implement  
13 the Class, whether they could identify the  
14 workers that would fall within the Class.

15                   So, we, the Work Group, asked SC&A  
16 to go back and consider that Definition a  
17 little more closely, including looking at some  
18 sample cases.

19                   Subsequent to that, before our  
20 last Work Group meeting, which we just had a  
21 few days ago, NIOSH modified their Class  
22 Definition.

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1           So, we're in the midst of  
2     considering, you know, just this Class  
3     Definition, and the main issue under  
4     discussion is whether they can identify this  
5     sort of sub-set of workers, or whether we have  
6     to consider a broader definition, in terms of  
7     the workers, if we consider all workers within  
8     the time period.

9           So, I'll first ask if NIOSH wants  
10    to present their piece.

11           MR. HINNEFELD:     We don't have  
12    anything to present. We thought, you know,  
13    the presentation was --

14           MEMBER GRIFFON:    Oh, I thought the  
15    --

16           MR. HINNEFELD:     There is a  
17    presentation, but it's not ours.

18           MEMBER GRIFFON:    But there was a  
19    PowerPoint that Ted sent around this morning.

20           MR. HINNEFELD:     Well, he sent a  
21    few slides.

22           MEMBER GRIFFON:    Okay.

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1 MR. HINNEFELD: Tim sent a few  
2 slides, which I believe are complementary or  
3 supplementary to this.

4 MEMBER GRIFFON: Well, it was a  
5 PowerPoint, explaining some of the -- we asked  
6 them to look at the gaps in that data. Anyway,  
7 okay.

8 MR. HINNEFELD: Hang on a minute.

9 MEMBER GRIFFON: I guess we have  
10 the slides, but --

11 MR. HINNEFELD: This was what was  
12 sent this morning, right?

13 MEMBER GRIFFON: Right, right. So,  
14 no one is really available to speak to that,  
15 from NIOSH?

16 MR. HINNEFELD: Well, Tim is on  
17 the phone, I believe. Tim, are you on the  
18 phone?

19 MR. KATZ: He is.

20 MEMBER GRIFFON: Tim, can you give  
21 a brief -- you don't have to go through your  
22 exact overheads, but if you can give a brief

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1 description of where you're at with the new  
2 Class Definition and this gap analysis that we  
3 asked for in the last Work Group meeting.

4 MR. KATZ: Tim, we can't hear you.  
5 I don't know if it's your end or our end. But  
6 your voice is very faint. I don't know which  
7 end the problem is.

8 DR. TAULBEE: Can you hear me now?

9 MR. KATZ: There we go.

10 MR. HINNEFELD: That's better.

11 DR. TAULBEE: Okay?

12 MR. KATZ: Yes, thank you, Tim.

13 DR. TAULBEE: Thank you very much.  
14 They did an update on why we've changed our  
15 Class Definition slightly.

16 We wanted to provide some  
17 clarification. From reading SC&A's report, it  
18 appeared that there was some confusion among  
19 our Class Definition, as to what our intent  
20 was, and so, by changing some of the wording  
21 around, we've hopefully made this clear, and  
22 some of the clarifications are -- is to

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1 specify that the 250 day requirement isn't 250  
2 days within an area, or 250 days worth of  
3 dosimeter codes.

4 What we indicated during our  
5 presentation back at Hanford, was that we  
6 would have -- one dosimeter code would be all  
7 we would consider for inclusion into the  
8 Class, not 250 days worth of dosimeter codes.

9 So, we hopefully clarified that  
10 with this new proposed Class.

11 The other item was the inclusion  
12 of unknown location. Within the latter time  
13 period, this would be post-1958, a dosimeter  
14 code of 000 was used when the issuance  
15 location was not known.

16 To us, the other -- these people  
17 are equivalent to the ones who may have been  
18 exposed to thorium.

19 Again, I've broken -- when I did -  
20 - provided my discussion to the Board back in  
21 August, I separated workers into three  
22 categories. One was likely exposed workers,

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1 and those are the ones within 773A and CMX/TNX  
2 facilities, and then workers who may have been  
3 exposed, and that was where we opened it up to  
4 construction trades workers.

5 Then the other category was  
6 workers not exposed, based upon their  
7 dosimeter codes, as working in the reactor  
8 area or the separation areas in specific time  
9 periods.

10 So, we included the 000 code and -  
11 - in this definition, and added language about  
12 when records are illegible or indeterminable.

13 The only other change to the  
14 definition was the addition of two dosimeter  
15 code designations, Y and D2 for the CMX/TNX  
16 facility, and this was the result of an  
17 investigation that we went through and found  
18 that the designation for that area actually  
19 changed.

20 This was the very first facility  
21 at Savannah River to handle radioactive  
22 material, and so, it changed from Y to D2, or

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1 Y to CMX, then D2, and so, we wanted to add  
2 those two designators for completeness.

3 So, are my slides present for  
4 everyone to see?

5 MR. KATZ: Yes.

6 DR. TAULBEE: Okay, if you go to  
7 the next slide then, this is our proposed  
8 Class Definition, and it's currently at all  
9 externally monitored employees at the  
10 Department of Energy, its predecessor agencies  
11 and their contractors and subcontractors,  
12 whose records have at least one of the  
13 following dosimeter codes, A, G, CMX, TNX, D2,  
14 Y or the code is blank or illegible,  
15 indicating issuance from an unknown or  
16 indeterminable location, and worked at the  
17 Savannah River Site from January 1, 1953  
18 through December 31, 1957, for a number of  
19 work days aggregating at least 250 days,  
20 occurring either solely under their employment  
21 or in combination with work days within the  
22 parameters established for one or more other

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1 Classes of employees included in the Special  
2 Exposure Cohort, or this is a very long  
3 definition.

4 So, the next slide, if you go to,  
5 or whose work -- or whose records have at  
6 least one of the following dosimeter codes 5A,  
7 5C, 6B through 6Z, 12D through 12H, 12J  
8 through 12Z, or 000 indicating issuance from  
9 an unknown location and worked at the Savannah  
10 River Site from January 1, 1958 through  
11 September 30, 1972, low number of work days  
12 aggregating at least 250 work days, occurring  
13 either solely under this employment or in  
14 combination with work days within the  
15 parameters established for one or more of the  
16 other Classes of employees, including the  
17 Special Exposure Cohort.

18 So, that is our changes to the  
19 Special Exposure Cohort petition definition,  
20 that we're proposing.

21 Are there any questions on that,  
22 before I move onto the gap analysis?

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1                   MEMBER GRIFFON: No, I think, Tim,  
2 you can go ahead onto the gap analysis. Maybe  
3 explain, from the Work Group, why we -- why  
4 you did this gap analysis, sort of what was  
5 the reason that we asked for it?

6                   DR. TAULBEE: Okay, a week ago,  
7 Monday, on November 28<sup>th</sup>, we received a report  
8 from SC&A considering our Class Definition,  
9 where they did an analysis of 10 Claimants,  
10 and went through their dosimetry records to  
11 see if this Class could be -- I guess the  
12 purpose is implemented, or whether there were  
13 any gaps within the dosimetry records that  
14 needed to be resolved or would create  
15 problems.

16                   Well, they identified 130 gaps  
17 among these 10 Claimants. One of the  
18 comments, though, that SC&A indicated in their  
19 report was they did not evaluate the reason  
20 for the gap, and so, during our Work Group  
21 call last Friday, we committed that we would  
22 go through and look at these gaps, and see if

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1 there is a reason for them, and whether they  
2 can be resolved.

3 Well, we used the Site Research  
4 Database and work history cards to evaluate  
5 these gaps, that were identified.

6 So, in summary, of the 130 gaps  
7 that were identified, we've resolved 99 of  
8 them, just in the past few days. So, that  
9 comprises 76 percent.

10 Now, there is still 15 that we've  
11 categorized as possibly resolved and 16  
12 unresolved.

13 So, in total, there are 88 percent  
14 of these gaps, we've categorized into resolved  
15 or possibly resolved.

16 It's important to note that there  
17 are no unresolved issues post-1963. So, all  
18 of these gaps that are still in the possibly  
19 resolved or unresolved category are pre-1964.

20 So, this is an early time period  
21 where we would expect to find more difficulty  
22 with the gaps.

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1           So, if we go to the next slide,  
2 I'll give a little better definition of what  
3 we've defined as resolved, possibly resolved  
4 and unresolved.

5           For the resolved, we either found  
6 dosimetry data, or they were not employed  
7 during this time period, the code was 000, and  
8 the break-down of those 99, 49 of them we  
9 found dosimetry results in the SRDB that were  
10 not provided with the Claimant's file, but the  
11 data is there, within our access, within our  
12 Site Research Database.

13           So, we've considered those gaps to  
14 be resolved in that we have HP location  
15 information. We have these dosimeter codes  
16 and information during that time period.

17           And then on top, the number of 000  
18 codes, there were 24 of those 99 resolved,  
19 were the 000 codes, which I think our change -  
20 - or our addition to Class Definition takes  
21 care of. So, those are resolved.

22           So, that left us with, I believe

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1       it's 26 unresolved -- or no, 26 resolved  
2       issues, that we were able to come through from  
3       a job change within their work history cards,  
4       where they changed from a job, where they were  
5       monitored, to a job where they were not  
6       expected to be monitored, such as electronics  
7       and instrumentation technician, E&I  
8       technician, to a clerical position.

9               The possibly resolved is again,  
10       being evaluated right now. We're not done. We  
11       just got started on this last week, so, we've  
12       got some more work to do.

13               But just to give an indication,  
14       again, job change appears to be one of the  
15       major issues. Nine of the 16 possibly  
16       resolved are one individual and it's -- he has  
17       a GI indicated in his work history card, but  
18       we're not sure what that means. It could be  
19       military service. It could not be. We just  
20       don't know at this point. We need to track  
21       that down more.

22               And then there is an additional --

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1 I think it's 16 or 12 percent, that are  
2 unresolved, that we need for further evaluate  
3 over the next few weeks.

4 So, that is where we're at with  
5 this analysis. Again, we haven't had this --  
6 a great deal of time. We really got started  
7 on this last Thursday and Friday, and my team,  
8 Mike Mahathy in particular, has been working  
9 very hard over the past few days to try and  
10 get this far.

11 So, that is where we're at with  
12 the gap analysis.

13 One final slide, the next slide,  
14 please, is an analysis that we did of the  
15 Computer Assisted Telephone Interviews, and  
16 this was something that was brought up back in  
17 August, could we use this information?

18 And it doesn't -- it's not a  
19 scientific study, because we're looking at  
20 self-reported information.

21 But we went through and identified  
22 -- did a keyword search within the CATI

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1 database, all Claimants from Savannah River,  
2 and we identified 171 Claimants who self-  
3 identified that they worked in Building 773 or  
4 CMX/TNX.

5 Of these 171, 154 were identified  
6 as during the covered period from 1953 through  
7 1972.

8 Based on the definition that we've  
9 proposed, originally, not even this modified  
10 one -- well, I guess the modified one does  
11 include the 000 code, so, I should clarify  
12 that.

13 But based upon these dosimeter  
14 codes, 151 of the 154 self-identified people  
15 would be included in the Class, based upon  
16 their dosimetry codes.

17 Three Claimants were not included.  
18 One of them was an administrative person who  
19 worked in a typing pool. Another was a  
20 computer programmer who stated in the CATI  
21 that they did not work with radioactive  
22 materials, and the other was a power equipment

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1 operator -- or power equipment inspector, who  
2 went around to various buildings throughout  
3 the plant, and in his CATI, indicated a large  
4 number of buildings that he said he went into.

5 So, that is kind of an overview of  
6 our CATI analysis, where we feel that this  
7 dosimeter -- or this Class Definition will  
8 work, in the vast majority of the cases, and  
9 so, that's an update, where we're at.

10 Are there any questions?

11 MEMBER GRIFFON: Thanks. Yes, I  
12 think we had one or two questions. David, did  
13 you have a question on that, on the NIOSH  
14 presentation?

15 MEMBER RICHARDSON: Thank you. So,  
16 by gap, you meant a year in which -- or maybe  
17 first, could you define to me what you meant  
18 by a gap?

19 DR. TAULBEE: I would defer to  
20 SC&A to define that, sorry. They are the ones  
21 who came up with their definition of gaps.

22 DR. MAKHIJANI: Yes, by gap, we

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1 meant where we didn't find a record with a  
2 dosimetry code, and the 000, where we did find  
3 them, were explicitly identified as such. We  
4 didn't call them gaps, but to combine all of  
5 those into the 130.

6 But gaps was when employment was  
7 indicated, at least as far as we could tell,  
8 and there was no code that we could find for  
9 that period.

10 MEMBER RICHARDSON: And a gap  
11 could arise because the person was unmonitored  
12 in that year, or the -- was monitored -- the  
13 dosimetry record was not located, or the  
14 dosimetry record was located and it didn't  
15 have a health physics department code  
16 associated with it?

17 DR. MAKHIJANI: Yes, Dr.  
18 Richardson, we -- as I -- as Tim said  
19 correctly, we did not explore the reasons for  
20 the gaps, and we looked at two things.

21 We looked at the DOE files in the  
22 Claimant records, and we also looked at the

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1 Computer Assisted Telephone Interviews, and we  
2 didn't go into the details, and Tim has gone  
3 into some of that in his presentation to you.

4 MEMBER RICHARDSON: Okay, and so,  
5 you -- Tim, you described that you resolved 76  
6 percent of the gaps by identification that --  
7 or by -- by determining that a job change had  
8 occurred?

9 DR. TAULBEE: Not all of those.  
10 The vast majority of them were a page -- a  
11 page of the dosimetry record was not in the  
12 Claimant's file, but we have the actual -- we  
13 have complete quarterly dosimetry reports that  
14 we've obtained from the site, and we went  
15 through those.

16 Those are all located in the Site  
17 Research Database, and we went through those,  
18 looking for that particular person, and that  
19 gap, that missing data, and in 49 of the 99  
20 resolved cases, we were able to find those.  
21 That was the reason that gap was resolved.

22 Okay, so, that is one group of

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1 these -- of those 99 resolved.

2 MEMBER RICHARDSON: Could you  
3 first describe that to me a little bit more?  
4 They had dosimetry information that wasn't  
5 provided to SC&A?

6 DR. TAULBEE: They had -- that is  
7 correct. They had dosimetry information that  
8 is in the Site Research Database, that was not  
9 provided by the site in the Claimant file.

10 Generally, what happens, a page is  
11 missed or in the earlier time periods, when  
12 Claimant files were being sent to us, if there  
13 was no change in the dose, for example, they  
14 were monitored but all of their dosimeter  
15 readings were zero, and the site wouldn't send  
16 us that particular page.

17 The location information is still  
18 there on that page. It's just, all of their  
19 doses are blank for that time period, and in  
20 that time period, blank can mean one of two  
21 things.

22 One, that the reading was zero in

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1 the main -- is the main one, and the other is,  
2 is that during that time period, they never  
3 picked or wore their dosimeter badge.

4 So, if they were working in  
5 another area, but badged in a particular area,  
6 they never went into the area.

7 So, the site, whenever the  
8 dosimetry or the -- the total dose doesn't  
9 change, didn't always send us every one of  
10 those pages, and that's why we were able to  
11 find so many of them.

12 But the location information is  
13 there.

14 MEMBER RICHARDSON: Yes, just to  
15 finish up with this --

16 DR. TAULBEE: I'm sorry, you were  
17 breaking up, sir.

18 MEMBER RICHARDSON: The proposed  
19 Class Definition that you have is based on  
20 health physics area codes, right?

21 DR. TAULBEE: That is correct.

22 MEMBER RICHARDSON: And so, how is

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1 a gap where there is a missing health physics  
2 area code for a period of employment resolved  
3 by determining that their job title has  
4 changed?

5 I would consider those as two  
6 dimensions of a matrix, where somebody may  
7 hold a job title and that job title may be  
8 held in various areas, either potentially  
9 clerical workers assigned to the 100 area or  
10 the 200 area and so on.

11 To identify that the person has  
12 changed from an E&I tech to a clerical worker,  
13 to me, doesn't resolve the question about the  
14 other dimension of classifying them, which is  
15 the area in which they worked as a clerical  
16 worker.

17 DR. TAULBEE: I don't disagree  
18 with you on principle, that it is a two-  
19 dimensional type of matrix.

20 We are making an assumption that  
21 when somebody moves from a -- when somebody is  
22 monitored and their job title is electronics

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1 and instrumentation technician, and then they  
2 -- the monitoring records stop for a time  
3 period, and we look at the work history card  
4 and it says they became a clerical person for  
5 this time period, and then their monitoring  
6 records pick up again, and their job title  
7 changed again, either back to E&I or to some  
8 other job, that one might assume to be  
9 monitored, in our opinion, it's showing that  
10 somebody is moving from -- that those two are  
11 coinciding together.

12 I agree that it wouldn't always be  
13 the case, but this seems like a very plausible  
14 scenario of somebody who is monitored and then  
15 they're not monitored. Well, why were they no  
16 longer monitored? Why don't we have any  
17 records for them? It's in that work history  
18 and their job changed.

19 MEMBER RICHARDSON: I am not  
20 contending that any of those are wrong, that  
21 they are -- that their job title did not  
22 change and the determination that they needed

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1 to be badged or not badged changed.

2 But I'm asking, why are you  
3 assuming that they weren't a clerical worker  
4 in a given area? Why do you believe that they  
5 changed spatially, their physical location, as  
6 opposed to a job title change, where for a  
7 while, I'm a pipefitter in an area, and then I  
8 switch over to, you know, a general service  
9 operator in that same area, and I'm working --  
10 you know, I tend to work in that physical  
11 location?

12 DR. TAULBEE: You are correct,  
13 they could have continued working in that  
14 area. There was that job title change. I  
15 believe without them being monitored, there  
16 would not have been an exposure to thorium.

17 In order to be exposed to thorium  
18 in the 773A area, you had to have been badged.  
19 You had to have gone into that area.

20 So, for the Class Definition, if  
21 they were still working in 773A, and I don't  
22 know the specifics on this, personally, I

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1 don't have them in front of me, but say, they  
2 moved from the laboratory area into the front  
3 part, into A-wing, where it's an  
4 administrative area, they didn't physically  
5 change location, but their potential for  
6 exposure to thorium ceased when they moved  
7 into this other part of the building.

8 MEMBER RICHARDSON: But is that  
9 how the Class is defined?

10 DR. TAULBEE: The Class is defined  
11 based upon the potential for exposure to  
12 thorium in 773A in the TNX facilities.

13 MEMBER RICHARDSON: Based on  
14 health physics areas, right, not based on job  
15 titles, held within health physics areas?

16 DR. TAULBEE: That is correct. It  
17 is based upon the monitoring of the health  
18 physics codes.

19 What the gap analysis or what the  
20 gaps were purporting was that we don't have  
21 complete records, and so, when this person is  
22 not -- when this record is incomplete, we

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1 don't know whether they worked and were  
2 exposed to thorium or not, and what I'm trying  
3 to show during this review of work history  
4 cards is that it doesn't appear like this  
5 person had a potential for exposure to  
6 thorium, when this code changed, or when this  
7 monitoring record ceased before it picked up  
8 again.

