

UNITED STATES OF AMERICA  
CENTERS FOR DISEASE CONTROL

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NATIONAL INSTITUTE FOR OCCUPATIONAL  
SAFETY AND HEALTH

+ + + + +

ADVISORY BOARD ON RADIATION AND  
WORKER HEALTH

+ + + + +

75th MEETING

+ + + + +

THURSDAY  
FEBRUARY 24, 2011

+ + + + +

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

PRESENT:

JAMES M. MELIUS, Chairman  
HENRY ANDERSON, Member  
JOSIE BEACH, Member  
BRADLEY P. CLAWSON, Member  
R. WILLIAM FIELD, Member  
MICHAEL H. GIBSON, Member  
MARK GRIFFON, Member  
RICHARD LEMEN, Member  
JAMES E. LOCKEY, Member\*  
WANDA I. MUNN, Member  
JOHN W. POSTON, SR., Member  
ROBERT W. PRESLEY, Member

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

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 GEORGE, ROBERT  
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 JACQUEZ-ORTIZ, MICHELLE, Senator Tom Udall's  
     Office\*  
 KINMAN, JOSH, DCAS  
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\*Participating via telephone

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

2 9:01 a.m.

3 CHAIRMAN MELIUS: Good morning,  
4 everybody. If we can get seated, we will get  
5 started.

6 Welcome. I would like to welcome  
7 one of our missing Members, Mark Griffon, who  
8 has arrived.

9 We are just one short now, but I  
10 think Jim Lockey will be on the line a little  
11 bit later.

12 Ted, do you want to go through --

13 MR. KATZ: Yes. Good morning,  
14 everyone and welcome to day two of the Board  
15 meeting. Welcome in the room and on the line.

16 Let me just note for people in the  
17 room, you look all familiar, but on the line  
18 we have a public comment session today as well  
19 as yesterday. Today it begins at 5:30 and  
20 goes to 7:00 p.m. So, members of the public  
21 are welcome to call in and ask questions and  
22 provide whatever comments.

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1           The other thing, just to say for  
2 folks on the line, please mute your phones.  
3 Use \*6 if you don't have a mute button, \*6  
4 again to take your phone off of mute.

5           Then, just to note, Board  
6 attendance, as Dr. Melius noted, we have all  
7 Board Members in attendance except for Dr.  
8 Lockey, and we expect him to call in for the  
9 Linde session that is second on the agenda  
10 today.

11           It's your agenda, Jim.

12           CHAIRMAN MELIUS: Okay. The first  
13 item we are considering today is the SEC  
14 petition for the Grand Junction Operations  
15 Office, and LaVon Rutherford.

16           MR. RUTHERFORD: Hi. Thank you,  
17 Dr. Melius.

18           Again, I am LaVon Rutherford. I  
19 am going to present NIOSH's evaluation of the  
20 Special Exposure Cohort Petition for Grand  
21 Junction Operations.

22           This petition was received on June

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1 30th of 2010. The petition proposed a Class  
2 by laborers, supervisors, painters, grounds  
3 personnel, and fire chief from 1943 to present  
4 who worked at all locations at Grand Junction.

5 The covered period for Grand  
6 Junction is from 1943 is present. It is a DOE  
7 facility and it is still in operation.

8 Now this petition qualified on  
9 September 7th of 2010. The petitioner  
10 provided a basis that was a lack of monitoring  
11 data. This was supported by a dose  
12 reconstruction that actually indicated that  
13 NIOSH had not found any monitoring data.

14 The Class evaluated by NIOSH was  
15 all onsite personnel who worked at Grand  
16 Junction from January 1, 1943 through July 31,  
17 2010.

18 I am going to get into this in  
19 more detail and provide more basis for this  
20 recommendation, but we will propose a Class  
21 for all employees of the Department of Energy,  
22 predecessor agencies, and contractors and

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1 subcontractors who worked at Grand Junction  
2 from March 23, 1943 through January 31, 1975.