9 MEMBER RICHARDSON: So, the way  
10 that you've resolved the gap, I guess is what  
11 I need to be clarified.

12 Are you resolving the gap under  
13 the assumption that they've remained in that  
14 area and continued to accrue their days of  
15 exposure there, or have you resolved the gap  
16 under the assumption that for that break in  
17 period, they moved out of that health physics  
18 area to one which is not considered part of  
19 the Class Definition?

20 DR. TAULBEE: The latter, but it's  
21 more of the standpoint of, they moved out of  
22 the area and were not monitored because they

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1 didn't need to be monitored.

2 If they moved to another area, and  
3 were monitored, we have that record.

4 MEMBER GRIFFON: Why don't we -- I  
5 think at this point, it would be good to have  
6 --

7 CHAIRMAN MELIUS: Well, Jim --

8 MEMBER GRIFFON: Oh, I'm sorry,  
9 Jim, go ahead.

10 MEMBER LOCKEY: Just maybe, for  
11 David, it would inform you that this analysis  
12 was done on what 10? I forget, it was 10  
13 cases that were submitted.

14 MEMBER GRIFFON: Right.

15 MEMBER LOCKEY: It's not a random  
16 analysis, so, there are concerns about that.  
17 I'd like to know whether this is  
18 representative of the group as a whole. I  
19 don't know that one way or the other.

20 MEMBER GRIFFON: It's also  
21 interesting that a lot of effort has gone into  
22 resolving these 10 cases.

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1           But having said that, I'll let  
2 SC&A maybe present their side of what they've  
3 -- you know, they've reviewed this, also, and  
4 Arjun, if you can present your work.

5           CHAIRMAN MELIUS:     While we are  
6 getting that set up, I have a logistical  
7 question.

8           I know Dr. Lockey has to leave  
9 around 3:30 p.m. Has anybody else got an  
10 earlier flight?

11           (Off mic comments.)

12           CHAIRMAN MELIUS:     Okay, I just  
13 wanted to check. Sorry to pick on you, Jim,  
14 but no, I just needed -- was trying to figure  
15 out --

16           MEMBER LOCKEY:     You warned me.

17           CHAIRMAN MELIUS:     That's right, I  
18 warned you. I won't tell you informed  
19 consent, but informed.

20           MEMBER LOCKEY:     Informed, that is  
21 right.

22           DR. MAKHIJANI:     Okay, I just want

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1 to ask whether Lynn Ayers is on the phone?  
2 Lynn, are you one the phone?

3 (No response.)

4 DR. MAKHIJANI: Doesn't matter,  
5 okay. Okay, the first slide just gives a  
6 little bit of an overview of the history of  
7 the thorium SEC issue, and the -- in 2010,  
8 NIOSH published an ER addendum covering one  
9 part of the thorium issue in which they  
10 presented a dose reconstruction method in the  
11 300M area, and then there was another report  
12 that went beyond 1965, and there are a number  
13 of outstanding issues. We've issued reports  
14 about that and so on.

15 That is not under discussion  
16 actively today. But just as reminder, that  
17 there are other thorium areas that have been  
18 and continue to be under discussion.

19 Then on August 9, 2011, NIOSH  
20 published addendum 2, which is what we're  
21 discussing today. Sorry, it says September  
22 310, 1972. Should be September 30, 1972, in

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1 the last bullet there.

2 As you have heard from Tim, NIOSH  
3 proposed an SEC for thorium for certain  
4 workers in certain areas, up to September 30,  
5 1972, starting in 1953.

6 I put up the original definition  
7 because our analysis of these 10 cases was  
8 against this original definition, certain  
9 areas up to 1957 and certain dosimetry codes  
10 in the years from 1958 to September 30, 1972,  
11 and so, now, that has changed, and I'll come  
12 to that.

13 But I just want to remind you that  
14 this is what we were analyzing against.

15 So, we, as Dr. Lockey said, we  
16 reviewed a small sample. It was not random.  
17 This was just to get an idea of whether there  
18 were gaps.

19 The reason we did this, other than  
20 time and resources and to get a preliminary  
21 look, is that in the way this Class Definition  
22 has been proposed, you actually have to have a

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1 record for every area and every period for  
2 which the worker worked, because even one  
3 designation of the particular type that's in  
4 the Class, would qualify the worker.

5 So, if you've got one period in  
6 which you have more records, then you don't  
7 know what to do with that, and so, the object  
8 was to find how many periods there were, for  
9 which there were no records or illegible  
10 records and so on.

11 We submitted a report on November  
12 28<sup>th</sup>, and most of these claims were provided  
13 as being problem claims of non-random in that  
14 sense, too, by Petitioner representatives.

15 So, let's see, here. So, our main  
16 finding was that there was only one case.

17 Now, we reviewed the DOE files and  
18 the CATIs, the DOE file in the claimant record  
19 and the CATI.

20 Only one case had complete records  
21 out of 10, with no uncertainties or  
22 discrepancies. Four out of 10 cases had some

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1       uncertainties and discrepancies, gaps, various  
2       kinds of things, and there were several kind  
3       of problem areas that we identified gaps,  
4       meaning no records, the 000 code that you  
5       heard about, and in the first period,  
6       especially from 1957 -- from 1953 to 1957,  
7       there were illegible records, blank records,  
8       stuff that was scratched out and not replaced,  
9       twice scratched out, replaced with something,  
10      again scratched out and so on and so on.

11               So, we considered all of these to  
12      be problem areas, and five out of the 10 cases  
13      where there were these incomplete, illegible  
14      records and so on, there was no -- or there  
15      were gaps, there was no code present  
16      indicating that they would be qualified for  
17      inclusion.

18               Now, under the present -- under  
19      the present revised definition, more than four  
20      out of 10 would be included, but not all 10.

21               All right, so, a little more  
22      detail. We compiled a number of employee

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1 years, and there were 139 employee years for  
2 these 10 workers, and 55 percent of the  
3 employee years had complete records.

4 Forty-five percent of the years  
5 were either fully or partially problematic in  
6 some way.

7 Now, I understand, you know, NIOSH  
8 has filled in some of those gaps. This is as  
9 presented in our November report, and so, 45  
10 percent of the claims had some kind of gap or  
11 illegible records, or blank or unreadable  
12 records and so on.

13 We also looked at the Computer  
14 Assisted Telephone Interviews, and we had a  
15 couple of conclusions about that.

16 Generally, these computer assisted  
17 interviews are very broad, where did you work.  
18 I worked in 100 area. I worked in the 200  
19 area, but they don't give you years, you know,  
20 or even -- this requires, in many cases, a  
21 finer grain than years. They don't say,  
22 "Well, in the first quarter of 1964, I worked

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1 in the 200H area and so on." You don't have  
2 that kind of detail, generally, in the  
3 computer assisted interview.

4 They may have referred to the 773  
5 or 773A, as Tim has indicated, but in survivor  
6 interviews where the worker himself has passed  
7 away, generally, you have even less detail  
8 than that and often, you may find nothing. So,  
9 there would be kind of an issue.

10 Generally, we didn't think while  
11 you might be able to include people from CATI  
12 and go there and find that they, in deed, were  
13 potentially thorium exposed, CATI would not be  
14 very useful to ensure that a worker was not  
15 present in SEC area, generally speaking.

16 So, we presented this at the Work  
17 Group meeting, and NIOSH, upon reviewing our  
18 research, proposed wider definition, which you  
19 have heard about, and you have seen a written  
20 proposal, so I won't dwell on this.

21 So, a couple of comments on what  
22 NIOSH has presented.

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1           You heard from the Petitioner  
2 yesterday that, you know, for construction  
3 workers they may have had a badge in a  
4 particular area and then worked in other  
5 areas.

6           I've looked over the interviews.  
7 We did some interviews with workers in 2010 or  
8 2009, I don't remember.

9           Anyway, you have the interview  
10 record that was provided to the Board, and put  
11 on the O: drive, and in reviewing those  
12 records, the construction workers who were not  
13 DuPont - the construction workers who were  
14 DuPont employees generally were assigned to  
15 some particular operations area. This is  
16 according to the interviews that we've  
17 compiled.

18           Construction workers who were not  
19 DuPont employees tended to fill in the gaps  
20 where they were needed, and so, who were more  
21 -- possibly more all over the site and could  
22 be called up to go from one place to another.

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1 So, that is one particular issue.

2 In regard to the gaps, I'd like to  
3 comment. This -- there has been a question  
4 about workers not wearing badges, and this  
5 question would come up.

6 The third point I'd like to make  
7 is something that was referred to by Dr.  
8 Lockey. You said that, of course, you wanted  
9 to see a more complete analysis.

10 Complete analysis that is non-  
11 random and a properly -- that is a random  
12 sample, that is properly stratified would be  
13 pretty forbidding in this case, in my opinion.  
14 I mean, we haven't consulted with our  
15 statistician, and I would certainly defer to  
16 him, if we were asked to do that.

17 But because you have to have every  
18 record, you'd have to have a pretty large  
19 sample. You not only are looking at the DOE  
20 records, then you are looking at every single  
21 record for every worker.

22 These are available at Savannah

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1 River Site, as Tim has mentioned. Sometimes,  
2 each record runs into 1,000 pages. We did  
3 this at Nevada Test Site. We did some workers  
4 and looked at every single page of records.  
5 It's a pretty forbidding task, and just want  
6 to alert you to that possibility.

7 MEMBER GRIFFON: I guess we can  
8 have some questions. We have time for some  
9 questions, right?

10 CHAIRMAN MELIUS: Yes.

11 MEMBER GRIFFON: I mean, one  
12 thing, this is really for Tim, I assume you're  
13 still on the line.

14 I was curious, when you say you  
15 resolved 76 percent of the gaps, how many  
16 claimants, out of these 10 that you looked at,  
17 how many of those cases were 100 percent  
18 resolved, all of the gaps, you know,  
19 completely resolved for an individual  
20 claimant, because we're talking like, you  
21 know, these exposure years here, but I want to  
22 know about the 10 claimants.

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1 DR. TAULBEE: Mark, unfortunately,  
2 I don't have that information right here in  
3 front of me. If you give me maybe 15 or 20  
4 minutes, I can try and pull it up.

5 But I mean, that is something that  
6 we were planning on including in a report.  
7 This was a preliminary analysis of this, and  
8 we're still going through some of these  
9 unresolved.

10 So, I just don't have that number  
11 in front of me right now. I'm sorry.

12 MEMBER GRIFFON: Arjun is -- yes,  
13 go ahead.

14 DR. MAKHIJANI: One thing I did  
15 not say, that I intended to, when I looked  
16 over -- and I don't have the chance to study  
17 the new Class Definition, but I noticed that  
18 it did not address one point that we had  
19 brought up, which is these scratched out  
20 codes, and so, I had asked Lynn Ayers to send  
21 me some information of how many of the cases  
22 had scratched out codes, that were not

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1 replaced? Lynn, are you on the line?

2 (No response.)

3 DR. MAKHIJANI: I'll go over it.  
4 There were three cases in which there were  
5 scratched out codes, Case 2 in which -- for  
6 example, in 1955 -- I won't go through the  
7 whole detail.

8 But just to give you an example.  
9 There was a code on a card in 1955, but it was  
10 scratched out, and you can read it, but it was  
11 scratched out.

12 So, we don't know what we would  
13 attribute, whether that was -- that hasn't  
14 been addressed in the new Definition.

15 So, whether that would be taken as  
16 an area code or would be taken as an unknown,  
17 hasn't been addressed. Illegible and blanks  
18 have been addressed.

19 MEMBER GRIFFON: Arjun, can I ask  
20 you the same question? I know that NIOSH has  
21 attempted to resolve some of these gaps that  
22 you initially identified, but in your first

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1 cut through, how many of the 10 did you find  
2 was some gap in their records, during the time  
3 period of interest?

4 DR. MAKHIJANI: Well, we don't  
5 know which cases the 12 percent remaining  
6 unresolved and the 12 percent potentially  
7 resolved, that were not resolved.

8 MEMBER GRIFFON: No, no, no, but  
9 I'm asking in your first --

10 DR. MAKHIJANI: Nine out of 10  
11 cases did not have complete records.

12 MEMBER GRIFFON: Okay.

13 DR. MAKHIJANI: Right.

14 MEMBER GRIFFON: That is what I  
15 was looking for. Anyway, Jim has a question.

16 DR. TAULBEE: Mark, this is Tim. I  
17 was able to pull that spreadsheet up, while we  
18 were talking here.

19 It looks like four additional ones  
20 do not have any gaps associated with them,  
21 now, if I'm interpreting this right.

22 MEMBER GRIFFON: So, four

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1 additional? So, that would be five out of 10?

2 DR. TAULBEE: So, five out of 10.

3 MEMBER GRIFFON: So, you have 76  
4 percent potentially resolved, but you really  
5 drop to 50 percent of the claimants that are  
6 resolved?

7 DR. TAULBEE: Well, yes, but keep  
8 in mind, one, this is not a random sample, and  
9 two, we're not finished with our work yet.

10 MEMBER GRIFFON: Right, I  
11 understand, I understand. I'm just putting  
12 some perspective on it. Go ahead, Jim.

13 MEMBER LOCKEY: You know, I wanted  
14 to ask you about why -- maybe you can inform  
15 me why we'd be such a -- it would be such as  
16 task to do a random sample, you know, at the  
17 at-risk group, that's before 1973?

18 You set your alpha and beta. You  
19 look at your power calculations, and I don't  
20 think I'd be asking you to go back and look at  
21 everybody, but it doesn't seem to me that that  
22 would be such a laborious task.

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1           You don't have to look at  
2 everybody. You can set your statistical power  
3 as your outcomes and go ahead and do that.

4           DR. MAKHIJANI:       Dr. Lockey,  
5 obviously, my comment was a preliminary  
6 comment, and subject to change.

7           But this is very different thing  
8 than say, what we did at Rocky Flats, where if  
9 you have not a complete dosimetry record, and  
10 you are looking to see whether a coworker  
11 model is feasible, you can fill in the gaps  
12 with, you know, bioassay information from  
13 coworkers who were doing the same job or were  
14 in the same building and so on.

15           The way this particular Class has  
16 been defined, every worker has to have a  
17 complete record for every period, or a  
18 complete explanation, if you accept that they  
19 did not -- that they were not badged in every  
20 case, that they actually were not in the  
21 designated areas, if we, for the moment,  
22 accept that.

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1           So, how -- I imagine that it would  
2 take a fair number of -- a fair size sample to  
3 conclude that with very high probability, you  
4 had all of the workers in Savannah River, who  
5 had all the codes, all the time.

6           So, you're asking for us, for a  
7 degree of certainty in this particular case,  
8 that we have not come across in any work that  
9 we've done for you, to the extent that I am  
10 aware, and then you'd need some stratification  
11 of this sample because as you've heard,  
12 construction workers were different than non-  
13 construction workers.

14           We have done a number of reports  
15 for Savannah River Site, and I'm not sure we'd  
16 have to stratify further than that, but we  
17 have found a fair number of differences among  
18 construction workers, by type of construction  
19 worker.

20           So, I just am making a preliminary  
21 remark, that it seems to me that because of  
22 the degree of certainty required, you probably

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1 -- and the kind of stratification that may be  
2 needed, you'd probably need a very large  
3 sample, and each worker -- and you have to  
4 examine the whole work period, because -- and  
5 we didn't go to the full records.

6 So, you have seen from what we  
7 did, just looking at what is in the claimant  
8 file and what Tim Taulbee did, looking at the  
9 whole record is a lot more work.

10 That is all I am saying. I am not  
11 saying it should or shouldn't be done. I'm  
12 just saying it is --

13 MEMBER LOCKEY: I would like to  
14 actually see that. I don't necessarily want  
15 you to go ahead and do it, but I would like to  
16 see the power calculations, and all I'm really  
17 interested in is, from my perspective, is  
18 these 10 cases aren't random.

19 DR. MAKHIJANI: They are not.

20 MEMBER LOCKEY: So, I can't draw  
21 any conclusions from these 10 cases.

22 But what I would like to do is a -

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1 - is this a systematic problem as a cohort,  
2 where there are gaps existing, and I don't  
3 think it's going to be as laborious as you  
4 think it is. I really don't.

5 DR. MAKHIJANI: You may well be  
6 right, I don't have an opinion right now.

7 MEMBER ZIEMER: Well, two things.  
8 One, the issue of indeterminate, it seems to  
9 me, the case that you described where the  
10 thing is crossed out is clearly indeterminate,  
11 but I guess either DOL or NIOSH would have to  
12 define what they mean by indeterminate. That's  
13 kind of a side comment.

14 I don't see anything in the  
15 proposed Class that specifies that you have to  
16 have 100 percent of the records. Where is  
17 that coming from?

18 DR. MAKHIJANI: My interpretation  
19 in that direction is the Class, as it is  
20 proposed to you, says that you have to have  
21 only one correct -- one dosimetry code or area  
22 code, that corresponds to that list, to be

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1 included.

2 It's not a -- you don't need to  
3 have 250 days in 773A. You need to be 250  
4 days on the site.

5 So, if you've got one blank, if  
6 you've got one period for which you have no  
7 information, can you assume in a claimant --  
8 is it claimant-favorable to assume that they  
9 were not in there?

10 MEMBER ZIEMER: Well, what about  
11 the whole rest of their record?

12 You're just saying maybe that is  
13 the only time they were there and none of the  
14 other codes -- and that is obviously, a  
15 possibility.

16 DR. MAKHIJANI: Right.

17 MEMBER ZIEMER: For most people,  
18 that probably wouldn't be the case.

19 DR. MAKHIJANI: That would  
20 probably also be right.

21 MEMBER ZIEMER: Okay, now, I also  
22 want to ask whether the inclusion of the

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1 indeterminate and the addition of the 000  
2 characterization -- what does that do, in  
3 terms of the construction workers and so on?

4 I don't know if you've had a --  
5 Knut Ringen has a -- had a chance to look at  
6 this, but is there anyone that can tell us the  
7 extent to which this does or does not address  
8 the issues raised for construction workers?

9 DR. TAULBEE: This is Tim Taulbee.  
10 I can partially address that.

11 The inclusion of 000 code actually  
12 includes a large number of construction trades  
13 workers, at least based upon my review of the  
14 Rule 4 workers, which are typically  
15 construction trades workers, within the  
16 dosimetry report.

17 It appears that the Savannah River  
18 Site, in processing the dosimeter, the --  
19 where the badge was issued was known in many  
20 cases, but in many -- in some of the others,  
21 it was not known, and so, 000 was entered for  
22 that dosimeter location.

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1                   MEMBER ZIEMER: Well, I guess I'm  
2 wondering if the group that was looking at  
3 that for the construction workers, Dr. Ringen,  
4 whether you folks have had an opportunity to  
5 look at these revisions yet, and whether you  
6 have had a chance to analyze the extent to  
7 which this may or may not address those  
8 problems? Perhaps it's premature.

9                   DR. RINGEN: Well, there are a  
10 couple of -- a number of things here that we  
11 can talk about, that may not be worth it.

12                   I am still uncertain, what is  
13 meant by 000. I don't know how you define  
14 that, how you come up with the -- taking a  
15 worker's record and saying, "This is a 000  
16 record." That is the first question.

17                   But the more broad question is  
18 that nobody is arguing here that you can't use  
19 dose codes to include somebody as having  
20 worked in a particular area.

21                   The real issue is, can you use the  
22 dose record codes to determine that somebody

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1 did not work there?

2 In other words, can you use the  
3 dose record codes to exclude them from the  
4 SEC, and that is where we say, "We don't think  
5 that can be done, based on the records that we  
6 have seen," and we don't think that this new  
7 definition fixes that problem at all.

8 If anything, it complicates it, in  
9 many ways, makes it more complicated, the  
10 Class Definition, and I just don't see how you  
11 get around the question of whether somebody  
12 worked there and did not have the code that  
13 they're supposed to have, according to this  
14 Class Definition.

15 When Tim earlier said that they  
16 had looked at these workers who had a -- who  
17 said they had worked in CMX or TNX, in their  
18 work history interview, you have to remember  
19 that that is a select group of people, as  
20 well, very significantly. So, there are  
21 people who remembered where they worked.

22 In this case, that excludes an

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1 awful lot of Claimants who are survivors, and  
2 you have to remember, this goes back, now,  
3 we're talking about a Class that starts --  
4 that ends in 1972, so, that anybody who can  
5 qualify for that -- for that SEC, at the very  
6 least, would have to be today, 58 or 59 years  
7 old, and most of them are significantly older,  
8 and most of them were there -- represented by  
9 survivors, since these are cancer cases.

10 So, they have no way of  
11 establishing -- a lot of survivors have no way  
12 of establishing clearly, that their -- that  
13 the -- the person they survived worked in one  
14 particular area or another.

15 This is where I think we're just  
16 digging ourselves into a deeper and deeper  
17 hole.

18 I don't want to stand in the way  
19 of a Class being established, based on the  
20 codes, but I also don't want a Class  
21 established that would exclude somebody, by  
22 using the codes.

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1           That is our point, and we can  
2 discuss this further.

3           As you can see, after Arjun and  
4 Bob Warren submitted their -- the cases that  
5 they have identified, Tim realized that there  
6 are two additional codes anyway, that should  
7 be included here.

8           Now, I don't know how many more  
9 codes are out there that should also be  
10 included, and I don't know how we find that  
11 out. I don't know quite where the existing  
12 codes come from, because they are not  
13 justified in the Evaluation Report, but I  
14 believe it was maybe from a list of codes,  
15 dated 1959.

16           Anyway, I can go on and on about  
17 this, but I think -- I don't want to waste  
18 your time by being circular.

19           DR. MAKHIJANI:     One thing about  
20 this 000?

21           CHAIRMAN MELIUS:    Go ahead, and  
22 then I want to comment. Go ahead.

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1 DR. MAKHIJANI: Just the 000 is  
2 actually a dosimetry code in the records,  
3 where they don't know, and since 000 has been  
4 included in the proposed definition, this  
5 would address Dr. Ziemer's earlier question,  
6 that if you don't know.

7 So, if there is a gap, so, what is  
8 the difference between having a single gap and  
9 having a 000, in my opinion, seems pretty  
10 parallel.

11 So, you have to have 100 percent  
12 complete record to exclude some of them.

13 CHAIRMAN MELIUS: I think another  
14 perspective on this is just thinking  
15 historically. This Class Definition is unlike  
16 any other. It's more -- much more complicated  
17 than -- and much more difficult to implement  
18 than any other Class Definition we have ever  
19 had, that has been able to survive.

20 In fact, if you look back, we've  
21 actually gone and revised Hanford and a number  
22 of other sites, where we tried to just get it

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1 down to area or even badging or not badged,  
2 and other constructs like that, and those have  
3 not proved feasible for the Department of  
4 Labor to implement.

5 So, we've the -- the other one --  
6 the only other one that I believe we've used  
7 something akin to this, that's still  
8 operational, is the Mound one, and that is not  
9 working.

10 Now, we're still trying to resolve  
11 how to do that in a fair way, but it's -- it's  
12 on a much smaller number, I believe, and much  
13 less complicated situation.

14 But you know, just based on our  
15 past experience -- and then, you know, we --  
16 not only are we being dependent on, you know,  
17 a high degree of accuracy in all the records,  
18 but a lot of records to be reviewed, to go  
19 through, and it didn't come up here yet, but  
20 in the Work Group call, which I listen into,  
21 there were issues related to the legibility of  
22 the records, so they have to be re-scanned, as

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1 I understood it, in order to be able to  
2 interpret that, and then we have to define  
3 illegible.

4 You know, we're back to hanging  
5 chads and the -- you know, it sounds  
6 straightforward, but not always as easy to do.  
7 Right, right, I know. Well, I hope we don't  
8 have to go to the Supreme Court to resolve  
9 this one.

10 But I mean, it's -- that -- and I  
11 think -- and again, it is -- I mean, I tend to  
12 agree with Arjun on -- well, I do agree with  
13 Arjun, I should say, on the sample size  
14 required, because you really are going to --  
15 you want very few false negatives, I think.

16 You know, it's not to be -- you  
17 know, you're not going to have 100 percent  
18 Class Definition, no, but do you -- can you  
19 miss five percent? Ten percent? I don't  
20 know.

21 Given that we've already revised  
22 the Class Definition in less than a week, to

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1 include two more areas, plus illegibility, in  
2 order to address the issues raised by a sample  
3 size of 10, I hate to think what happens when  
4 we, you know, go to a higher sample size.

5 But I think just historically,  
6 these haven't worked, and I think the onus of  
7 proof really is on NIOSH to -- if they think  
8 they can make something work, to really be  
9 able to demonstrate it, and I think that  
10 should be our test in this situation.

11 Does anybody else have -- Bill?

12 MEMBER FIELD: I think part of the  
13 problem is, we don't see the actual data. It's  
14 hard to really understand. You can see  
15 summaries, but it still makes it difficult to  
16 understand.

17 One of the questions I had was,  
18 are dose codes closely associated with job  
19 codes?

20 DR. TAULBEE: This is Tim Taulbee.  
21 Dose codes are not associated with job codes.  
22 They are associated with areas.

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1 MEMBER FIELD: Okay.

2 DR. TAULBEE: The codes at  
3 Savannah River Site was 310 square miles in  
4 size. The dosimeter exchange cycles were done  
5 by area, and so, the badging was done by  
6 independent areas, and so, that is why we are  
7 using dose codes, for this purpose.

8 MEMBER FIELD: So, there is not  
9 any one job code, where everyone in that job  
10 code has an eligible dose code, is that  
11 correct?

12 DR. TAULBEE: That is correct. No,  
13 it is by area, and for example, in the post-  
14 1958 time period, 1958 to 1972, the dosimeter  
15 code for people who were badged out of the  
16 773A area, the code was 5A.

17 So, everybody, regardless of job,  
18 badged out of 773A, were given the HP area  
19 code of 5A.

20 MEMBER FIELD: I understand. Okay,  
21 thank you.

22 CHAIRMAN MELIUS: Yes, Dr. Ringen,

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1 I thought had another comment, and then we  
2 should listen to the -- give a chance for the  
3 other petitioners, the representatives to  
4 speak, also.

5 DR. RINGEN: I just want to make a  
6 clarification to what Tim said.

7 He said that dose codes are  
8 associated with a particular area.

9 I would like to correct that, to  
10 say that dose codes may be associated with a  
11 particular area, but in very many cases,  
12 including the cases that we have submitted to  
13 you, and granted, that is not a representative  
14 sample, but we don't have a denominator, you  
15 know, that is not information that we have  
16 access to.

17 But we have enough records  
18 submitted, to show that the person worked in  
19 various areas, having the same dose record or  
20 dose code and vice versa.

21 CHAIRMAN MELIUS: Okay, Mr.  
22 Anderson, did you have something, also?

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1 MR. ANDERSON: I'm not sure if this  
2 would be helpful or not.

3 Bob Warren sent me, just something  
4 today, I'm sorry.

5 If you would like to see a card,  
6 or a code from 1957, with crossed-off things  
7 on it, this one is not necessarily indicative.

8 I do want to point out that our  
9 non-random sample that we sent into SC&A was  
10 really pretty random, because we just starting  
11 looking, thinking how is the Department of  
12 Labor claims examiner going to deal with these  
13 codes? Let's go look.

14 All of the sudden, one after the  
15 other came up problematic.

16 So, it's easy to think, "Oh, we  
17 looked for the problem ones and sent only  
18 those," but that is not necessarily true.  
19 Almost all of these are problematic.

20 In this particular case, even  
21 though the alpha numeric system was not  
22 supposed to start until 1958, here, we have

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1 someone in what appears to be A9, whatever  
2 that is, crossed out and moved to C, and this  
3 one little sheet, we've got bunches and  
4 bunches and bunches of these sheets.

5 But the other thing that I wanted  
6 to talk about is whether or not this might be  
7 a systemic problem, you know, not just looking  
8 at these particular problematic codes, but you  
9 know, all along, we thought that the codes  
10 that have been used in dose reconstruction are  
11 not the codes, but the records have had all  
12 kinds of problems in them, that NIOSH has  
13 glossed over.

14 Also, talking about the Site  
15 Research Database that was referenced earlier  
16 by Dr. Taulbee, are the claimants going to  
17 able to get to that Site Research Database, to  
18 find all of the records that they need?

19 Is the Department of Labor claims  
20 examiner going to be able to do that? We are  
21 very concerned about how the Department of  
22 Labor is going to deal with this, because at

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1 an earlier meeting, a representative said,  
2 "You know, we just don't -- we're not going to  
3 be able to dig that deep."

4 Well, how deep are they going to  
5 need to dig to qualify someone who should be  
6 qualified?

7 So, I think Mr. Warren is on the  
8 phone, I hope, and would like to make a  
9 statement, as well.

10 CHAIRMAN MELIUS: Okay, Mr.  
11 Warren, are you on the phone?

12 MR. WARREN: Yes, yes, I am. I'm  
13 here.

14 CHAIRMAN MELIUS: Okay, would you  
15 like to make a public statement?

16 MR. WARREN: Well, just staying  
17 with this same piece of papers that I just  
18 faxed to David Anderson.

19 The one paper in there is the DOE  
20 verification, on the comments not listed the  
21 report of 1960, for this particular case, and  
22 if you actually look at the 1960 -- the fourth

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1 quarter, look at the data, and then you look  
2 at the summary sheet for 1960, should have had  
3 655 deep, 705 shallow.

4 But then on this fourth quarter of  
5 1960 paper, it looks like 905 and 855, and  
6 whatever the figures are, they're not the same  
7 as listed on the summary.

8 What I sent this for is, these  
9 HPAREH records are supposed to be the basis  
10 for everything that NIOSH does. They say  
11 these are all verified and they all add up,  
12 but on this particular case, which I just  
13 happened to look at, it doesn't pan out.

14 What I guess I want to say today,  
15 is over the nine years I've been representing  
16 claimants, and I appreciate the Board's  
17 courtesy; former Chair Dr. Ziemer and present  
18 Chair Dr. Melius and all of the Members of the  
19 Board, but special thanks goes to union  
20 members, Dr. Ringen, for organizing the  
21 meetings and keeping workers informed on all  
22 of the proceedings.

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1                   Since 2002, we've had meeting  
2 after meeting, worker transcripts, worker  
3 testimony, secret testimony, and all of them  
4 testified about the missing records or  
5 incorrect records, and the one thing I think  
6 that's been the hardest for me through all  
7 these years, is when I get the client that  
8 calls and I'm in the last conversation with  
9 that client, because they ask me, they thought  
10 the process was that -- you know, the 180 days  
11 NIOSH has to answer an SEC petition.

12                   They ask me if they had to  
13 stipulate an answer, and the missing records,  
14 why the process wasn't working.

15                   I've had about 30 of those calls,  
16 and I've always responded saying, "Advisory  
17 Board had the authority to move forward. NIOSH  
18 has been granted delays," and this most recent  
19 delay is just -- has not been justified.

20                   I think you just need to include  
21 all employees from 1953 through at least 1972,  
22 and David Anderson would be glad to pass up

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1 those -- that paperwork to you. I don't have  
2 -- I just found it this morning. The only  
3 reason I -- I forwarded it to you.

4 But it just gives an example that  
5 DOE has this data, then when you look at the  
6 exact data, you see that it isn't transcribed  
7 directly on the card.

8 CHAIRMAN MELIUS: Okay, thank you  
9 very much, Mr. Warren.

10 Are there any other petitioners  
11 that wish to speak?

12 (Off mic comments.)

13 CHAIRMAN MELIUS: Further  
14 discussion? Work Group? Where is the Work  
15 Group? Go ahead.

16 MEMBER CLAWSON: I am speaking for  
17 myself, but I think other Members of the Work  
18 Group are the same way.

19 This is very complicated. This is  
20 -- and I know that it's not our responsibility  
21 with the Department of Labor, but we've got to  
22 give to them something that they can actually

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1 implement, in my opinion.

2 I've seen the other sites that  
3 have been much smaller than this, Mound and  
4 all of these others, they're having trouble  
5 with this, and I have to agree with Dr.  
6 Ringen.

7 I can understand to use this, to  
8 involve somebody in a Class, but to exempt  
9 them, I have a problem with it.

10 CHAIRMAN MELIUS: Mark?

11 MEMBER GRIFFON: I mean, where the  
12 Work Group, we decided to bring the issue back  
13 to the Board. We really didn't come with a  
14 recommendation, necessarily.

15 But the, you know, the concern I  
16 have, similar to what Arjun was speaking to,  
17 was that if we do further analysis of bigger  
18 data sets, you know, and I think Jim, you  
19 mentioned this, too, what degree of certainty  
20 do we want to come out of that?

21 Is 90 percent acceptable? That  
22 means that, you know, 10 percent, you could

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1 have people that -- and this is not a  
2 population study. This is decisions on  
3 individual claimants.

4 So, I think we want to be close to  
5 100 percent right, and I see the Petitioner  
6 has a question, related to my comments. Go  
7 ahead.

8 DR. RINGEN: Well, let me say  
9 also, that if you accept a certain margin of  
10 error here, that is not distributed randomly  
11 throughout this population. It's going to  
12 affect one group of workers much more than the  
13 other ones, and they are the ones that are  
14 transient throughout the site, and this would  
15 be incredibly unfair, particularly to the  
16 construction worker population.

17 Now, to the Working Group, the  
18 Petitioners have made a recommendation that is  
19 two-fold that you could consider.

20 The first is to include all  
21 workers from January 1, 1953 through, I guess  
22 it should be September 30, 1953 -- 1972, to be

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1 consistent with what Tim has proposed for now.

2 Secondly, to expedite the process  
3 of reviewing all of the other exotic radio-  
4 nuclides in the other areas where thorium has  
5 been used and other periods where thorium has  
6 been used since then. Those are the two basic  
7 recommendations that we have.

8 MEMBER GRIFFON: Yes, so, anyway,  
9 and you know, the -- I mean, I guess the other  
10 reason I was highlighting the gap analysis is,  
11 you know, my concern of a larger study, is  
12 that to resolve these gaps on 10, you know, it  
13 took quite a bit of effort on NIOSH's part,  
14 and I'm not sure we, you know, are even going  
15 to be definitive in the resolution.

16 I mean, it seems like there is  
17 some sort of assumptions that are made, "Well,  
18 a shift to a job meant that they were out of  
19 an area."

20 There is some -- so, you know,  
21 even in this gap analysis, I think we're not  
22 going to have a very certain answer when we

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1 complete a -- we'll do a lot more work, and  
2 probably won't get a definitive answer.

3 CHAIRMAN MELIUS: Mr. Rowe, as you  
4 back on the line?

5 MR. ROWE: This is Gordon Rowe.

6 CHAIRMAN MELIUS: Mr. Rowe, are  
7 you back on the line? We also appear to have  
8 music on the line, and I think that is  
9 interfering. So, we're trying to get that  
10 off. Go ahead, Jim.

11 MEMBER LOCKEY: I was thinking in  
12 the gap analysis, we have the codes where  
13 workers will be included in the cohort during  
14 the -- in the SEC.

15 So, you know, what I was really  
16 interested in is looking at situations where  
17 workers were not -- had none of those codes  
18 and where there is a gap, and where re-  
19 analysis puts them into the cohort.

20 That is really what I want to  
21 know. Yes, that is the piece I want to know.

22 If they ever have one of these

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1 codes, they're already in the cohort. They're  
2 already in the SEC. They're not --

3 MEMBER GRIFFON: But how would you  
4 say the re-analysis, just to take this down  
5 the road, how would you see the re-analysis  
6 putting them into the group?

7 MEMBER LOCKEY: They're already in  
8 the group.

9 MEMBER GRIFFON: No, no, if you  
10 took that sub-set that was not, that didn't  
11 have a code --

12 MEMBER LOCKEY: I would look at --

13 MEMBER GRIFFON: -- examine the  
14 gaps on that --

15 MEMBER LOCKEY: Look at the gaps  
16 and see how many would then result in them re-  
17 entering -- or going in -- not re-entering,  
18 but going into the SEC.

19 MEMBER GRIFFON: But how do you  
20 define that? How do you determine whether  
21 they would re-enter it?

22 MEMBER LOCKEY: Going back and

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1 look at the records to see if there is records  
2 that weren't included.

3 MEMBER GRIFFON: That have the  
4 code?

5 MEMBER LOCKEY: That, or for some  
6 other reason, would suspiciously put them back  
7 into the SEC.

8 See, I don't know that. What I do  
9 know, that if you ever have that code, you're  
10 already in it.

11 MEMBER GRIFFON: Yes.

12 MEMBER LOCKEY: So, I'm interested  
13 in if you don't have that code, all right,  
14 where are those people? Yes, where are they?

15 MEMBER GRIFFON: Yes, yes.

16 MEMBER LOCKEY: Where are they?

17 MEMBER GRIFFON: Yes.

18 MEMBER LOCKEY: And what you are  
19 saying is, if there is a gap in anybody,  
20 they're automatically into the SEC.

21 MEMBER GRIFFON: Well, I mean, I  
22 think the argument is for all workers, that

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1 you can't resolve these gaps, yes.

2 MEMBER LOCKEY: Yes, the workers,  
3 right, yes.

4 MEMBER GRIFFON: Yes.

5 MEMBER LOCKEY: And that is a --  
6 you know, before making that decision, I would  
7 like to have some information about that. That  
8 is a huge leap.

9 MEMBER RICHARDSON: So, was that -  
10 -

11 MEMBER GRIFFON: I'm just not sure  
12 how you would determine if the --

13 MEMBER LOCKEY: No, I think we --

14 MEMBER GRIFFON: These workers  
15 that didn't have the code --

16 MEMBER RICHARDSON: Was that what  
17 we were --

18 MEMBER GRIFFON: -- that have a  
19 gap, how do you place them in -- you know, how  
20 do you --

21 MEMBER RICHARDSON: Mark, was that  
22 what was shown with the -- I wasn't quite

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1 following.