3 A little background: on March 23,  
4 1943, an Army representative arrived at Grand  
5 Junction, establishing the Colorado Area  
6 Engineer Office which later became the Grand  
7 Junction Operations Office.

8 The initial operation involved  
9 construction and operation of a refinery plant  
10 to produce uranium concentrates for the MED.

11 After the war, the site became the  
12 center of uranium ore exploration,  
13 procurement, processing, and sampling  
14 activities.

15 We put together a timeline of the  
16 major project and operations. Hopefully, this  
17 will give you an idea of the things that were  
18 occurring from the early forties all the way  
19 to present. It also, I think, gives you an  
20 idea of a break that we see in 1975, where  
21 most of the activities that were conducted  
22 onsite, the major activities, refinery

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1 operations, pilot plant operations, and  
2 assaying uranium, stopped in 1975, and they  
3 went more to a remedial action period. I will  
4 get into a little more detail with that.

5 Refinery operations: they started  
6 in August of 1943, operated until October of  
7 1945. At that time, they were processing  
8 green sludge which was actually vanadium  
9 tailings they had received from Uravan and  
10 Durango mills.

11 They produced about 1,170 tons of  
12 uranium oxide and a similar amount of vanadium  
13 oxide. The uranium was then shipped east for  
14 further processing. From 1946, later in 1945  
15 through 1947, the refinery was dismantled.

16 The AEC Raw Minerals Office was  
17 established at Grand Junction in December of  
18 1947. The focus was uranium exploration and  
19 purchasing. They established ore buying  
20 stations in the western states to stockpile  
21 ore.

22 And starting in 1948, the Grand

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1 Junction Office received and sampled uranium  
2 concentrates. The Analytical Lab and Sampling  
3 Plant was established as well at Grand  
4 Junction to sample these ore concentrates.

5 A little background on the pilot  
6 plants: there were two pilot plants, a small  
7 pilot plant which operated from May of 1953  
8 through December of 1954. This focus at the  
9 small pilot plant was perfecting the resident  
10 pulp uranium extraction process.

11 The large pilot plant operated  
12 from January of 1955 through May of 1958, and  
13 it was focused on testing methods for uranium  
14 mills.

15 The pilot plant mills ran 24 hours  
16 per day, seven days per week.

17 The pilot plants started out in  
18 1953 with about 17 to 18 employees and ramped  
19 up to 105 employees by 1957. They processed  
20 30,000 tons of ore, uranium ore. The  
21 byproducts of this became the primary source  
22 of contaminated materials onsite. They had

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1 247,000 cubic yards of uranium mill tailings  
2 buried onsite as well as other byproducts. It  
3 contaminated 22 acres of land and 19  
4 buildings.

5 Sampling and analysis actually  
6 began in 1948 and continued through 1974.  
7 They received more than 347 million pounds of  
8 uranium oxide from 1948 through 1971.

9 Most of the sampling of the  
10 uranium oxides was done at Grand Junction in  
11 the 1961 to 1965 time period. A little bit of  
12 sampling was done at Weldon Springs. But,  
13 again, most of the sampling was done at Grand  
14 Junction.

15 Grand Junction had two sampling  
16 plants in separate buildings. They had an  
17 auger method and a falling stream method of  
18 sampling.

19 Uranium concentrates were received  
20 up until 1971. Then the last drums of  
21 material were shipped offsite in January of  
22 1974. After that, the site then continued

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1 other work and was the center for uranium  
2 exploration and some remediation projects.

3 After 1974 is when I indicated  
4 that we felt that activities onsite had  
5 shifted. You will see from a little more  
6 detail of the programs that continued after  
7 1974 why we feel that way.

8 Grand Junction managed the  
9 National Uranium Resource Program, NURE. Work  
10 included analyzing existing data, drilling  
11 445,000, that should be, new boreholes;  
12 samples, 750,000 hydrochemical samples, and  
13 flights, a million flight line miles to map  
14 out distributions of uranium and thorium and  
15 potassium. The drilling and the sampling  
16 activities occurred offsite. This resulted in  
17 a comprehensive database of the nation's  
18 uranium resources.

19 The first remedial action project,  
20 which began in 1972, Grand Junction assisted  
21 the State of Colorado in remediation of 594  
22 homes or businesses. These sites were

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1 contaminated from tailings from private mills.

2 I put this in here, exposures. I  
3 want to point out that exposures that occurred  
4 offsite in these operations are not covered  
5 under the program. However, I will say that  
6 the data that we have on individuals -- and I  
7 will get into that a little more -- we can't  
8 separate them out. So, we can't separate them  
9 out from onsite or offsite exposures. So, we  
10 will use that data.

11 And in addition, I think the  
12 discussion on that, we have had discussions  
13 with the Department of Labor that indicate  
14 that it would be difficult to identify  
15 individuals that solely worked offsite as  
16 well.

17 All right. The next remedial  
18 action project was actually onsite and began  
19 in 1988. The approach was to remediate all  
20 the open spaces at Grand Junction from south  
21 to north. Seventeen buildings were either  
22 demolished or decontaminated; 414,000 tons of

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1 radioactive contaminated material was  
2 excavated and transported to the Cheney  
3 Disposal Cell. They recontoured,  
4 reconstructed, and revegetated affected areas.

5 Dose reconstructions, we had  
6 actually 59 claims submitted to NIOSH. I am  
7 going to provide a little more information  
8 here. I should say claims that are within the  
9 period evaluated are 59 claims. Further  
10 review, there are actually 39 claims that fall  
11 into the SEC Class recommendation that we will  
12 make here in a little bit.

13 We have completed 22 dose  
14 reconstructions. Eighteen of those were over  
15 50 percent, 27 less than 50 percent. Claims  
16 containing internal are eight, and claims  
17 containing external dosimetry are 22.

18 The actual cases that you see were  
19 greater and less than 50 percent totaled 35.  
20 Those are actually all the claims that were  
21 completed. So, they cover the entire time  
22 period.

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1 Sources of available information:  
2 we looked at Technical Information Bulletins,  
3 interviewed with, it says seven former  
4 workers; there are actually eight former  
5 workers. We looked at existing claimant  
6 files, the documentation provided by  
7 petitioner, NIOSH research database, and data  
8 captures.

9 The interviews actually covered,  
10 we interviewed an individual who worked all  
11 the way back in the refinery period. So, we  
12 covered most of the timeframe of operations at  
13 Grand Junction.

14 Data captures: the Atomic Energy  
15 Commission, DOE Opennet, internet searches,  
16 CEDR, NARA at Atlanta, various DOE locations,  
17 including Grand Junction.

18 Our external sources of exposure:  
19 obviously, you can see you would expect the  
20 internal/external sources of exposure mainly  
21 from the operations in the refinery plant, the  
22 pilot plant milling works, and the processing

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1 materials, as well as sampling.

2 Direct radiation from handling and  
3 processing the ore and tailing; submersion in  
4 contaminated air; moving equipment and drums  
5 into warehouses that were part of the pilot  
6 plant; moving ore samples from receiving area  
7 to analytical chemistry, and high grade  
8 uranium mineral specimens accumulated in  
9 plants, labs and offices.

10 I want to make sure everybody  
11 understands these ore samples were not samples  
12 like this. Okay? They were actually drums  
13 that were taken in and they used these auger  
14 methods to auger material out of it. It was  
15 one sampling method.

16 The other sampling method was  
17 actually to take the drum and they would  
18 actually drop it into -- I don't know the term  
19 here -- like a conveyer, and they would slice  
20 out samples of that to sample the drums.

21 So, there's a couple of different  
22 sampling methods. They actually took a large,

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1 I mean they may take 20 drums and take out  
2 portions of 20 drums, mix them together to  
3 make a homogenous sample, and then do the  
4 sampling as well. So, to give you an idea,  
5 this wasn't a small-scale sampling activity.