2           There were 154 workers who were --  
3 had -- was it self-identified, as working in  
4 773A?

5           MEMBER LOCKEY: CATI.

6           MEMBER GRIFFON: That was the  
7 CATI.

8           MEMBER RICHARDSON: Based on the  
9 CATI, had said that they worked there?

10          MEMBER GRIFFON: Yes.

11          MEMBER RICHARDSON: And 151 of  
12 those had codes which indicated that at some  
13 point, they had worked in there and three did  
14 not have codes that indicated that they worked  
15 there?

16          MEMBER GRIFFON: Correct, yes.

17          MEMBER RICHARDSON: And is that --  
18 that is the type of discordance you're talking  
19 about?

20                 Was there a gap or was there some  
21 -- what was the basis for them, not having  
22 been flagged as working there?

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1                   MEMBER LOCKEY:     No, I'm actually  
2 going the other way.

3                   MEMBER GRIFFON:     He's going the  
4 other way.

5                   MEMBER LOCKEY:     If they have a  
6 code, they're automatically in the SEC, no  
7 matter where else they worked.

8                   MEMBER RICHARDSON:   Right, but I  
9 think Mark's question was, what sort of  
10 external information on somebody who didn't  
11 have these codes, would be available that  
12 would suggest that you would move them in, and  
13 one type of external information would be  
14 their self-reported --

15                   MEMBER GRIFFON:     Or would answer  
16 the question that they -- right, right.

17                   MEMBER ANDERSON:     Or move them  
18 out.

19                   MEMBER GRIFFON:     Right.

20                   MEMBER ANDERSON:     Because now, the  
21 way it's defined, if there is a gap, they  
22 would be moved in, right?

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1                   MEMBER GRIFFON:    So, if I'm -- I  
2                   mean, my -- let me maybe try to clarify.

3                   If you look at that set that  
4                   didn't have a code, and they have gaps, then  
5                   I'm asking what criteria would you -- would  
6                   NIOSH look at, to determine whether they had  
7                   enough information that said they didn't  
8                   belong in those codes?

9                   You know, how would you -- what  
10                  exclusion -- because you know, if you just  
11                  look at job -- you know, you say, "Well, they  
12                  were an administrative assistant," it may  
13                  answer it, but they might have been in 773,  
14                  you know.

15                  So, what would your criteria be?  
16                  That is my concern. My concern is it's going  
17                  to be a lot of grey area there.

18                  MEMBER LOCKEY:    We have to turn to  
19                  NIOSH, and ask the criteria.

20                  MEMBER GRIFFON:    Yes, right, yes.

21                  MEMBER LOCKEY:    But the lack -- I  
22                  do -- what I am reassured is that they have

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1 the codes that are going to be in there.

2 MEMBER GRIFFON: Okay.

3 MEMBER LOCKEY: If they have none  
4 of those codes, then how many people have  
5 unknown information, then they put them back  
6 in -- they put them in the SEC, and we don't  
7 know that part. That's what my concern is.

8 MEMBER GRIFFON: Oh, I see, okay.

9 MEMBER LOCKEY: We're dealing with  
10 a vacuum here, which we're making a very  
11 substantial expansion of the people eligible  
12 in this SEC. I'd just like to have some  
13 objective information that I can rely on, for  
14 this to be justified.

15 MEMBER GRIFFON: Okay, yes.

16 MEMBER ZIEMER: I think Dr. Lockey  
17 is suggesting that you looked at the gaps in  
18 the wrong group. You have looked at gaps in a  
19 group that is already included.

20 So, it's the issue of people who  
21 are -- have none of these codes, and do those  
22 groups have gaps that might have put them in,

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1 and as a start, you could do the very same  
2 thing and start picking 10 of those and see if  
3 it's similar.

4 It might give you some idea. I  
5 think it makes sense logically, why look at  
6 gaps in people who are already in, when we're  
7 really interested in the gaps for those who  
8 would be otherwise excluded, anyway.

9 CHAIRMAN MELIUS: But I think the  
10 point to do -- that Arjun made, and I agreed  
11 with earlier, was that to do that type of an  
12 effort, you're talking about a large research  
13 effort that is going to take a significant  
14 amount of time and effort, and you know, is  
15 not what we have required in other similar  
16 situations in the past.

17 I guess I can't quite see the  
18 justification for requiring that. Why would --  
19 -- why should we develop a -- you know, a new  
20 way of defining Classes, when we know that --  
21 or implement -- recommend implementing a new  
22 way of defining Classes, when we know in the

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1 past, this has not worked, and in fact, NIOSH  
2 has not found it to work, and has recommended  
3 -- and Department of Labor has not found it to  
4 work at other sites, not at this site, and  
5 have found that we end up with these broad  
6 Classes.

7 I think if one also thinks about -  
8 - you know, again, it's not that -- what --  
9 the question of the monitoring part, it's a  
10 question of the records which were never  
11 developed or designed to -- for dose  
12 reconstruction. That was not their purpose.

13 I don't think it faults the site  
14 or anything. It's just sort of fact of life,  
15 given how things developed at that site, and  
16 at most Department of Energy sites of those  
17 years, and I think we've gotten frustrated  
18 with it, at several sites, but I think it's  
19 something -- you know, we went through it with  
20 GE. We go through it with others, and I think  
21 we'll continue to confront it.

22 But it just -- more specific Class

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1 Definitions, based on area or monitoring or  
2 whatever, just have not appeared to work, at  
3 all.

4 The question is, do we want to,  
5 you know, delay action on this, while we then  
6 -- you know, do a large study, to make a  
7 determination? May be helpful. It may not.  
8 It's hard to tell.

9 But it would be certainly a large  
10 effort. I mean, I don't know how -- whether  
11 this is a question of priority, but just the  
12 analysis of the CATI interviews, the 150 CATI  
13 interviews took -- is still not complete. We  
14 don't have a report on that and I don't  
15 believe a report -- and that has been since  
16 our August meeting, I believe is when that was  
17 discussed and started, and here, it's you  
18 know, three or four months later, and you  
19 know, at the Work Group meeting, and you were  
20 there, Jim, and Tim reported that, well, maybe  
21 by the end of December, this month, we'll have  
22 it.

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1                   Yes, and again, it's not  
2 necessarily faulting Tim. It's just, you  
3 know, some recognition that these efforts take  
4 a long time and that there are competing  
5 priorities and so forth, and I think we have  
6 to think carefully about that, and weigh that  
7 also.

8                   People have waited. Yes, Dr.  
9 Ringen, last comment.

10                  DR. RINGEN: Yes, I would like to  
11 comment on this idea about trying to do the  
12 representative study.

13                  NIOSH has had -- we invited NIOSH  
14 to come down to talk to the workers about the  
15 problems of the dose record at Savannah River,  
16 starting in 2003, spent basically eight years  
17 trying to prove that the records were suspect,  
18 and then came up with this problem with the  
19 thorium, records at the last minute.

20                  Workers have testified repeatedly  
21 to NIOSH, in interviews of various kinds, that  
22 there are deficiencies in the dose records and

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1       somehow, many people on this Board don't seem  
2       to accept perhaps, their word for that.

3               But I don't think they are being  
4       misleading in this regard.

5               Going back to trying to validate  
6       this in a statistical study would be very  
7       hard, something, by the way, that NIOSH has  
8       never done in any way in this dose  
9       reconstruction program. It's never validated  
10      the dose reconstructions, themselves.

11              But if you want to do that  
12      statistical study, first it's going to be a  
13      question of, what is the denominator? That is  
14      very difficult. It can't be CATI interviews.  
15      It can't be workers with dose records, because  
16      you have to have also record workers without  
17      dose records.

18              You have the -- which would be  
19      very difficult to identify, and to come up  
20      with a comprehensive really, population, a  
21      denominator at Savannah River would be just  
22      about impossible, and it would be huge, 67,000

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1 construction workers, alone, I believe is what  
2 we estimate has been at Savannah River.

3 If you're going to do that study,  
4 in the end then, we're also going to have to  
5 ask for a replication, for a validation of  
6 that study, just like everything else, and how  
7 long is that going to take?

8 We've been doing this for eight  
9 years, basically, and we have submitted, Dr.  
10 Lockey, objective evidence. These are cases  
11 that show that the record is not complete. We  
12 can do that. That is as much as you can  
13 expect in this case, the Petitioners to do, I  
14 think.

15 I don't think you can expect the  
16 Petitioners to do a statistical study for you,  
17 and I don't think -- how NIOSH can do the  
18 statistical study, either, in anything that  
19 would take years.

20 I mean, we were going to -- we  
21 would have to have a very long discussion  
22 about the study design, first of all, and that

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1 is going to -- you know, this is very  
2 complicated, if you will, epidemiological  
3 study, of administrative records, that are  
4 very incomplete, to begin with.

5 Those of us who have done  
6 epidemiology, based on administrative records,  
7 know how difficult it is to do that.

8 So, I just see more and more  
9 problems being raised by this proposal.

10 CHAIRMAN MELIUS: Josie and then  
11 Jim, do you have another comment, or are you  
12 okay?

13 MEMBER BEACH: I just want to say  
14 that I believe that implementation of this  
15 Class, as defined, would be impossible.

16 I agree with your comments, Dr.  
17 Melius and of Arjun's, and I think we should  
18 move forward to vote on a different  
19 Definition, including all workers at Savannah  
20 River during those dates.

21 CHAIRMAN MELIUS: Thank you. Jim?

22 MEMBER LOCKEY: I guess my

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1 comments are -- I'd like to know if this is a  
2 systemic problem, and not necessarily just  
3 applies to this particular SEC. It may apply  
4 to others, and we don't have a database to  
5 know that, in regard to those people that  
6 don't have a code that puts them in the SEC.

7 And so, I don't think it would be  
8 that -- as difficult as some were saying, to  
9 go back and design a randomized study that  
10 allows us to see if this is a systemic  
11 problem. You know, I don't think that would  
12 be as difficult as people are thinking.

13 We've given this data -- some  
14 objective data to say, you know, this is a  
15 problem and it doesn't just apply to Savannah  
16 River. It very well may apply to other  
17 facilities. Okay, that is what I'm interested  
18 in.

19 MEMBER GRIFFON: I guess just to  
20 follow up on that.

21 I think that -- I mean, my  
22 question would be, the end point of -- the

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1 study that you're describing, and if you were  
2 to look at those that didn't have the code,  
3 you know, the sub-set that didn't have the  
4 code, and looked for gaps in those records,  
5 that is one study, how many of these claimants  
6 in this time period have gaps in their  
7 records, period?

8 That might be something that is  
9 definable and doable.

10 I think the thing that really  
11 would really run into problems is if you tried  
12 to say, how many of these have gaps that could  
13 not be resolved, and this resolution of these  
14 gaps is a very gray area, in my opinion. It's  
15 -- even in these 10, it's been difficult.

16 You know, the question of whether  
17 this -- a change in job is actually changing  
18 their area, we've heard a lot of testimony  
19 where construction workers in particular, were  
20 badged in one area, but worked in different  
21 buildings with the same badge. They came on  
22 our Work Group call saying that.

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1           So, I think that is where it gets  
2 into that gray area, and I am afraid we're  
3 going to end up with some sort of very  
4 inclusive results. So, I don't know, that is  
5 my concern.

6           MEMBER LOCKEY: Non-resolution can  
7 be -- five to 10 percent non-resolution is  
8 really significant. That has huge  
9 implications, for me, in this classification.

10          MEMBER GRIFFON: Right.

11          MEMBER LOCKEY: I'm not talking  
12 about 50 percent is acceptable. I would say  
13 five to 10 percent is, to me, pretty much  
14 unacceptable, because that means there is  
15 misclassification occurring, and if this is a  
16 systemic problem because of records across all  
17 facilities, during these time frames, I think  
18 that is some important information to know.

19          CHAIRMAN MELIUS: It certainly has  
20 implications for other sites, where -- even  
21 though these definitions aren't -- Class  
22 Definitions aren't -- apply to other sites,

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1 certainly, I think it would have implications,  
2 in terms of what happens during dose --  
3 individual dose reconstruction, and how gaps  
4 are handled?

5 Now, when there are coworker  
6 models and so forth, it's part of that, and I  
7 think maybe it's less of a problem, at certain  
8 sites. But certainly, it can be a bigger  
9 problem than that. Henry?

10 MEMBER ANDERSON: Yes, I guess my  
11 only issue is, this would be the first time  
12 we've used, you know, badge codes to classify  
13 individuals as being part of an SEC.

14 I mean, the issue of, are we  
15 putting people in, who don't belong, I mean,  
16 that is the basis of the whole SEC thing, is  
17 we don't know whether they belong or not.

18 So, they're typically put in and  
19 they -- and the option here is, we either go  
20 with, we're just going to include all  
21 employees during these years. This is an  
22 attempt to narrow that down some, and I think

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1 -- you know, whether that is doable or not, is  
2 problematic, as -- you know, and people can  
3 always appeal, if they were left out, as well,  
4 and then you have the individual records  
5 looked at.

6 But I'm not sure what would be our  
7 alternative here, that would make the -- kind  
8 of the false positives lower, and so, what  
9 would be the alternative here if you say,  
10 "Well, 10 percent of them," if you really look  
11 at them carefully, don't belong, in this SEC  
12 definition.

13 MEMBER LOCKEY: No, we're not  
14 looking at excluding people from the  
15 Definition. We're looking for people who,  
16 based on this Definition, would not be in it,  
17 and we're looking to those people who would  
18 not be and how many would belong.

19 MEMBER ANDERSON: So, they would  
20 all have -- they would have complete records,  
21 then?

22 MEMBER LOCKEY: No, if we looked

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1 at those people who don't have those codes,  
2 and we can't resolve gaps in five or 10  
3 percent of them, to me, that is enough doubt  
4 across the cohort as a whole, to include  
5 everybody.

6 MEMBER ANDERSON: Okay.

7 MEMBER LOCKEY: That is what I'm  
8 trying to say.

9 MEMBER ANDERSON: Okay, that is  
10 what -- I see what you're -- I was going the  
11 other way, that we're somehow getting too  
12 many, and therefore, this would be different,  
13 yes, okay.

14 MEMBER LOCKEY: No, I'm looking  
15 at, if you -- if there are gaps in the people  
16 who don't qualify for the SEC, how significant  
17 are those gaps, and this is a systemic  
18 problem, or is just isolated to this facility?

19 MEMBER ANDERSON: Yes.

20 MEMBER LOCKEY: That is what I'm  
21 talking about.

22 CHAIRMAN MELIUS: Bill?

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1           MEMBER FIELD: I think we have had  
2 a lot of discussion. I'd like to hear from  
3 NIOSH and if they would happen to have any  
4 further comments.

5           We've had a lot of discussion  
6 regarding to some of the limitations of the  
7 method that was proposed.

8           I was just wondering, is there any  
9 response that would give us maybe more  
10 confidence that this is a valid method to use?

11          CHAIRMAN MELIUS: Stu?

12          MR. HINNEFELD: I don't know that  
13 we have really a lot to add, other than what  
14 has been provided already, in Tim's  
15 presentation.

16          I don't know if Tim is on the  
17 phone, he can hear us or not?

18          DR. TAULBEE: Yes, I am on the  
19 phone, Stu. If I'm understanding the question  
20 correct, Dr. Field, are you asking is there  
21 anything that you feel that -- is there  
22 anything that we feel we could do that would

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1 improve your confidence, is that correct?

2 MEMBER FIELD: Well, I think that  
3 is what I was asking. There were a lot of  
4 concerns expressed over the past half-hour.

5 I was just wondering if there were  
6 any concerns that you heard expressed, that  
7 you think you could address?

8 I know there a lot of concerns  
9 were raised, and there seems to be a lot of  
10 criticism to the method that was first  
11 proposed. I was just wondering, do you have  
12 maybe a fallback method or something else, or  
13 thoughts on some of the problems that were  
14 discussed?

15 MEMBER ANDERSON: Why you think  
16 this would work?

17 MEMBER FIELD: Yes.

18 DR. TAULBEE: I guess one thing  
19 that I could comment on, and again, this is  
20 just off the cuff here, is that the study  
21 proposed by Dr. Lockey is really -- would not  
22 be incredibly cumbersome to do.

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1 I believe it's possible to pull a  
2 random sample from all claimants that we  
3 currently have, and from that, develop some  
4 statistics of which ones would be included in  
5 the Class, based upon what we've got  
6 currently, and from that random sample, those  
7 that have the complete gap analysis -- or a  
8 complete analysis, all dosimetry, placing them  
9 somewhere else.

10 I think that would be possible to  
11 do.

12 The question of -- Mark had  
13 pointed out, of what do you do with the --  
14 those that are, you know, true gaps, that are  
15 unresolved, that we don't know?

16 I don't have an answer for that. I  
17 don't have a way of looking at that, that I  
18 can think of right now, to use, but you know,  
19 once we get into the random sample, you know,  
20 if 90 percent of them, we can place, then the  
21 10 percent, I think that is something for you  
22 all to discuss.

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1           But we don't know until we get to  
2 that point, and please let me know if you guys  
3 could hear any of this. There is a lot of  
4 ringing going on, on the phone.

5           CHAIRMAN MELIUS: Yes.

6           MEMBER ANDERSON: Yes, we heard  
7 you.

8           DR. TAULBEE: Okay.

9           CHAIRMAN MELIUS: I just have to  
10 comment. I mean, I don't think it's -- the  
11 putting back 10 percent error rate back on the  
12 board, to solve is not appropriate.

13           I know, I know, I'm not saying  
14 anybody on the Board was proposing that,  
15 either, to that -- Jim Neton had a comment.

16           DR. NETON: This is Jim Neton.  
17 I've got a question. I guess I'm a little bit  
18 confused on this gap analysis.

19           It seems to me that the gap  
20 analysis is really identifying monitoring  
21 periods where there is no information at all.  
22 Is that correct?

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1           It was my understanding that if  
2 there is no information in there, Tim, correct  
3 me if I'm wrong, it was our position that then  
4 no dosimeter was needed to be worn, because  
5 they were not in an area that required a  
6 dosimeter. Is that correct?

7           DR. TAULBEE:     That is correct,  
8 Jim.

9           DR. NETON:     All right, so, the  
10 fundamental issue here seems to be, is do we  
11 believe that if there are -- there is no code  
12 in a monitoring period for a worker, that it  
13 is 100 percent certain that that worker did  
14 not need to wear a dosimeter, and then the  
15 remaining issue is, what are the codes in the  
16 filled in spots?

17           I mean, that is really what it  
18 comes down to.

19           So, if the Board does not believe  
20 that Savannah River actually monitored -- or  
21 had a dosimeter on everybody that needed to be  
22 monitored, and if there is a gap there,

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1 meaning there is nothing in that slot for that  
2 monitoring period, then it didn't need to be  
3 monitored, then this won't work.

4 But I think it's fundamentally  
5 NIOSH's position right now, as I'm hearing  
6 Tim, that if there is a gap, if it's blank, no  
7 dosimeter is required, and Tim did a little  
8 bit of research on that to show that it made  
9 sense on the ones that he -- that were  
10 observed.

11 How far you go down that road, I  
12 guess is really the issue.

13 CHAIRMAN MELIUS: Yes, but I think  
14 that there is -- the issue of the gaps, there  
15 is also people being falsely attributed to be  
16 assigned to some other work area, when in  
17 fact, they were in the work areas that are  
18 covered.