6 Our external sources of photons,  
7 photon source would be from uranium and  
8 progeny. The largest source was radium.  
9 Obviously, after the uranium was extracted,  
10 the radium and thorium were mostly maintained  
11 in the mill tailings and became a considerable  
12 source of external exposure.

13 Beta was a uranium progeny,  
14 protactinium.

15 Neutrons, californium-252 and the  
16 zetatrons. The neutron sources were used in  
17 the later years, I believe in the 1990s,  
18 around the 1990 timeframe. They were not used  
19 in the early years.

20 Internal sources of exposure: we  
21 had inhalation and ingestion of contaminated  
22 air resulting from various milling and

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1 sampling operations, including crushing and  
2 grinding of the ore; preparation of ore  
3 samples after drying. Samples were pulverized  
4 on the floor of the prep room and screened.  
5 They also had samples reduced in size by  
6 quartering and riffing, pulverized again, and  
7 passed through another mesh screen. All those  
8 activities would generate potential airborne  
9 or internal exposures.

10 Our source of internal exposure  
11 was uranium. Uranium was extracted. So, the  
12 uranium was a major source of internal  
13 exposure as well as uranium progeny, and the  
14 mill tailings were byproducts, specifically,  
15 the radium, thorium, and radon.

16 This is actually a table that  
17 identifies bioassay data that we had for  
18 years. If you look at the refinery  
19 operations, the colored sections are actually  
20 the years of operation. 1943 through 1946, we  
21 have 11 samples in 1945. The small pilot  
22 plant, we have 10 and 11 in 1953 or 1954

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1 during the years of operations.

2 I want to point out these bioassay  
3 samples are fluorometric samples for uranium  
4 only. No other isotopic analysis was done.

5 The sampling plant, you we have  
6 first samples in 1949. We had sporadic  
7 samples pretty much consistent through 1953 to  
8 1962.

9 We also had annual summaries,  
10 1960, 1964, 1969, 1972, and 1973. They give a  
11 range, but they do not necessarily give the  
12 number of bioassay samples that were taken.  
13 We had no bioassay data after 1973 up until  
14 the D&D period.

15 This is just I wanted to point out  
16 that some of the data we have is just not  
17 legible. So, we put together a little table  
18 to indicate that we have, for example, in 1961  
19 you see that our total samples are actually up  
20 over 50, but the actual number of samples that  
21 are legible are only a little over 30. So,  
22 again, this is mainly because not only just

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1 the quality of the document remaining, but  
2 some of the documents are actually torn off on  
3 the ear or the dates are removed, some of the  
4 information, and it is very hard to get  
5 anything from them. So, I wanted to point  
6 that out as well.

7 Air sampling, if we think of our  
8 hierarchy of what we look for in data, we  
9 start out with our bioassay data and, then, we  
10 would move to our air sampling data. Again,  
11 the color coding is the years of operations.  
12 It is very hard to read the sampling plant  
13 numbers.

14 I believe there's one year in  
15 there, actually, if I look at it on this  
16 screen, I can see it. 1956, there's 61  
17 samples; 1959, 30; 1960, 18, and 1961, 64.  
18 But if you look at these, you see that we have  
19 some air sample data. It gives gross alpha  
20 and we have eight samples including five from  
21 the refinery plant and sporadic samples  
22 throughout the operations. We do have 45

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1 samples in 1960 for outdoor air.

2 Radon data, because this is where  
3 we focus our feasibility discussion, in 1967,  
4 we have seven results outdoors; 1968, nine  
5 results outdoors. This is radon gas samples.  
6 In 1990, we have 27 samples indoors. Radon,  
7 we have some working levels. In 1985, we have  
8 a really pretty good sample set in 1985 of 300  
9 results, focusing on three buildings, mainly  
10 pilot plant, former pilot plant buildings.  
11 And we have characterization data and building  
12 closeout reports.

13 Additionally, environmental data  
14 we have, we have environmental release reports  
15 from 1990 through 2001, except for 1995 and  
16 1997.

17 Air sampling was discontinued in  
18 1994 after removal of contamination from the  
19 open lands.

20 Our feasibility determination is  
21 there is insufficient monitoring of  
22 source-term data from which to draw

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1 conclusions regarding potential magnitude of  
2 internal dose from March 23rd, 1943 through  
3 January 31st, 1975.

4 As you have seen from the previous  
5 slides, we lack radon data for the period.  
6 Radon was a source of exposure due to the  
7 radium content in the mill tailings that were  
8 left onsite as well as during operations in  
9 the pilot plant and the refinery, as well as  
10 in the sample plant when they were sampling  
11 the ores up through the period.

12 We have lack of air sampling and  
13 personal bioassay for uranium progeny through  
14 1958. All our bioassay samples and air  
15 samples associated were looking for uranium.

16 We have an inconsistent  
17 source-term. Activities varied through the  
18 site operational period up through 1975. We  
19 had refinery operations. We had pilot plant  
20 operations with laboratory activities. We  
21 were bringing in material and sampling  
22 material from various different ore sites,

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1 which makes it very difficult for us to model  
2 or use surrogate data.

3           At this time, we believe there is  
4 sufficient monitoring and source-term data for  
5 the period of February 1st, 1975 through July  
6 31st, 2010. We base this on that, by February  
7 1975, on the site, the last of the 103,776  
8 drums of uranium concentrates were shipped  
9 offsite. The site's primary mission changed  
10 to the NURE program, where they were actually  
11 going out, looking for uranium and thorium and  
12 potassium at other areas. Radium-226  
13 concentrations, because of the lack of  
14 activities onsite, were relatively constant on  
15 the surfaces and in the soil.

16           However, saying that, in recent  
17 reviews of information that we have, we have  
18 brought a couple of questions that we feel  
19 that it would not be appropriate to complete  
20 our evaluation on the post-1975 period. So,  
21 although we feel that we may be correct with  
22 this post-1975, we would like to continue our

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1 evaluation of that period.

2 Right now, in our Evaluation  
3 Report we use sampling activities post-1975,  
4 air sampling data from sampling activities to  
5 bound our exposure. However, questions came  
6 up. What about the resuspension, residual  
7 material in these existing facilities? Have  
8 we done a comparison of air activities to see  
9 if we do have a truly bounding approach?

10 As well as, recently, in December,  
11 we got some D&D information, data, that we  
12 felt that we may need to refine our dose  
13 reconstruction methodology based on that  
14 recently-obtained data. So, based on that, we  
15 will revise our Evaluation Report for the  
16 post-1975 period. We will either revise it or  
17 issue an addendum, and we will issue that  
18 prior to the May 2011 Board meeting. I will  
19 present that at that May meeting.

20 Our current feasibility  
21 determination is, again, we lack the amount of  
22 information to reconstruct the internal dose

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1 for the 1943 through 1975 period. External  
2 dose we feel is reconstructable. There is one  
3 correction. I want to say the external dose  
4 from neutrons up through 1975, it should be  
5 "NA" because there was no neutron exposure  
6 during that period through 1975.

7 Currently, we feel it is feasible.

8 However, we have additional work we are going  
9 to do on the post-1975 period.

10 So, the evidence that we have  
11 reviewed indicates that some workers in the  
12 Class may have accumulated chronic exposures  
13 through intakes of radionuclides and direct  
14 exposure to radioactive materials.  
15 Consequently, we believe that health may have  
16 been endangered.

17 Our proposed Class, again, is all  
18 employees of the Department of Energy, its  
19 predecessor agencies, its contractors and  
20 subcontractors who worked at Grand Junction  
21 from March 23, 1943 through January 31, 1975  
22 with the additional information at the end.