19 DR. NETON: Well, see, that has  
20 not come out in any analyses I've seen to  
21 date, though. I mean, that is not --

22 CHAIRMAN MELIUS: Well, but that

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1 is another --

2 DR. NETON: That is another issue,  
3 okay.

4 CHAIRMAN MELIUS: Another problem  
5 with this approach.

6 DR. NETON: Right.

7 CHAIRMAN MELIUS: And we'll do  
8 that, and so, I think that also has to be --  
9 would have to be addressed.

10 DR. NETON: Well, that would make  
11 it a more complicated analysis.

12 CHAIRMAN MELIUS: Yes, and I think  
13 maybe that is why I think it's a larger  
14 effort, but I'm not sure years -- or whatever.

15 Brad has a question and I think --  
16 I think we need to try to move forward on  
17 this.

18 DR. NETON: Right.

19 CHAIRMAN MELIUS: I think we've  
20 heard a lot.

21 MEMBER CLAWSON: I guess we have,  
22 and I'd like to hear from DOL. They've heard

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1 all of these conversations here today.

2 It's ultimately going to come down  
3 to DOL, to be able to implement what we put  
4 out there.

5 MR. KOTSCH: Jeff Kotsch with DOL.

6 The only thing I can say is we've  
7 seen some samples of records which would  
8 indicate that, you know, those codes exist,  
9 but other than that, we can't say much, as to  
10 whether they're complete or the  
11 comprehensiveness of the records.

12 I don't think we could allow -- I  
13 don't think we could expect our CEs to have to  
14 do any kind of in depth analysis of these  
15 things, other than just looking at, you know,  
16 sheets, however we get those, whether we get  
17 those PAR requests or whatever, and the  
18 question of whether we have access to the  
19 Savannah River database, you know, routinely  
20 to be able to get these -- you know, these  
21 records.

22 But I think basically, you would

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1 just have to have whatever -- get whatever  
2 records we could for the particular worker,  
3 and look at them to determine whether there  
4 are codes there or not, and that is about, I  
5 think, all we could do.

6           Again, like I said, I don't --  
7 we've only seen a sampling of records from  
8 that site.

9           MEMBER GRIFFON: I mean, just one  
10 more point, and this is -- I don't know if  
11 this will clarify or complicate matters.

12           But I mean, it sort of goes to  
13 what David Richardson was asking earlier. Jim  
14 Neton, you indicated that if they didn't have  
15 the -- if there was a gap and they changed  
16 jobs, or whatever, there was a determination  
17 that they didn't need a dosimeter.

18           I think, I mean, my understanding  
19 of this is that by establishing this Class  
20 Definition, NIOSH has determined that you  
21 can't do thorium dose reconstruction.

22           (Whereupon, the above-entitled

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1 matter went off the record briefly at 12:30  
2 p.m.)

3 CHAIRMAN MELIUS: For those of you  
4 on the phone, we're laughing because we got  
5 unplugged here, by mistake, our Court Reporter  
6 and a few of us here.

7 MEMBER GRIFFON: I guess my point  
8 was that, you know, you're looking at -- you  
9 know, the HP department made a decision on  
10 dosimeters, not necessarily on inclusion in a  
11 thorium monitoring program or anything like  
12 that.

13 So, then you get back to the  
14 question of whether this is an area or you  
15 know --

16 DR. NETON: Well, no, I think the  
17 dosimeter were -- the dosimeter codes,  
18 according to Tim, are area specific, right?

19 If you needed a dosimeter to work  
20 in a certain area, you were assigned at that  
21 area. So, I think that covers it.

22 The question is --

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1                   MEMBER GRIFFON: But I think there  
2 is some question on job, too, that you could  
3 have had different job designations and  
4 remained in those buildings, but Tim was  
5 saying possibly not in a function where you  
6 could have exposure.

7                   So, the question is --

8                   DR. NETON: But then you wouldn't  
9 have a code in that block. That is what I'm  
10 saying. If you have no code in there, you  
11 could be in the same area, but not in an area  
12 that you could have been exposed to  
13 radioactive materials. That is the  
14 assumption.

15                   The underlying assumption is, you  
16 had to wear a dosimeter to go in to work in an  
17 area where thorium was present.

18                   MEMBER GRIFFON: I guess, it's a  
19 subtle point, but I'm making the distinction  
20 that they weren't making the determination for  
21 badging based on --

22                   DR. NETON: Well, yes, it's --

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1                   MEMBER GRIFFON:       -- potential  
2 internal thorium exposure. They were making  
3 it based on, you know, other -- you know,  
4 potential to receive a certain amount of  
5 external exposure.

6                   DR. NETON: Right, but it's --

7                   MEMBER GRIFFON: Yes, I know.

8                   CHAIRMAN MELIUS:       Wanda, then  
9 Josie.

10                  MEMBER MUNN:     There are thousands  
11 of people who have worked at Savannah River,  
12 who are extremely healthy, hardy and led good  
13 lives as a result of their employment at  
14 Savannah River.

15                  Many of them will never have any  
16 serious disease, including cancer, or any of  
17 the radiation generated concerns that we face  
18 here.

19                  There is yet, more thousands and  
20 thousands of people who have worked at  
21 Savannah River, who, like every other  
22 individual in the United States, will have the

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1 same percentage of cancers occur in their  
2 lives, as those who have never had any  
3 interaction at all with any of our sites, or  
4 with any radiation inducing disease.

5 Those individuals are led to  
6 believe, if they do incur any of the cancers  
7 that we talk about here, that they incur them  
8 as a result of their work at Savannah River.

9 If we do not in some way, limit  
10 the classification of individuals that we look  
11 at, when we're looking at Special Exposure  
12 Cohorts, then we are misleading that large  
13 group of people who have had, and never will  
14 have, any adverse effects from their work  
15 there.

16 Many of them were never in any  
17 way, exposed to any significant amount of  
18 radiation and even many who were exposed, were  
19 not exposed at a level that is of any concern.

20 There was a good program, not a  
21 perfect program, by any means, we've never  
22 encountered, so far as I know, a perfect

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1 badging and perfect record of any of our  
2 sites, that is not likely because they were  
3 all operated by human beings, and every single  
4 one of us has flaws in our record keeping.

5 My checkbook has flaws in it.  
6 Certainly, the kinds of records that we have  
7 to have for these kinds of programs will have  
8 flaws in them.

9 That doesn't change the fact that  
10 it is incumbent upon us, in accordance with  
11 the charter that we have been given, to try to  
12 make some reasonable decision with respect to  
13 the number of people who may be compensated  
14 for injury that may have come to them as a  
15 result of their work for us and for our  
16 nation, and this program.

17 It's not going to be easy to do,  
18 and it's an ugly, messy business, certainly  
19 for Savannah River, it's worse than most. That  
20 is a foregone conclusion.

21 But we need to do something to  
22 agree that we will limit the number of people

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1 that will be granted noblesse oblige for  
2 cancers that they suffer, if they have worked  
3 at Savannah River.

4 What we're talking about here  
5 today is difficult, and nobody that has  
6 spoken, to the best of my knowledge, has a  
7 full grip on exactly how to go about doing  
8 that.

9 But it would be a mistake, and I  
10 think a misuse of our time, and of everyone  
11 else's time, if we did not continue to  
12 struggle with how to identify and how to  
13 define this special cohort in some way, other  
14 than everybody who worked anywhere on the  
15 site.

16 CHAIRMAN MELIUS: Josie?

17 MEMBER BEACH: I would like to  
18 make a motion to reject NIOSH's proposed Class  
19 Definition for the SEC, as written, and I  
20 don't know if I can do that in two motions or  
21 not, but redefine the Class Definition.

22 CHAIRMAN MELIUS: Well, there is

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1 no motions. I think it would be easier to  
2 work from a positive motion.

3 MEMBER BEACH: Yes, I wasn't sure.

4 CHAIRMAN MELIUS: Yes.

5 MEMBER BEACH: So, then I'll --

6 CHAIRMAN MELIUS: Yes, I think  
7 that --

8 MEMBER BEACH: Then I'll change  
9 that.

10 CHAIRMAN MELIUS: There is no  
11 recommendation from the Work Group, and so,  
12 there is no motion pending.

13 MEMBER BEACH: Okay.

14 CHAIRMAN MELIUS: And so, we're --

15 MEMBER BEACH: Yes, I was  
16 wondering if we needed to reject --

17 CHAIRMAN MELIUS: We can move what  
18 we want.

19 MEMBER BEACH: So, then I would  
20 like to make a motion to propose -- or change  
21 the Class Definition to all workers during the  
22 time periods listed.

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1 CHAIRMAN MELIUS: Do we have a  
2 second for that?

3 MEMBER SCHOFIELD: I'll second it.

4 CHAIRMAN MELIUS: Any further  
5 discussion? Yes, Paul?

6 MEMBER ZIEMER: The Work Group  
7 itself didn't make a recommendation on it. I  
8 was wondering if they had had any plans to  
9 further evaluate this newest material that  
10 came before us.

11 I'm sympathetic to the motion in a  
12 certain sense, and -- but also, to the  
13 frustrations that we face in both for the  
14 Class as described, and how it might be  
15 administered, as well as the concerns for the  
16 construction workers.

17 But I am a little uncomfortable in  
18 voting on this new Definition right off the  
19 bat. Was the Work Group otherwise planning to  
20 look at any of these issues further?

21 I am not talking necessarily about  
22 Dr. Lockey's proposal, but just this new

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1 information that came on the gap analysis and  
2 so on, because I --

3 MEMBER GRIFFON: Where we left it,  
4 we just had a phone call meeting, and where we  
5 left it was, we asked NIOSH to complete as  
6 much as they could of the gap analysis, prior  
7 to this meeting, because we wanted to bring  
8 the issue before the entire Board.

9 But there was no plan for further  
10 action, you know, pending our discussion here.

11 MEMBER ZIEMER: Could I follow up?

12 CHAIRMAN MELIUS: Sure.

13 MEMBER ZIEMER: The other sort of  
14 possibility that occurred to me would be to  
15 proceed with the recommendation of NIOSH,  
16 recognizing that it may not fully cover the  
17 Class ultimately, certainly, some additional  
18 information needed on construction workers, as  
19 well as perhaps, if those gaps are a stumbling  
20 block, and then allow later, the expansion.

21 I know that we don't always like  
22 to step-wise these things, but I would

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1 certainly feel comfortable in moving ahead  
2 with a big portion of this right away, and  
3 that is the Class, as defined, and then if we  
4 find that these other issues are really  
5 surmountable, then to expand it at a later  
6 time after we've had a chance to consider it  
7 in more depth.

8 But that would be a separate  
9 motion. Anyway, that -- I just get that on  
10 the table, and others can comment.

11 CHAIRMAN MELIUS: Additional  
12 comments? I would just add one -- I'm sorry,  
13 Jim, but one further, I guess, piece of  
14 information, and is that after the last  
15 meeting, where we -- remember, we -- these  
16 issues were all raised at the last meeting,  
17 and I have talked to NIOSH staff, to Stu then,  
18 and we followed after the Work Group meeting  
19 and so forth, saying is there -- are there  
20 alternative Class Definitions that would at  
21 least appear to be more feasible to implement?

22 And I think we're at a loss to,

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1 you know, come up with that. I have not heard  
2 any suggestions. I know there is thoughts.  
3 Mark and I have talked about that, also.

4 So, it's not like, you know, there  
5 has been no thought given to that. I just  
6 think it's -- it's difficult to find something  
7 in between. That is all.

8 MEMBER ROESSLER: I am -- if we  
9 bring this motion to a vote, I'm going to vote  
10 against it.

11 I am just not ready to take that  
12 big step. I think it's irresponsible for us,  
13 as a Board, to do that, without maybe looking  
14 a little bit more at a step-wise approach to  
15 this, and I'm also uncomfortable because the  
16 Work Group hasn't come up with anything that  
17 we can really grab onto and feel comfortable  
18 with.

19 CHAIRMAN MELIUS: My comment to  
20 that would be, I think -- I also feel it would  
21 be irresponsible to recommend a Class  
22 Definition that we know that Department of

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1 Labor cannot implement, and it's not been  
2 implementable in any other sites that we've  
3 dealt with so far.

4 We're sort of caught in between. I  
5 understand the concern, and but I don't know  
6 if there is an easy alternative or a ready  
7 alternative. Brad?

8 MEMBER CLAWSON: I have been  
9 involved in a lot of the data captures at  
10 Savannah River. We all know that all of these  
11 sites have numerous issues with their data  
12 keeping, especially in the early years.

13 But something that also is eating  
14 at me, and this may be just a personal thing,  
15 but in these interviews that have been  
16 performed at Savannah River, and the people  
17 that I have interviewed and have talked to,  
18 and they have talked about how that -- this  
19 badge coding would not work because they were  
20 outside the buildings, in the trenches,  
21 running away from these buildings, but they  
22 didn't have the job codes for those areas, or

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1 the badging, I'd say over half of them that  
2 I've interviewed are no longer with us.

3 We are losing the majority of the  
4 people that actually worked during this time  
5 frame, and I think it is incumbent upon us to  
6 also realize and buck-up, and this -- we're  
7 grasping a straws to try to limit to this, and  
8 I understand why, but I think we really need  
9 to look at what we are here for and this is  
10 for these people, and I understand the  
11 concern, but I don't know how we would get at  
12 100 percent resolution of knowing where we're  
13 at.

14 This information is full of holes,  
15 and I think we're giving something to the  
16 Department of Labor that is far harder to  
17 implement than what we have ever done before,  
18 and they've had problems with.

19 CHAIRMAN MELIUS: Phil?

20 MEMBER SCHOFIELD: I agree that  
21 this is a real difficult problem, because we  
22 have so little real accurate data that we can

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1 honestly say that if you had a certain code,  
2 you only were in that certain area.

3 Almost any facility you go to,  
4 people will say, "Well, you know, I was  
5 assigned this area, but I went over to this  
6 area regularly," or maybe when they were  
7 short-handed, they'd move over there. People  
8 shift around, and that code is not set in  
9 concrete.

10 I mean, it's not like, well, you  
11 can't pass through that door because you have  
12 this code on your badge. If it was that  
13 accurate, then I would have no problems not  
14 voting for it.

15 But as it is, I just don't see how  
16 we can say that strictly on a code basis, for  
17 what is on that badge, you are either in or  
18 out, when it's not that clear-cut or set.

19 CHAIRMAN MELIUS: Brad, do you  
20 have another comment? Anybody else which to  
21 speak? David, yes?

22 MEMBER RICHARDSON: I am

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1 sympathetic to the approach, I mean, in part  
2 because we use this approach for kind  
3 epidemiologic analyses, for NIOSH, and we --  
4 you know, we proposed it to them for trying to  
5 figure out primarily, non-radiological  
6 hazards, but also, to impute exposures in  
7 years when workers weren't -- had gaps in  
8 their dosimetry information.

9 And I think -- I mean, I'm sort of  
10 -- you know, kind of the CATI-based kind of  
11 evaluation of it was sort of impressive to me,  
12 in that fact that it had kind of the level of  
13 concordance with what people were reporting  
14 that it did.

15 I mean, that -- in a way, that was  
16 more -- that is -- that is surprising to me,  
17 but I take Knut's point, that it's -- those  
18 people were providing CATI information are not  
19 necessarily a random sample of those people  
20 who could recall what building they were in,  
21 maybe not fully representative.

22 Now, the other side of it is that

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1 when we used it for distinguishing between  
2 workers who on average, had a higher potential  
3 for exposure than the remainder of people who  
4 were not classified in the area, that wasn't  
5 making the case that we -- you know, that we  
6 had perfect -- like, a diagnostic test, or  
7 perfectly separating these into distinct  
8 groups of people. That is not the intention  
9 of epidemiology what so ever.

10 We were aspiring to be sort of  
11 right on average, and our level of discomfort  
12 with it was always the fact that, well, this  
13 is -- these are badging areas, and people are  
14 moving in and out through them, and so, it --  
15 as developed, it was not intended for this  
16 purpose, I guess is a starting point.

17 As it would be used for -- in  
18 terms of implementation, I was just sort of  
19 looking through.

20 We scanned through the quarterly  
21 log books, scanned in the codes, and I think -  
22 - now, that is not -- I mean, this was for

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1 22,000 people who were the prime contractor  
2 employees, this bigger group of construction  
3 workers, which you're saying is maybe 60,000  
4 workers.

5 I don't know that anybody has  
6 exhaustively tried to inventory what is  
7 recorded there, but I have like five pages of  
8 codes recorded, maybe it looks like 124  
9 different numeric codes that we picked up, and  
10 what we had to do for gaps was, when there was  
11 a gap, we -- and we did what you would do in  
12 an epidemiologic study of, we made the  
13 assumption that the area was just consistent  
14 across any of the gaps, where there were -- or  
15 we split the time -- split the difference,  
16 when there was an area.

17 So, and we did a lot of that. I  
18 mean, for these 22,000 workers, there were --  
19 we did a lot of imputation for their work  
20 history.

21 NIOSH has tried to pick up these  
22 codes, but I mean, one of the other things I

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1 remember with these areas codes is that the  
2 site was dynamic over time. Area codes were  
3 introduced and removed as things changed.

4 We could never find -- and I don't  
5 believe NIOSH has either, in their hands,  
6 something that says what all these 100 --  
7 what, 120 codes actually correspond to.

8 I mean, so, 40 percent of them  
9 have some historical record of it, some  
10 calendar year, what that code -- you know,  
11 where on a map it corresponds to, but there is  
12 a lot of codes which we -- are not 000's, but  
13 there are -- they're 0ZA, or something like  
14 that.

15 I don't think anybody knows right  
16 now, what that code means. That is not a 000,  
17 but it's also not interpretable as a distinct  
18 place on a map in a given year.

19 So, there is -- there would be  
20 more -- I believe Department of Labor would  
21 encounter more problems than simply missing  
22 data or explicitly missing data. There is

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1 non-intelligible data, and there is  
2 assumptions that a code in two years means the  
3 same thing year to year, and then there is --  
4 I think there is going to be a lot of gaps,  
5 just based on -- and this was the best -- I  
6 think probably the best documented workers,  
7 the prime contractors, the construction  
8 workers.

9 My recollection of SEC is -- what  
10 the -- the dosimetry data was not as complete.

11 So, I think there are -- I mean,  
12 just from our experience of trying to impute  
13 where workers were moving through over time  
14 and assign them days worked with exposure  
15 potential as high versus low, this was -- you  
16 know, was perhaps, the best attempt at the  
17 time, to use available historical information,  
18 but I'm not quite sure it does something as  
19 refined as declaring that somebody had no  
20 exposure, based on these codes, which were not  
21 recorded for that purpose, at all.

22 CHAIRMAN MELIUS: Thank you,

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1 David. That was helpful. Paul?

2 MEMBER ZIEMER: I just would like  
3 to ask David, I interpret what you say as  
4 speaking for the motion, is that correct?

5 I'm trying to -- I want to -- I  
6 think I understand what you're saying, and I  
7 think it supports the motion, is that correct?