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1                   So, again, I would just mention  
2                   dose reconstruction is not feasible from March  
3                   23rd, 1943 through January 31st, 1975.

4                   Questions?

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

7                   I want to say I like the new,  
8                   fancy diagrams, multi-colors.

9                   MR. RUTHERFORD:       I can't take  
10                  credit for those, though.

11                  (Laughter.)

12                  CHAIRMAN MELIUS:       And adding some  
13                  additional information like you did on the  
14                  dose reconstructions that have been done is  
15                  actually very helpful.   So, it gives us some  
16                  perspective.   I notice some of the more recent  
17                  reports you are adding more, and I think it is  
18                  helpful to the Board in sort of understanding  
19                  what went on at the site and sort of the  
20                  magnitude of exposures, and sort of explaining  
21                  why you have already done some, even though it  
22                  is now not feasible.

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1                   So, questions for LaVon? Brad?

2                   MEMBER CLAWSON:       LaVon, I just  
3                   have one. You said that you had uncovered  
4                   some D&D data about you are going to go back  
5                   to the 1975? Or I didn't understand.

6                   MR. RUTHERFORD:       Okay. I  
7                   apologize. The D&D data we have is actually  
8                   from the later years, 1990 through 1994  
9                   period, or 1988 through 1994 period.

10                  We just wanted to go back,  
11                  reevaluate this data to ensure we had the  
12                  proper methodology for that period. It is not  
13                  going to affect pre-1975. It is going to  
14                  affect the later years. You know, the 1975  
15                  through 2010 period would be the later years  
16                  of that period.

17                  MEMBER CLAWSON: I would also like  
18                  to tell you I appreciate -- I know that me and  
19                  you had talked a little bit about it, but the  
20                  remediation period that I was worried about in  
21                  covering that, I would like to tell you I  
22                  appreciate your going into a little more

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1 detail on that. Thank you.

2 MR. RUTHERFORD: Okay.

3 CHAIRMAN MELIUS: Anybody else  
4 have questions or comments? Paul?

5 MEMBER ZIEMER: This operations  
6 office appears to be very different from most  
7 operations offices which are administrative.  
8 It looks like this is more of a worksite for  
9 actual uranium work.

10 Were there any administrative  
11 offices that were at all separate from where  
12 all this work was done?

13 MR. RUTHERFORD: Actually, the  
14 administrative offices were added later on.  
15 Up until -- and I can't remember the years,  
16 and Tom Tomes, who is actually the lead on  
17 this evaluation, he is on the line. He might  
18 be able to answer in more detail.

19 But I will say that most of the  
20 administrative offices for the activities, the  
21 NURE program and all these other activities  
22 that occurred in later years were added on

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1 later on. So, the early operations, the  
2 actual operations of the mill and the pilot  
3 plant, and so on, were the main buildings on  
4 the site.

5 CHAIRMAN MELIUS: Tom, if you are  
6 on the line, if you want to comment?

7 MR. TOMES: Yes, I am here.

8 CHAIRMAN MELIUS: Okay.

9 MR. TOMES: The site added various  
10 projects. I think they started as early 1947  
11 and there was various activities there over a  
12 period of time that started in late 1947.

13 CHAIRMAN MELIUS: And I think  
14 Paul's question was, when did sort of the  
15 office operations start there? Do you know?

16 MR. RUTHERFORD: Tom, I think what  
17 Dr. Ziemer was questioning was, were there  
18 separate office or admin buildings on the site  
19 in the early years? I am taking the point  
20 those individuals might not have been exposed  
21 to operations that we could have -- if there  
22 was any thought of eliminating a Class based

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1 on that? So, were there any facilities or  
2 buildings that were completely strictly  
3 administrative that were separated out from  
4 the other operations onsite?

5 (No response.)

6 MR. KATZ: It sounded like he was  
7 having trouble with his phone.

8 CHAIRMAN MELIUS: Yes, why don't  
9 we wait a second?

10 MR. TOMES: Hello. This is Tom  
11 Tomes.

12 CHAIRMAN MELIUS: Did you hear the  
13 question that LaVon --

14 MR. TOMES: Yes, I heard part of  
15 it. I lost my connection briefly.

16 CHAIRMAN MELIUS: Yes, that's what  
17 we thought.

18 LaVon, why don't you repeat it?

19 MR. RUTHERFORD: Yes. Tom, what  
20 Dr. Ziemer is looking for, is there any  
21 information there were administrative  
22 buildings that were separate from the

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1 operations onsite, maybe in the early years,  
2 that those individuals may have not been  
3 exposed to the activities?

4 MR. TOMES: I believe in 1947 is  
5 when they started using the site for the  
6 center for raw materials program. So, there  
7 were administrative functions as early as  
8 1947. Over the period of time, different  
9 functions were added in the later years. I  
10 don't know how well those can be separated as  
11 far as commingling in other areas of the site.

12 As a general rule, the  
13 administrative areas on the north part of the  
14 plant and the drum areas on the south part of  
15 the plant, but I have not really looked at how  
16 well those can be separated out.

17 MR. RUTHERFORD: I can say, based  
18 on the data that we have, we have no  
19 indication that we could separate individuals  
20 from that.

21 MEMBER ZIEMER: Well, if I might  
22 comment further, my guess is in a site like

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1 this even the administrative people are out in  
2 the spaces quite a bit. This is, as I said, a  
3 very different-looking situation than many  
4 operations offices where they are sometimes  
5 not even close to the site that they are  
6 administering.

7 MR. RUTHERFORD: I agree. When we  
8 first got the petition in, I thought Grand  
9 Junction Operations Office, it is an  
10 operations office; what could they have been  
11 doing.

12 CHAIRMAN MELIUS: Any? Josie,  
13 yes?

14 MEMBER BEACH: Yes. LaVon, could  
15 you explain a little bit about the x-rays?  
16 The ER says that x-rays, some of them were  
17 onsite; some of them were off, and prior to  
18 1947 it was unclear whether the x-rays were  
19 taken on- or offsite. But your feasibility  
20 says that you can reconstruct during those,  
21 1943 to 1975?

22 MR. RUTHERFORD: Right. Well,

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1 since we could not determine whether they were  
2 on- or offsite, we will include x-ray dose for  
3 all workers because we will assume they were  
4 conducted onsite. So, we will use our  
5 standard methodologies for doing the x-rays.

6 Again, those would be not  
7 presumptive cancers in the early years up  
8 through 1975, because we would be adding a  
9 Class for that period.

10 MEMBER BEACH: And, then, one  
11 other followup, a different question. On the  
12 homes, the different buildings offsite that  
13 stored, could you give a little bit more  
14 information on who is covered or not covered?

15 MR. RUTHERFORD: I can tell you  
16 that, through brief discussions with the  
17 Department of Labor, there is no indication  
18 that we can separate out individuals that  
19 would be working onsite and individuals who  
20 were working offsite.

21 We have noticed that as well from  
22 the dosimetry data we have. We can't really

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1 tell necessarily whether the activity was  
2 onsite or offsite.

3 Based on that, anyone, any claim  
4 that would be accepted would be assumed to be  
5 onsite and, therefore, included in the Class  
6 up through 1975.

7 Did that answer it?

8 MEMBER BEACH: Mr. Poston is  
9 saying no. I guess I am wondering, if a  
10 worker was onsite and they took the drums,  
11 stacked the drums, those individuals would be  
12 covered. So, if there's offsite workers  
13 associated with that, they would not be  
14 covered?

15 MR. RUTHERFORD: If there are  
16 workers that worked offsite only and the  
17 Department of Labor did not accept their claim  
18 because they worked offsite only, and they  
19 could prove it, then they would not be  
20 covered.