8 MEMBER RICHARDSON: I am not quite  
9 sure what you mean. There are several --

10 MEMBER ZIEMER: I know it's --

11 MEMBER RICHARDSON: There are  
12 several motions.

13 MEMBER ZIEMER: Well, I thought at  
14 first, you were sort of married to the codes,  
15 but I think you're saying in spite of how you  
16 use them before, you're separating out the epi  
17 work from this -- which is very different from  
18 making a decision on compensation.

19 MEMBER RICHARDSON: That is --

20 MEMBER ZIEMER: Are you saying  
21 you're supporting the motion, is what I'm  
22 saying, or were you speaking in support?

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1                   CHAIRMAN MELIUS:     Just clarify.  
2     I'm more confused, but the motion is all  
3     employees. That is the motion that is on the  
4     floor.

5                   MEMBER ZIEMER:     Yes, all right,  
6     that is what I was asking.

7                   CHAIRMAN MELIUS:    Yes, and it has  
8     been seconded and I think what David was --  
9     yes, was --

10                  MEMBER     ZIEMER:           Well,     I  
11     understand, but I'm -- the implication of this  
12     toward the motion, I believe, is that it  
13     supports the idea that the codes are not that  
14     useful for the purpose that has been described  
15     to us in the original NIOSH.

16                  CHAIRMAN MELIUS:    I think it's --

17                  MEMBER ZIEMER:     I don't want to  
18     presume what you -- but I am trying to fit it  
19     in with our debate here, to help me inform my  
20     -- my vote.

21                  MEMBER RICHARDSON:    I think that  
22     is right, Dr. Ziemer. I mean, my -- what --

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1 yes, the characterization that I think that  
2 codes -- the codes are not going to be useful  
3 or a sharp tool for saying that somebody was  
4 or did -- did or did not have potential for  
5 exposure in a given area is true.

6 I also think from kind of the  
7 administratively Department of Labor  
8 perspective on our question of trying to  
9 recollect how many gaps are there and what do  
10 we mean by a gap?

11 I think there is -- the more you  
12 dig into this, the more kind of ambiguous  
13 information there is.

14 So, that is going to be very  
15 difficult to use for that purpose.

16 Now, whether the conclusion from  
17 there is that we propose something entirely  
18 different from the SEC Class Definition that  
19 is here, is the next step.

20 But I'm comfortable with this  
21 Class Definition, as NIOSH has proposed.

22 CHAIRMAN MELIUS: I think one --

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1 some evidence of this issue with the codes, I  
2 think is the fact that based on the sample --  
3 non-random sample of 10, Tim ended up adding  
4 two more codes, areas, and a third, which was  
5 the illegible, I'm not sure how that counts,  
6 but and do that.

7 And I think that, you know, you're  
8 just going to find people that were coded in  
9 different time periods in different ways, that  
10 may have actually worked in some of those  
11 areas, it's just that, and then beyond that,  
12 there is the question of how inclusive is  
13 that, and accurate is it, to find everybody?

14 So, again, they weren't -- these  
15 codes weren't designed for our purposes.

16 Any further discussion before we  
17 vote? Sorry, Gen?

18 MEMBER ROESSLER: I don't think  
19 David answered Paul's question. I'm not sure  
20 what -- I think what you said is you are  
21 against the NIOSH proposal. That is pretty  
22 clear.

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1           But are you willing to take the  
2 next step, and say, let's go for the motion  
3 that is on the floor, that I don't think we  
4 heard 'yes' or 'no' from you. Maybe you're  
5 not willing to say.

6           But I think that was the question.

7           MEMBER RICHARDSON: In a sense,  
8 you're asking me to vote before -- you want to  
9 know how I'll vote before we vote, which is,  
10 you know, fair enough, if you'd like to know  
11 that.

12          MEMBER ANDERSON: But you don't  
13 have to say it.

14          MEMBER RICHARDSON: The other  
15 option that I'm still weighing with, and I  
16 think other people have asked NIOSH for, is --  
17 is there -- and you posed this question to  
18 them.

19                 Is there -- do you have something  
20 else in your pocket? Like, is there -- do you  
21 -- can you imagine another Class Definition  
22 which is more workable than this one, which I

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1 am having a hard time seeing work?

2 So, if that is the out there still  
3 as an option, I'd be open to hearing it.

4 If not, then I think it is -- I  
5 mean, there is some sort of -- this could go  
6 on and on for a long time. I don't think  
7 there would be a lot to be gained by further  
8 study of these data, but that is my  
9 perspective, having studied these data. I  
10 mean, other people may be more creative and  
11 have use for them, but we did spend five years  
12 working through the employment history.

13 So, I can say it's a long process,  
14 even for the 22,000 operations workers. I  
15 can't imagine how long it would take to work  
16 with the rest of them.

17 CHAIRMAN MELIUS: So, I think the  
18 question is for you, Stu. Does NIOSH have  
19 another Class Definition ready?

20 MR. HINNEFELD: Well, no, I'm  
21 feeling a little bit like Captain Kangaroo up  
22 here, if anybody remembers Captain Kangaroo,

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1 he used to pull, you know, one thing after  
2 another out of his pockets.

3 But no, we've reached pretty far,  
4 I believe, with what we've presented so far,  
5 pretty far from, meaning -- pretty far from  
6 what we have typically done in defining  
7 Classes.

8 And so, I don't know that we have  
9 another reach that we could be expected to  
10 come up with in a reasonable amount of time.

11 CHAIRMAN MELIUS: Thank you for  
12 that clarification. Any further discussion,  
13 before we vote? Bill Field, I'm sorry, and  
14 then John Poston.

15 MEMBER FIELD: And that's why I  
16 was asking before, was there a fallback,  
17 because this is a hard vote. I mean, it's a  
18 very hard vote, and you look for something  
19 that is going to work, and I guess I was  
20 hopeful that at some point, the dose  
21 information we had would be related to job  
22 codes, so you could fall back and use job

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1 code, perhaps as a measure. That doesn't seem  
2 to be the case.

3 We're not hearing any other  
4 fallback strategy. I think there were some  
5 discussions of looking at the data further,  
6 but I think that may be an endless process.  
7 I'm not sure looking at the data further is  
8 going to tell us much, and this could be two  
9 or three years down the road.

10 So, it's -- I think this is a very  
11 hard vote. I'd prefer the stepwise process,  
12 but I don't know what the steps to that  
13 process are. They haven't been identified, as  
14 far as I can tell.

15 CHAIRMAN MELIUS: John?

16 MEMBER POSTON: I can't be as  
17 eloquent as Bill, because he said everything I  
18 wanted to say.

19 So, what I do want to say one sort  
20 of thing, something in summary, and that is,  
21 I'm very frustrated and don't know exactly how  
22 to vote on this, and one of the reasons I'm

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1 frustrated is, we don't have a recommendation  
2 from the Working Group, and that really  
3 bothers me.

4 I mean, we've made a decision  
5 without the Working Group, who had been  
6 working on this project for quite a while, to  
7 come with something solid, and so, now, we are  
8 making -- we're doing the work of the Working  
9 Group, and that just really bothers me,  
10 because it would be easy if we had a  
11 recommendation, to consider what they're  
12 recommending or vote against what they're  
13 commending.

14 But here, we don't have a solid  
15 recommendation that we know what to do. So,  
16 we each one of us is not only confused, but  
17 I'm personally very frustrated that we don't  
18 have such.

19 CHAIRMAN MELIUS: Yes, in fairness  
20 to the Work Group, I've listened in on their  
21 last phone call, and I think one of the issues  
22 they have, that made it difficult, one is it

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1 was a phone call. So, it's a limited amount  
2 of time.

3                   Secondly, there was new  
4 information presented, which -- again, without  
5 a report from NIOSH, that they wanted to be  
6 able to think about and third, that NIOSH was  
7 going to do some further work, you know,  
8 looking at the -- those 10 cases, and I think  
9 they felt that by this week, there would be  
10 more information, but I also think the Work  
11 Group was -- had the same concern, you know,  
12 that many of us have raised here, hoping there  
13 was some other way of resolving this.

14                   I think that is why they  
15 hesitated. Is that fair, Mark? That was my  
16 interpretation?

17                   MEMBER GRIFFON: Yes, yes.

18                   CHAIRMAN MELIUS: Just listening  
19 to it.

20                   MEMBER GRIFFON: I mean, yes, I  
21 think it was, in part. We were waiting for,  
22 you know, NIOSH to kind of -- if they could,

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1 complete this gap analysis and come to some  
2 more conclusions and didn't want to push it to  
3 a vote on the Work Group call, but rather,  
4 bring it back to the floor to discuss with all  
5 -- you know, all of our perspectives.

6 But I mean, I still feel strongly  
7 -- I mean, I have my opinion, but I wasn't  
8 ready to, you know, take a vote on the Work  
9 Group, but I still feel strongly that the --  
10 you know, doing further analysis on this is  
11 just going to lead us into more gray area, and  
12 I think we have a lot of past activities to  
13 support that, as well as the issues on the  
14 records that David has discussed.

15 So, you know, I'm pretty  
16 convinced, just with the problems on these 10  
17 that we analyzed, whether they were random or  
18 biased or what, I think we -- you know, we  
19 could be at this for a while, and you know, in  
20 trying to define.

21 And then, you know, when you get  
22 down to it, is five percent, you know -- if

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1 you miss five percent of the people that  
2 should have been in, is that an acceptable  
3 rate?

4 You know, so, I think that is  
5 where I stood, but I wanted to give the Work  
6 Group -- you know, there was still information  
7 in process, so we didn't push it to a vote on  
8 the Work Group.

9 CHAIRMAN MELIUS: Henry?

10 MEMBER ANDERSON: I was only going  
11 to say, I mean, the other thing is, is it  
12 workable, and the decision of is it workable,  
13 is really a Department of Labor decision, and  
14 is there any way to get a read from them, as  
15 to -- or will they wait -- they won't do  
16 anything until we've --

17 CHAIRMAN MELIUS: Not quickly.

18 MEMBER ANDERSON: Okay, well,  
19 fine, and that helps, in my vote. Thank you.

20 CHAIRMAN MELIUS: Paul?

21 MEMBER ZIEMER: I think some of  
22 the frustration we feel is not unlike what we

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1 felt at General Electric and some other  
2 locations, as well.

3 We know that at Savannah River,  
4 although it's a very, very large site, and in  
5 fact, because it's a very large site, there  
6 are many workers there who were non-rad  
7 workers, but we don't have a good way to  
8 distinguish these issues on, perhaps, any of  
9 them.

10 So, we end up with a case where in  
11 order to take care of those who we know are in  
12 the categories that would be covered by the  
13 SEC, we end up pulling in many, many others,  
14 and it's as Wanda described, in a certain  
15 sense, those who are -- end up coming along  
16 for the ride.

17 They certainly won't object. We  
18 aren't doing our country a service, in a  
19 sense, by doing that, because it's money out  
20 of everybody's pocket, but we sort of had a  
21 mandate to take care of those who are entitled  
22 to this, and I'm not seeing how we can

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1 separate it out at this point.

2 We had, I think, almost that  
3 situation at GE, in Cincinnati, and we finally  
4 said, "You know, we just -- we've got to bite  
5 the bullet," so, I'm uncomfortable as John is,  
6 Wanda, and I think we're all kind of  
7 uncomfortable in these kind of situations.

8 They probably occur at all sites,  
9 to some degree, but at a big site like this,  
10 it gets magnified.

11 So, that is the only comment. I am  
12 at the point where I probably will support the  
13 motion, but I want to express my degree of  
14 discomfort.

15 CHAIRMAN MELIUS: I would just add  
16 that in addition to GE, I mean, we should  
17 remember that NIOSH ended up making the same  
18 recommendation -- and DOL, essentially, making  
19 the same recommendation at Hanford, where we  
20 went from areas, to all employees, because of  
21 feasibility issues, I mean, just to administer  
22 the Class, and so, you know, I think we have

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1 some responsibility to come up with a workable  
2 Class Definition.

3 But if there is no further  
4 comments, and we've been at this a while, we  
5 should take a vote or take lunch.

6 MS. LIN: Dr. Melius?

7 CHAIRMAN MELIUS: Yes.

8 MS. LIN: Before you take the  
9 vote, can you state the --

10 CHAIRMAN MELIUS: Yes, I will,  
11 yes. It's all employees of the Department of  
12 Energy, its predecessor agencies and their  
13 contractors and subcontractors who worked at  
14 the Savannah River Site from January 1, 1953  
15 through September 30, 1972, for a number of  
16 work day aggregating at least 250 work days,  
17 occurring either solely under this employment  
18 or in combination with work days within the  
19 parameters established for one or more other  
20 Classes of employees included in the Special  
21 Exposure Cohort.

22 MR. KATZ: Dr. Anderson?

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1 MEMBER ANDERSON: Yes.

2 MR. KATZ: Ms. Beach?

3 MEMBER BEACH: Yes.

4 MR. KATZ: Mr. Clawson?

5 MEMBER CLAWSON: Yes.

6 MR. KATZ: Dr. Field?

7 MEMBER FIELD: Yes.

8 MR. KATZ: Mr. Gibson is not on  
9 the line, I presume. So, absent I'm marking  
10 for him. Mr. Griffon?

11 MEMBER GRIFFON: Yes.

12 MR. KATZ: And Dr. Lemen, I  
13 presume is not on the line? I'm marking him  
14 as absent. Dr. Lockey is absent, now. I'll  
15 collect his vote, as well. Dr. Melius?

16 CHAIRMAN MELIUS: Yes.

17 MR. KATZ: Ms. Munn?

18 MEMBER MUNN: No.

19 MR. KATZ: Dr. Poston?

20 MEMBER POSTON: No.

21 MR. KATZ: Dr. Richardson?

22 MEMBER RICHARDSON: Yes.

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1 MR. KATZ: Dr. Roessler?

2 MEMBER ROESSLER: Yes.

3 MR. KATZ: Mr. Schofield?

4 MEMBER SCHOFIELD: Yes.

5 MR. KATZ: And Dr. Ziemer?

6 MEMBER ZIEMER: Yes.

7 MR. KATZ: The motion passes.

8 There are two 'nays' and two absences. So,  
9 the motion passes.

10 CHAIRMAN MELIUS: Now, we have the  
11 second motion to consider, which is lunch.

12 MEMBER BEACH: How much more work  
13 do we have?

14 CHAIRMAN MELIUS: Well, that is  
15 what I was going to go through.

16 What we have left to do is, we  
17 have at least one or -- we have some of the  
18 letters to talk, but we can do those -- those  
19 are quick.

20 We have Mark's Subcommittee and  
21 Work Group report, quick. We have some  
22 discussions on scheduled meetings.

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1           So, those are all quick, well,  
2           should be, and then the question is how -- do  
3           we want to spend more time on the 10 year  
4           review issue?

5           Remember, we heard Stu's  
6           presentation, but we really didn't have the  
7           time to ask questions or present.

8           So, or you know, have further --  
9           more discussion and some disposition on those.

10          So, I think the options are, we  
11          can break for about an hour for lunch, come  
12          back at 2:15 p.m. or something. I don't know  
13          what that does, in terms of people's  
14          schedules, and then we would go on for about  
15          an hour, or we can go on for at least --  
16          roughly a half-hour, but that would mean not  
17          doing the 10 year discussion, which that -- or  
18          we could just charge through for another hour.  
19          It's up to -- take a short break, and then do  
20          the hour.

21          MEMBER ROESSLER: The other option  
22          is, can we at least take a five minute break?

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1 CHAIRMAN MELIUS: Oh, we will,  
2 yes.

3 MEMBER BEACH: No, let's take 10.

4 MEMBER ROESSLER: If we come back,  
5 I think we can go without lunch.

6 MEMBER BEACH: Yes.

7 CHAIRMAN MELIUS: Okay, is that  
8 everybody's --

9 MEMBER BEACH: Ten minute break?

10 CHAIRMAN MELIUS: Ten minute  
11 break. We'll reconvene around 1:15 p.m., and  
12 will someone go and buy some cookies?

13 (Whereupon, the above-entitled  
14 matter went off the record at 1:05 p.m. and  
15 resumed at 1:20 p.m.)

16 CHAIRMAN MELIUS: Okay, let's  
17 reconvene. I think Dr. Ziemer had to leave,  
18 but I think everybody else is back, and do  
19 that, and I'm going to do the letters. You'll  
20 have to bear with me, we're sort of doing this  
21 on the run, this time.

22 But I'm going to actually do them

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1 one at a time. We'll probably break them up  
2 with some other discussion here, because I've  
3 got to find them on my computer and make sure  
4 I've got the right version, because we've been  
5 going -- Jenny and I have been going back and  
6 forth, we've got the language right.

7 So, the first one I'm going to do  
8 is actually Savannah River. Again, sort of  
9 the usual preface on this.

10 But the Advisory Board on  
11 Radiation Worker Health, the Board, has  
12 evaluated Special Exposure Cohort SEC Petition  
13 00103 concerning workers at the Savannah River  
14 Site under the statutory requirements  
15 established by the Energy Employees  
16 Occupational Illness Compensation Program Act  
17 (EEOICPA) of 2000, incorporated into 42 CFR  
18 Section 83.13.

19 The Board respectfully recommends  
20 that SEC status be accorded to "All employees  
21 of the Department of Energy, its predecessor  
22 agencies and their contractors and

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1 subcontractors who work the Savannah River  
2 Site from January 1, 1953 through September  
3 30, 1972, for a number of work days  
4 aggregating at least 250 work days, occurring  
5 either solely under this employment or in  
6 combination with work days within the  
7 parameters established for one or more other  
8 Classes of employees included in the Special  
9 Exposure Cohort."

10 "This recommendation is based on  
11 the following factors, individuals employed at  
12 the Savannah River Site during a time period  
13 in question worked on the production of  
14 materials for nuclear weapons."

15 Number two, "The National  
16 Institute for Occupational Safety and Health  
17 (NIOSH) review of available monitoring data,  
18 as well available process and source-term  
19 information for the facility found that NIOSH  
20 lacked sufficient information necessary to  
21 complete individual dose reconstruction with  
22 sufficient accuracy for internal radiological

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1 exposures due to thorium in some areas of the  
2 facility during the time period in question."

3 "The Board concurs with this  
4 determination. The Board also found that  
5 available personnel and monitoring records  
6 were not adequate to identify all employees  
7 who worked or may have worked in those areas  
8 of the Savannah River Site and for whom dose  
9 reconstructions are not feasible."

10 "Hence, the Board has recommended  
11 a Class Definition that includes all employees  
12 at the Savannah River Site, notwithstanding  
13 of available personnel and monitoring  
14 records."

15 "NIOSH determined that health may  
16 have been endangered for these Savannah River  
17 Site employees during the time period in  
18 question. The Board also concurs with this  
19 determination."

20 "Based on these considerations and  
21 the discussion at the December 7<sup>th</sup> and 8<sup>th</sup> 2011  
22 Board meeting held in Tampa, Florida, the

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1 Board recommends that this Class be added to  
2 the SEC, closed documentation from the Board  
3 meeting, where this Class was discussed,  
4 documentation includes copies of the petition,  
5 NIOSH review thereof and related materials."

6 "If any of these items aren't  
7 available, they will follow shortly."

8 The only difference from some of  
9 our usual letters, I just wanted to clarify  
10 that we were essentially agreeing with NIOSH  
11 on the SEC Class of thorium areas, but that we  
12 were -- I wanted to get the rationale we had  
13 for expanding the Class Definition in there,  
14 compared to the recommendation.

15 So, we'll circulate these, also,  
16 but as long as no one has any major concerns,  
17 I think we're fine, and let's go ahead then  
18 with the Work Group Report 1 from Mark, Rocky  
19 Flats.

20 MEMBER GRIFFON: We had a call, a  
21 Work Group call on Rocky Flats, and the focus  
22 of the discussion was, well, two-fold,

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1 actually.

2 One was to clarify how DOL came up  
3 with a new bulletin on how to implement the  
4 Class, considering the use of the Ruttenber  
5 database data, and we had a discussion around  
6 that, and then we also had a discussion on  
7 continuing the Site Profile review that had  
8 been set aside for several years.

9 There were some outstanding Site  
10 Profile issues that remained on our matrix of  
11 issues. So, we're -- we made our first  
12 attempts at resurrecting that process, and  
13 we'll take those issues up at our next  
14 meeting.

15 I would like to ask maybe for a  
16 specific agenda item on the next Board  
17 meeting. I think it can be the phone meeting,  
18 if we have a phone meeting coming up between  
19 the -- as usual, to have Rocky Flats, a  
20 discussion of the Class Definition by the full  
21 Board.

22 Our concern on the proposal, or

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1 some on the Work Group are concerned that the  
2 proposed use of the Ruttenger database is --  
3 has some -- is flawed, specifically in that it  
4 relies on identifying people in the Ruttenger  
5 database that were noted to have neutron  
6 exposures greater than 100 millirem in any one  
7 year, and why, in my opinion, that is flawed,  
8 is because we already, by this Class  
9 Definition, have indicated to NIOSH that we  
10 don't believe neutron doses can be  
11 reconstructed during that time period.

12 This would rely on the same  
13 neutron/photon ratios used in the original  
14 proposal by NIOSH to reconstruct doses, to  
15 make a determination on this 100 millirem.

16 So, if it wasn't useful for dose  
17 reconstruction, we feel it isn't useful to  
18 identify a cut-off for who is in and out of an  
19 SEC Class.

20 So, I think we want to come back  
21 to the full Board with that, and possibly  
22 consider modifying the Definition of the Class

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1 for Rocky Flats.

2 CHAIRMAN MELIUS: Okay, any  
3 questions for Mark on that?

4 Okay, good, and do you want to do  
5 your Subcommittee?

6 MEMBER GRIFFON: The Subcommittee  
7 is very quick.

8 No meeting occurred between the  
9 last Board meeting and now. We have a  
10 Subcommittee meeting scheduled for December  
11 19<sup>th</sup>.

12 So, there is really no report on  
13 the DR Subcommittee for this meeting.

14 CHAIRMAN MELIUS: Okay, we are  
15 going to go back to letters, and now, we can  
16 read through the Linde letter.

17 The letter is, "The Advisory Board  
18 on Radiation and Worker Health (the Board) has  
19 evaluated a Special Exposure Cohort SEC  
20 Petition 00154 concerning workers at the Linde  
21 Ceramics Plant in Tonawanda, New York, under  
22 the statutory requirements established by

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1 Energy Employees Occupational Illness  
2 Compensation Program Act of 2000, and  
3 incorporated into 42 CFR 83.13."

4 "The Board respectfully recommends  
5 that SEC status be accorded to "all Atomic  
6 Weapons Employees" who worked in any area at  
7 the Linde Ceramics Plant in Tonawanda, New  
8 York from November 1, 1947 through December  
9 31, 1953, for a number of work days  
10 aggregating at least 250 work days, occurring  
11 either solely under this employment or in  
12 combination with work days within the  
13 parameters established for one or more other  
14 Classes of employees included in the SEC."

15 This recommendation is based on  
16 the on the following factors: "Individuals  
17 employed at the Linde Facility during the time  
18 period in question worked on the production of  
19 materials for nuclear weapons and/or in the  
20 decontamination of buildings where these  
21 materials have been previously been produced."

22 Number two, "The National

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1 Institute for Occupational Safety and Health  
2 (NIOSH) review of available monitoring data,  
3 as well as available process and source-term  
4 information for this facility found that NIOSH  
5 lacks sufficient information necessary to  
6 complete individual dose reconstructions with  
7 sufficient accuracy for internal radiological  
8 exposures due to uranium and uranium progeny  
9 (with the exception of radon) during the time  
10 period in question. The Board concurs with  
11 this determination."

12 "NIOSH determined that health may  
13 have been endangered for these Linde Ceramics  
14 Plant employees during the time period in  
15 question. The Board also concurs with this  
16 determination."

17 "Based on these considerations and  
18 the discussions at the December 7<sup>th</sup> and 8<sup>th</sup>,  
19 2011 Board meeting held in Tampa, Florida, the  
20 Board recommends that this Class be added to  
21 the SEC."

22 "Enclosed is the documentation

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1 from the Board meeting, where this SEC Class  
2 was discussed. The documentation includes  
3 copies of the petition, NIOSH review thereof,  
4 and related materials."

5 "If any of these materials are  
6 unavailable at this time, they will follow  
7 shortly."

8 Any concern or questions? Again,  
9 I will circulate these, so that everybody gets  
10 to see them.

11 Okay, Ted, do you want to deal  
12 with meeting schedules?

13 MR. KATZ: Sure. So, I'm missing  
14 a few for this. I did notice we got Paul  
15 Ziemer's availability, and I think at this  
16 point, at least tentatively, we've got  
17 everybody's availability who is here.

18 We need to schedule another  
19 teleconference. Just to remind you, right  
20 now, our last teleconference is April 26<sup>th</sup>,  
21 and our latest Board meeting we scheduled out  
22 to is June 19<sup>th</sup> through 21<sup>st</sup>. Those have

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1 already been scheduled.

2 So, the next teleconference then,  
3 the right time frame is August 6<sup>th</sup> through 10<sup>th</sup>  
4 or 13<sup>th</sup> through 17<sup>th</sup>. Both of those time  
5 frames work for Paul.

6 Normally, we do them on Wednesday,  
7 but of course, any day of the week is okay.

8 MEMBER RICHARDSON: It is 6<sup>th</sup>  
9 through 10<sup>th</sup> and when is the next option?

10 MR. KATZ: The 6<sup>th</sup> through the 10<sup>th</sup>  
11 or the 13<sup>th</sup> through the 17<sup>th</sup> of August.

12 CHAIRMAN MELIUS: So, for  
13 argument's sake, the Wednesday would be the  
14 8<sup>th</sup> or the 15<sup>th</sup>?

15 MR. KATZ: Yes, right.

16 MEMBER RICHARDSON: The 15<sup>th</sup> is  
17 better for me.

18 MR. KATZ: The 15<sup>th</sup>? Does that  
19 work for everyone here?

20 Okay, that was quick. August 15<sup>th</sup>?

21 MEMBER ANDERSON: At what time?

22 MR. KATZ: Normally, we do 11

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1 o'clock, but it's not -- we're not set on it  
2 yet. Very good, that's all. Next, we have  
3 the next face-to-face then, and September 10<sup>th</sup>  
4 through 14<sup>th</sup>, 17<sup>th</sup> through 21<sup>st</sup> or 24<sup>th</sup> through  
5 28<sup>th</sup>. Those are the whole weeks. Of course,  
6 the -- we can pretty much go around that, and  
7 Paul has a conflict. He can't do the 10<sup>th</sup>,  
8 but he can do the 11<sup>th</sup> through 14<sup>th</sup>, and he  
9 can't -- no, I'm sorry, 24<sup>th</sup> and 28<sup>th</sup> and is --  
10 Paul is not certain, but he's pretty sure that  
11 doesn't work for him.

12 So, 10<sup>th</sup> through 14<sup>th</sup> or 11<sup>th</sup> through  
13 14<sup>th</sup> or 17<sup>th</sup> through 21<sup>st</sup>?

14 MEMBER MUNN: The 17<sup>th</sup> through 21<sup>st</sup>  
15 would be better for me.

16 MEMBER BEACH: Me too.

17 MS. LIN: Me too.

18 MR. KATZ: This is September 17<sup>th</sup>  
19 through 21<sup>st</sup>.

20 MEMBER GRIFFON: What is the  
21 location?

22 MR. KATZ: We don't have it.

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1                   CHAIRMAN MELIUS:    We don't have a  
2                   location, yet.

3                   MR. KATZ:     Right, we just put it  
4                   out there, for this Board meeting.

5                   Okay, any problems with that?  
6                   Okay, so, then --

7                   CHAIRMAN MELIUS:    So, what days  
8                   are you talking about?

9                   MR. KATZ:     So, it's better not to  
10                  start on a Monday.    I mean, if people like  
11                  Tuesday through Thursday, that is okay?

12                  So, the 18<sup>th</sup> through the 20<sup>th</sup>, the  
13                  20<sup>th</sup> may be a half-day.

14                  MEMBER SCHOFIELD:    We need to get  
15                  around Oak Ridge.

16                  CHAIRMAN MELIUS:    For the record,  
17                  we also have a request to meet in Washington,  
18                  D.C.

19                  MR. KATZ:     Yes.

20                  CHAIRMAN MELIUS:        From some  
21                  Congressional staff, not naming names.

22                  MR. KATZ:     So, those are two

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1 locations. We can ponder further.

2 CHAIRMAN MELIUS: Yes.

3 MR. KATZ: We a discussion of this  
4 before, and there may be other locations,  
5 depending on the progress of work that you see  
6 a few months down the road.

7 CHAIRMAN MELIUS: Okay.

8 MR. KATZ: Now, we've done -- we  
9 had a beast of a time getting down a hotel  
10 that is available in the entire San Francisco  
11 area, apparently, but we do now have a place.  
12 It's San Jose.

13 We had hoped to do it closer to  
14 Berkeley, because there are more claimants  
15 there, but there is not a hotel.

16 MEMBER SCHOFIELD: Where is this  
17 one going to be?

18 MR. KATZ: So, this is the  
19 February, end of February meeting. It will be  
20 in San Jose.

21 MEMBER BEACH: So, that is San  
22 Jose?

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1 MR. KATZ: So, it's San Jose. It  
2 sounds like it's a -- we haven't signed the  
3 contract with them, but it's the only hotel we  
4 could meet in.

5 Oh, by the way, that meeting will  
6 be your ethics training too.

7 MEMBER POSTON: Will you send  
8 these out to everybody?

9 MR. KATZ: The dates?

10 MEMBER POSTON: Yes.

11 MR. KATZ: Absolutely. I mean,  
12 you already have these, the dates right here,  
13 for the ones that we've established, right?

14 MEMBER POSTON: Yes.

15 MR. KATZ: Yes, I'll send out the  
16 new dates.

17 MEMBER POSTON: Yes.

18 MR. KATZ: Absolutely. As I was  
19 saying, there was a lot of confusion  
20 yesterday. I mentioned smart cards. Andy is  
21 going to send me something that I'm going to  
22 circulate to those of you who have smart

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1 cards, or want them, so that you can fill out  
2 applications, extending your coverage with  
3 your smart card.

4 MEMBER ROESSLER: What if you  
5 don't -- I missed my opportunity to pick mine  
6 up, and I don't have one. Do I need one?

7 MR. KATZ: Well, you did all the  
8 paperwork up front?

9 MEMBER ROESSLER: I did all the  
10 paperwork.

11 MR. KATZ: Yes, then send me an  
12 email to that effect, but it would be a  
13 similar situation, and I'll assign someone to  
14 get you one.

15 CHAIRMAN MELIUS: Ted actually  
16 told me earlier that I didn't qualify for a  
17 smart card. So, I get the dumb card.

18 MEMBER BEACH: Well, one other  
19 thing on those smart cards. I just got an  
20 email that says they're going to kick me off  
21 the training portal, if I don't go in and --

22 MR. KATZ: Oh, yes, that is

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1 different. So, the training --

2 MEMBER BEACH: Yes, but to get  
3 into that portal, you have to have the little  
4 thing that they send you to read your smart  
5 card, which none of us have.

6 MR. KATZ: No, you don't need a  
7 smart card right now. You don't. So, you can  
8 get into the portal, now, until they say --  
9 they haven't instituted it yet.

10 MEMBER ANDERSON: But you can't  
11 get in to do the training.

12 MR. KATZ: No, no, you don't need  
13 a smart card right now, for anything.

14 So, it's not stopping you right  
15 now, but --

16 MEMBER ANDERSON: But if you go --  
17 we keep getting these notices about --

18 MR. KATZ: So, if you use the  
19 portal, it will continue your coverage.

20 MEMBER BEACH: When I tried to get  
21 on the portal yesterday, it said I needed to  
22 use my smart card.

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1 MR. KATZ: There is two ways to  
2 get into the portal. One is your smart card.  
3 One is your ID and password, all of that, and  
4 that middle section.

5 MEMBER BEACH: All right, thank  
6 you.

7 MEMBER ANDERSON: But once you get  
8 there, then you need to do the training side.

9 MR. KATZ: No, no, no.

10 MEMBER ANDERSON: You can't do the  
11 training side.

12 MR. KATZ: Stop trying to make  
13 trouble here.

14 MEMBER ANDERSON: Well, I mean,  
15 that is the notice for -- you know, your  
16 ethics training and go to the site and try to  
17 do it, and it's very frustrating.

18 CHAIRMAN MELIUS: I am not sure  
19 what our work load will be for the next  
20 meeting. So, we will try to get an estimate  
21 of that by the time of our conference call, of  
22 whether we can have a two-day meeting -- given

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1 what LaVon presented, I don't think that there  
2 will be a lot of -- maybe 83.14s or newly  
3 qualified petitions, evaluations, there may be  
4 that, too.

5 So, and we certainly have Fernald  
6 to address at that meeting, but we'll do an  
7 inventory, to sort of see where we are. I'm  
8 not sure on GSI and some of the other  
9 outstanding sites, or Mound might be ready,  
10 too. So, it could be two and a half days. I'm  
11 not predicting.

12 But we will try to make that  
13 determination, so, if we can -- don't have to  
14 have the extra day, that's fine.

15 MR. KATZ: Yes, it seems like a  
16 good chance we'll be able to have two more?

17 CHAIRMAN MELIUS: Yes, so, I think  
18 Fernald, I think we will at least set aside at  
19 least two hours for discussion on that,  
20 because I think there are a lot of issues  
21 there, and I think we're fooling ourselves, if  
22 we think we can do it in an hour.

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1 MR. KATZ: And we have the ethics  
2 session, and that will be --

3 CHAIRMAN MELIUS: Yes, the ethics  
4 session.

5 MR. KATZ: -- at least an hour.

6 CHAIRMAN MELIUS: I think two and  
7 a half days. We'll see. Let's see how it  
8 looks.

9 MR. KATZ: Yes.

10 CHAIRMAN MELIUS: Yes, LaVon never  
11 gets anything done on time. So, he always  
12 disappoints us. Yes, Brad?

13 MEMBER CLAWSON: I just wanted to -  
14 - when was passed the SEC for Pantex, the  
15 letter has gone out.

16 I know that I saw a copy of it and  
17 I reviewed it, but I didn't know if it had  
18 come before the full Board and had been sent  
19 out.

20 CHAIRMAN MELIUS: Yes.

21 MR. KATZ: That's all done.

22 MEMBER CLAWSON: That's all done?

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1 CHAIRMAN MELIUS: Yes.

2 MEMBER CLAWSON: Okay, I just  
3 wanted to make sure.

4 CHAIRMAN MELIUS: Yes, and the  
5 package is on its way, or so forth, through  
6 the process. So, that's fine.

7 I have one more letter I need to  
8 do, which is -- this is a quick one. This is  
9 on the Hooker Electrochemical Site.

10 "The Advisory Board on Radiation  
11 Worker Health, the Board, has evaluated a  
12 Special Exposure Cohort, SEC Petition 830141,  
13 concerning workers at the Hooker  
14 Electrochemical Company, under the statutory  
15 requirements established by the Energy  
16 Employment Occupational Illness Compensation  
17 Program Act of 2000 (EEOICPA) and incorporated  
18 into 42 CFR 83.13."

19 "National Institute for  
20 Occupational Safety and Health (NIOSH) has  
21 recommended that individual dose  
22 reconstructions are feasible for workers at

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1 the Hooker Electrochemical during the  
2 operational period from January 1, 1943  
3 through December 31, 1948, and the residual  
4 period from January 1, 1949 to December 31,  
5 1976."

6 "NIOSH found that it has access to  
7 adequate exposure monitoring, other  
8 information necessary to do individual dose  
9 reconstructions with sufficient accuracy for  
10 members of this group, and therefore, a Class  
11 covering this group should not be added to the  
12 SEC. The Board concurs with this  
13 determination."

14 "Enclosed is the supporting  
15 documentation from December 7<sup>th</sup> through 8<sup>th</sup>,  
16 2011 Board meeting, held in Tampa, Florida,  
17 and earlier meetings where this potential SEC  
18 Class was discussed."

19 "Documentation includes copies of  
20 the petition, the NIOSH review thereof and  
21 related materials."

22 "If any of these items aren't

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1 available at this time, they will follow  
2 shortly," and I have one change to the letter,  
3 I just noticed, because I haven't --

4 Well, it's, I think we really  
5 should say that they have -- NIOSH has access  
6 to adequate information necessary to do an  
7 individual dose. They really didn't have  
8 adequate exposure monitoring at that facility,  
9 in order to do that.

10 So, I think just say "adequate  
11 information," I think is appropriate, yes.

12 Okay, any other things? And I  
13 believe the -- actually, the official name of  
14 the facility under the DOE is Hooker  
15 Electrochemical.

16 MR. KATZ: Yes.

17 CHAIRMAN MELIUS: Without any --  
18 it sounds funny, but it's -- and we have to be  
19 -- tied to that.

20 Okay, 10 year, yes, got your mouth  
21 -- your sandwich adequately finished, Stu? We  
22 can call you up here.

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1                   MR. HINNEFELD: Yes, I hate to rub  
2 it in, but it was delicious.

3                   CHAIRMAN MELIUS: You can talk  
4 with your mouth full.

5                   MR. HINNEFELD: Okay, to refresh  
6 everybody's memory, in my presentation  
7 yesterday, I suggest that many of the 10 year  
8 review action items fall neatly into the  
9 purview of various Work Groups and  
10 Subcommittees of the Board, and I suggested  
11 that those Work Groups and Subcommittees stay  
12 engaged with us, as we proceed, maybe by  
13 reviewing intermediate products and choosing,  
14 really, to be as involved as the Work Group or  
15 Subcommittee chooses to be.

16                   So, that is -- I'll just kind of  
17 leave it at that, and we'll entertain any  
18 questions that anybody might have about what I  
19 presented yesterday, which was just sort of an  
20 overview of information.

21                   CHAIRMAN MELIUS: Wanda, do you  
22 have a question or are you just holding up

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1 your pen?

2 MEMBER MUNN: No, I am just  
3 holding my pen.

4 CHAIRMAN MELIUS: Okay.

5 MEMBER MUNN: I need support.

6 CHAIRMAN MELIUS: Support, okay.  
7 Yes?

8 MEMBER BEACH: For me, it would be  
9 helpful to know which Work Group is going to  
10 be involved in that and maybe what information  
11 would go to those Work Groups.

12 MR. HINNEFELD: Yes, here is the  
13 ones that I suggested.

14 In the quality of -- 12 of these  
15 service areas, the Worker Outreach Work Group,  
16 dose reconstruction area would be the Dose  
17 Reconstruction Subcommittee.

18 The quality of science area would  
19 be the Science Issues Work Group, and the --

20 CHAIRMAN MELIUS: Put your  
21 microphone on.

22 MR. HINNEFELD: Is my microphone

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1 off? Okay, we can try this. Okay, for the  
2 quality of service area, the review, I  
3 suggested the Worker Outreach Work Group --

4 Okay, we're going to try this  
5 again.

6 Okay, for the quality of service  
7 area, I suggested the Worker Outreach Work  
8 Group, because it has to do with clarity of  
9 communication and our receptiveness to  
10 communication.

11 CHAIRMAN MELIUS: Let's go through  
12 them like one area at a time, because --

13 MR. HINNEFELD: Okay

14 CHAIRMAN MELIUS: -- I'm not sure  
15 I agree with them.

16 MR. HINNEFELD: Quality of  
17 service.

18 CHAIRMAN MELIUS: Quality of  
19 service I think, certainly, that would be to  
20 the Worker Outreach Work Group.

21 MR. HINNEFELD: Okay, and for the  
22 dose reconstruction area, I suggested --

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1                   CHAIRMAN MELIUS:   Well, the next  
2 slide you have is timeliness.

3                   MR. HINNEFELD:   Okay, and the  
4 timeliness one?

5                   CHAIRMAN MELIUS:   Timeliness, and  
6 I think regard to dose reconstruction issues,  
7 it would go to the Dose Reconstruction  
8 Subcommittee.

9                   MR. HINNEFELD:   Yes.

10                  CHAIRMAN MELIUS:   Time limits for  
11 the completion of SEC petitions, I believe  
12 would be the SEC Review Committee.

13                  MR. HINNEFELD:   I believe that  
14 would be true.

15                  CHAIRMAN MELIUS:   Work Group,  
16 excuse me, Work Group that I chair.

17                  MR. HINNEFELD:   Okay, quality of  
18 science?

19                  CHAIRMAN MELIUS:   And well, I  
20 guess the question now, SEC petitions is next.  
21 Do that.

22                  MR. HINNEFELD:   Okay.

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1                   CHAIRMAN MELIUS:   And again, those  
2                   are SEC.   I think the one issue we need to  
3                   think about is how to deal with sufficient  
4                   accuracy, because I think that is a key issue,  
5                   and it's got some issues related to science  
6                   and it's got the -- you know, some issues,  
7                   sort of, that are policy issues, and I'm a  
8                   little hesitant on sending that to David's  
9                   Work Group, because they've got six -- I think  
10                  five or six major issues, and I don't  
11                  necessarily think that -- I don't know if you  
12                  want to add that or it would be better to  
13                  either have the SEC Work Group deal with that,  
14                  or form a new Work Group, or something,  
15                  because it's almost -- I think it's working  
16                  with that, and I think the would prefer the  
17                  SEC Evaluation group to simply -- we've  
18                  already gone through a bunch of the SEC  
19                  issues, and sort of touched on that, without  
20                  ever trying to address it.

21                         So, we may pull in other Members  
22                         or work with the SEC -- the Science Issues

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1 Work Group, but I don't want to get you bogged  
2 down in that issue. Is that --

3 MR. HINNEFELD: Okay, on the SEC  
4 petitions area, then, the issue having to do  
5 with sufficient accuracy to keep with --

6 CHAIRMAN MELIUS: Yes, keep all  
7 the SEC in the SEC area.

8 MR. HINNEFELD: Okay.

9 MEMBER MUNN: So, that puts us  
10 both doing part of the time on this, and all  
11 the quality science?

12 CHAIRMAN MELIUS: No.

13 MR. HINNEFELD: No.

14 MEMBER MUNN: No?

15 CHAIRMAN MELIUS: Just the  
16 sufficient issues, related issues of  
17 sufficient accuracy, is the only sort of  
18 quality issue that goes there.

19 Now, quality of science would be -  
20 - there is -- two areas. One is an  
21 implementation guide for levels of peer  
22 review. I think that is something that comes

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1 back to the whole Board. I think Stu is going  
2 to develop a recommendation.

3 MR. HINNEFELD: Right.

4 CHAIRMAN MELIUS: And because  
5 there is so many different types of documents  
6 that would overlap, I think it would be more  
7 efficient to have a Board discussion of that.

8 Now, if we are uncertain about an  
9 area and we think that there is some way of  
10 referring that, we can.

11 MR. HINNEFELD: Sure.

12 CHAIRMAN MELIUS: The second one  
13 under quality science is assessing validity of  
14 indirect exposure methods, which is, I think  
15 coworker data --

16 MR. HINNEFELD: Yes.

17 CHAIRMAN MELIUS: -- and so forth.  
18 Now, that could either be a science issue or  
19 it could go to the Procedures Work Group,  
20 which I think has previously reviewed coworker  
21 -- some of the coworker TIBs and so forth?

22 MEMBER MUNN: We have reviewed the

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1 procedures and the coworkers.

2 MR. HINNEFELD: Okay.

3 CHAIRMAN MELIUS: Is that -- I  
4 can't tell if that's a 'yes' or a 'no', that  
5 you think it's -- you're willing to take it  
6 on, because I think it's an important issue.

7 I mean, if you think about the  
8 discussions we had earlier today on Fernald,  
9 there are issues that SC&A has raised about  
10 the adequacy of the coworker models, and they  
11 really -- and those were developed under sort  
12 of the old procedures.

13 We have a Science -- quality of  
14 science recommendation that those coworker  
15 procedures may not be adequate, and those need  
16 to be changed, and sort of didn't -- the  
17 process on that, and I'm not quite -- I don't  
18 know quite where the White -- I just hesitate  
19 to put it -- you know, put it off, dealing  
20 with that, that issue because it could be a  
21 significant change.

22 It has some implications for a lot

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1 of the sites that we're currently dealing with  
2 and will be dealing with.

3 MEMBER RICHARDSON: Yes, the other  
4 places that kind of -- the DR Subcommittee, I  
5 think -- you know, right now, we sort of, at  
6 least internally agree, that the quality of  
7 science group was going to focus on those  
8 scientific issues related to models for  
9 disease outcomes, and that's opposed to  
10 science related to dose reconstruction because  
11 there were a number of other Work Groups  
12 already working on that.

13 So I think for our own purposes,  
14 it may be useful to keep those scientific  
15 issues separate, but certainly, we can --

16 CHAIRMAN MELIUS: Another  
17 possibility --

18 MEMBER MUNN: Procedures can  
19 certainly handle that.

20 CHAIRMAN MELIUS: Do you have an  
21 epidemiologist on Procedures?

22 MEMBER MUNN: No, we don't.

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1 CHAIRMAN MELIUS: Yes, you do,  
2 Dick Lemen.

3 MEMBER MUNN: No, we don't.

4 CHAIRMAN MELIUS: Is Bill? I  
5 think Dick Lemen is. Yes, so, okay. Well,  
6 let's start there. We can see -- I just think  
7 it needs a

8 There is enough epidemiological  
9 issues there in terms of looking at the -- one  
10 of the issues is sort of what -- how fine --  
11 how focused down to the job title there, the  
12 level, and so forth, should coworker models  
13 be, because most of them are not, at the  
14 moment.

15 And I think that was the major  
16 recommendation in -- David's talk, in terms of  
17 dealing with epidemiological data. It's an  
18 ongoing issue, but Dr. Lemen is there, so,  
19 that is fine.

20 MEMBER MUNN: Dr. Lemen is fine.

21 CHAIRMAN MELIUS: Yes.

22 MEMBER MUNN: He can handle that.

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1                   CHAIRMAN MELIUS:       We need to  
2 recruit Bill Field in.

3                   MEMBER ROESSLER:        I would  
4 recommend, if you're talking about the quality  
5 of science being given over to the SEC Work  
6 Group, I would recommend we mention adding  
7 something -- I would recommend adding Bill  
8 Field to that group.

9                   CHAIRMAN MELIUS:    No, I would --  
10 quality of science we were talking about for  
11 the SEC Group.

12                   Well, we're talking -- no, I'm  
13 sorry, I meant -- I was thinking of the  
14 science group, for the second one, the  
15 indirect exposure, which is that the -- we --  
16 which essentially, coworker is one of the main  
17 areas, but it's not the only one, that we add  
18 that over to the -- either the Procedures or  
19 Science, and I think we just decided  
20 Procedures.

21                   I will add, and I am, for whatever  
22 reason, keep forgetting and I keep trying to

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1 mention this at a time when all the Board  
2 Members are here so it's sort of fair notice.

3

4 But we do have to do some  
5 modifications to some of our Work Groups in  
6 terms of adding people and changing and so  
7 forth. Bob Presley needs to be replaced on  
8 some and -- and others, that I think are sort  
9 of outstanding.

10 So I will send, after the meeting,  
11 I will send out an email to everybody asking  
12 for some specificity of that, and adding some  
13 -- asking people to -- for volunteers,  
14 essentially, so that we can bring some of  
15 those back up, in terms of numbers and so  
16 forth.

17 The other quality -- the next  
18 quality of science issue is characterize  
19 degree of claimant-favorability in current  
20 methods.

21 MR. HINNEFELD: That is something  
22 that we will do.

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1 CHAIRMAN MELIUS: You will do?

2 MR. HINNEFELD: We will do.

3 CHAIRMAN MELIUS: I think that  
4 goes back to the Dose Reconstruction.

5 MR. HINNEFELD: Yes.

6 CHAIRMAN MELIUS: For the most  
7 part.

8 MR. HINNEFELD: Okay.

9 CHAIRMAN MELIUS: Or whatever the  
10 -- you know -- I think you do, and then let's  
11 see how it shakes out, or what you specify in  
12 that, then we go from that.

13 MR. HINNEFELD: Okay.

14 CHAIRMAN MELIUS: And then  
15 surrogate data, you will be doing?

16 MR. HINNEFELD: Yes, that's that -

17 -

18 CHAIRMAN MELIUS: -- having  
19 outside reviews, and then I think that we have  
20 a Surrogate Data Work Group --

21 MR. HINNEFELD: Yes.

22 CHAIRMAN MELIUS: -- which is not

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1 active right now.

2 MR. HINNEFELD: Okay.

3 CHAIRMAN MELIUS: But could be  
4 reactivated.

5 MR. HINNEFELD: All right.

6 CHAIRMAN MELIUS: And then --

7 MR. HINNEFELD: The final last big  
8 bullet is supposed to be a subordinate bullet.

9 CHAIRMAN MELIUS: Yes.

10 MR. HINNEFELD: That is  
11 subordinate to the EPA.

12 CHAIRMAN MELIUS: Right, yes,  
13 which is another -- would be input into that.

14 MR. HINNEFELD: Right, yes.

15 CHAIRMAN MELIUS: And then dose  
16 reconstruction, I think that's the Dose  
17 Reconstruction Committee.

18 MR. HINNEFELD: Okay, yes.

19 CHAIRMAN MELIUS: Is that  
20 satisfactory? I mean, we can always change  
21 these and if the workload, you know, if it  
22 interferes with workload or whatever, we can -

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1 - or if we need a new Work Group to address  
2 certain ones, we can do that.

3 I think one of the other  
4 questions, which is always harder to think  
5 about, especially at the end of a meeting, is  
6 what is missing here? Is there something that  
7 we think Stu should be prioritizing, in terms  
8 of implementation, that is not on this list,  
9 that was from the 10 year review, or some  
10 other thing that should be started now?

11 I think as it goes to the Work  
12 Group, if you have suggestions on other  
13 approaches or other areas to look at, that is  
14 fine, but I guess I'm looking for anything  
15 that's missing, and again, I don't think this  
16 is something we all have to think of now, but  
17 can do so at a later point in time.

18 But do think about that because I  
19 don't think we want to get -- you know, two  
20 years from now, suddenly say, "Well, you  
21 really should have addressed this. This is  
22 what is important," in the program, when a

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1 change that's needed and was recommended, and  
2 isn't being implemented.

3 MR. KATZ: Do you want this on the  
4 agenda for the teleconference?

5 CHAIRMAN MELIUS: I think we have  
6 that. We'll put it as an agenda item on the  
7 teleconference, yes, seeing how active and  
8 vigorous we're all feeling right now.

9 By the way, my plane just got  
10 delayed until 9 o'clock. So I think we're  
11 going to go for another four or five hours.

12 MEMBER ROESSLER: Then we need a  
13 lunch break.

14 CHAIRMAN MELIUS: What do you mean  
15 lunch?

16 MEMBER ANDERSON: Just after  
17 you've changed it, right?

18 CHAIRMAN MELIUS: I didn't have a  
19 chance to change it. I decided not to change  
20 it. That was the fatal mistake.

21 Any other issues on this? I do  
22 want to commend Stu and NIOSH for working on

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1 this and getting this implemented. I know  
2 it's a lot to do, with all the other things  
3 you have to do, and sort of putting this on  
4 top, and trying to figure out -- I think one  
5 of the difficulties I foresee is how do you --  
6 how do we implement this, at the same time,  
7 without having to go back over everything or  
8 keep progressing on other -- we don't want to  
9 wait to all of these issues, but at the same  
10 time, it would be terrible to -- it would be  
11 difficult, I shouldn't say terrible. It could  
12 be difficult if we, you know, evaluate and,  
13 again, just as a hypothetical example,  
14 something with sort of -- the old coworker  
15 approach, and then we end up, you know, six  
16 months later, recommending a brand new  
17 approach and almost on the face of the old  
18 ones, you know, the old approach is  
19 inadequate, and -- in terms of recommendation.

20 I think there is -- I'm not  
21 predicting that is so, but it's the kind of  
22 thing that would be difficult, and I think you

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1 -- from some of the public comments we had  
2 from the Petitioners and others, I think you  
3 can see there is some expectation of other  
4 changes and that these changes be implemented.  
5 So, again, I commend you on getting this  
6 going.

7 Any other comments? I think we can  
8 -- if not, we finish as promised by 2 o'clock,  
9 unless somebody has other business they want  
10 to bring up? Yes, Dave? You're brave.

11 MEMBER RICHARDSON: There was an  
12 issue raised in correspondence that was  
13 circulated with us.

14 CHAIRMAN MELIUS: Oh, thank you  
15 for reminding me. Go ahead.

16 MEMBER RICHARDSON: It was an  
17 issue about whether the Board should evaluate  
18 -- I don't know anymore what the terminology  
19 is, perceptions of conflict of interest --

20 CHAIRMAN MELIUS: Yes.

21 MEMBER RICHARDSON: -- with  
22 contractors who are doing work for the

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1 program.

2 CHAIRMAN MELIUS: Yes, I think  
3 there is a specific concern that has been  
4 raised in a letter to the DCAS -- not -- I  
5 believe to John Howard, wasn't it? Yes, and I  
6 just think it certainly raises an issue that  
7 certainly made me uncomfortable when I saw it.

8 Now I don't know the details and  
9 there is contracting and other issues  
10 involved, but it's -- certainly, the  
11 perception on the outside, at least among some  
12 of the claimants and claimant representatives,  
13 is that that is a -- does raise issues for  
14 them, and I would hope that it would get  
15 addressed, and I would hope that the Board  
16 would be kept informed about it, as you -- as  
17 it does get addressed.

18 Thank you for reminding me, Dave.

19 MEMBER RICHARDSON: Yes, I guess,  
20 I felt like that these are -- I mean, I guess  
21 -- you know, I find these categories of  
22 conflict of interest difficult to fully

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1 understand, without probably a legal training,  
2 and it's probably -- I felt like looking at  
3 it, yes, I had the same sort of sense of --  
4 sort of unease.

5 I'm not -- I don't have the  
6 capacity to fully make evaluations of it, but  
7 I would like to kind of keep on top of it and  
8 maybe kind of be educated and informed about  
9 it so that the Board can serve its role on  
10 these issues.

11 CHAIRMAN MELIUS: Well, it just so  
12 happens that Ted told me at our next meeting  
13 we will have our annual ethics training.

14 MEMBER RICHARDSON: Yes, those  
15 have always --

16 CHAIRMAN MELIUS: Someone will be  
17 there, and I think we can certainly ask that  
18 that specific -- that they be ready to -- if  
19 not address the specific issue, to address  
20 that -- the issue that's been raised, in terms  
21 of helping us to understand it, in the --  
22 because I think what happens is that we're --

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1 we're asked these questions, isn't it a  
2 conflict of interest on this issue or a  
3 perceived conflict with certain individuals or  
4 certain situations, and so forth.

5 And it puts us in an awkward  
6 position. I don't think we'd say we'd make a  
7 determination on it, but for us to claim that  
8 we're ignorant of it, it appears as if we  
9 don't have any concerns about it. At the same  
10 time, you don't want to exaggerate your  
11 concern because of the specifics.

12 So I think it helps to have some  
13 level of information on it and go forth.

14 MEMBER RICHARDSON: Right.

15 CHAIRMAN MELIUS: And, Jenny, I'll  
16 make sure you get that specific, if you're not  
17 aware of what it is.

18 MEMBER RICHARDSON: I don't mean  
19 to say that I feel like I'm ignorant of -- I  
20 think the training that we've received has  
21 been focused on perceptions of bias and  
22 conflict of interest as they concern our own

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1 behaviors and the relationships that we engage  
2 in, and what is being brought before us  
3 concerns organizations that are contracted to  
4 do work for the program.

5 And so, now, we're in a different  
6 position, and I don't think we have the  
7 responsibility for that sort of oversight or  
8 anything, but at some point, I mean,  
9 specifically to make those evaluations --

10 CHAIRMAN MELIUS: Yes, but if  
11 we're relying on those contractors or  
12 subcontractors, then that perception also, in  
13 some ways, could apply to the public's --

14 MEMBER RICHARDSON: Right.

15 CHAIRMAN MELIUS: -- or claimant's  
16 perception of what our work is and NIOSH's and  
17 other work, and so -- I think that our -- all  
18 of us have been on the Board a while. We've  
19 all struggled with this. It's evolved, and I  
20 think we finally have gotten at least what's  
21 written down, a much more coherent policy that  
22 addresses all levels, the Board, the Board

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1 contractor, NIOSH, NIOSH's contractors, and so  
2 forth, with some -- at least not -- and it  
3 can't all be the same, you know, sort of rules  
4 and conflicts, there's different balancing  
5 that goes on and so forth.

6 But at least it is more coherent  
7 than it was before, and it appears, I think,  
8 more equitable, but there is still our  
9 differences and there is still our details and  
10 nuances to it that can be confusing.

11 MEMBER RICHARDSON: Okay, thanks.

12 CHAIRMAN MELIUS: Yes, okay.  
13 Anything else? Okay, without objection, we're  
14 adjourned.

15 (Whereupon, the above-entitled  
16 matter concluded at 2:05 p.m.)

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