21 My point, the point I am getting  
22 at is that, yes, there were activities that

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1 occurred offsite, and under the program those  
2 activities would not be covered under this  
3 program. But the problem the Department of  
4 Labor has is identifying individuals that  
5 solely worked offsite.

6 CHAIRMAN MELIUS: Okay? Is that  
7 helpful?

8 MEMBER BEACH: Yes.

9 CHAIRMAN MELIUS: Okay, yes. It  
10 is a covered site issue that is tricky.

11 MR. RUTHERFORD: Yes.

12 CHAIRMAN MELIUS: Anybody else  
13 with questions or comments?

14 (No response.)

15 Okay. If not, what does the Board  
16 wish to do? Do I hear a motion?

17 MEMBER MUNN: It was my  
18 understanding that they were asking for an  
19 opportunity to do a little more work.

20 CHAIRMAN MELIUS: On the latter  
21 part only.

22 MEMBER MUNN: Yes.

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1                   MR. RUTHERFORD:     And, actually,  
2     the opportunity to do a little more work is  
3     solely for the later years.     We fully are  
4     complete with our evaluation for the 1943  
5     through 1975 period.     We can't reconstruct  
6     dose for that period.

7                   That will not change with our  
8     further evaluation.     Our further evaluation is  
9     solely looking at the later years.     So, we  
10    feel that the Board, I mean it is obviously  
11    your prerogative to move forward with that  
12    recommendation.

13                  CHAIRMAN MELIUS:    I actually am a  
14    little bit out of order here.     We may have a  
15    petitioner on the line.     I don't believe the  
16    petitioner wanted to provide comments, but I  
17    at least want to make that offer right now.  
18    There is no obligation.     You don't need to,  
19    but if you would like to, you may.

20                  PUBLIC PARTICIPANT:    No, thank  
21    you.

22                  CHAIRMAN MELIUS:    Okay.     Thank

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1 you.

2 Okay, Wanda?

3 MEMBER MUNN: I move that we  
4 accept the NIOSH recommendation that an SEC be  
5 granted for the employees of the Grand  
6 Junction Operations Office for the years 1943  
7 through 1975.

8 CHAIRMAN MELIUS: Okay, thank you.

9 MEMBER POSTON: I second it.

10 CHAIRMAN MELIUS: Thank you. We  
11 have a second from --

12 MEMBER CLAWSON: I second it.

13 CHAIRMAN MELIUS: No, the Chair  
14 rules that, actually, Dr. Poston made the  
15 second. I think we have to follow procedures  
16 here today.

17 Any further discussion?

18 Questions?

19 (No response.)

20 If not, let Ted do the roll call.

21 Yes, Henry, I'm sorry.

22 MEMBER ANDERSON: Do we have any

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1 timeline for when the rest of the evaluation  
2 will be done?

3 MEMBER BEACH: He said May.

4 MEMBER ANDERSON: May?

5 MEMBER CLAWSON: The question was  
6 you said that you had some further evaluation  
7 to do in the later years, and we were looking  
8 at the timeframe. And I believe you said the  
9 May --

10 MR. RUTHERFORD: Yes, it is,  
11 actually, we plan to have a report complete in  
12 time for the May meeting and will present at  
13 the May meeting.

14 MR. KATZ: Dr. Anderson?

15 MEMBER ANDERSON: Yes.

16 MR. KATZ: Ms. Beach?

17 MEMBER BEACH: Yes.

18 MR. KATZ: Mr. Clawson?

19 MEMBER CLAWSON: Yes.

20 MR. KATZ: Dr. Field?

21 MEMBER FIELD: Yes.

22 MR. KATZ: Mr. Gibson?

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1 MEMBER GIBSON: Yes.

2 MR. KATZ: Mr. Griffon?

3 MEMBER GRIFFON: Yes.

4 MR. KATZ: Dr. Lemen?

5 MEMBER LEMEN: Yes.

6 MR. KATZ: Let me just check in  
7 case. Dr. Lockey, have you joined us yet?

8 (No response.)

9 Okay. He's absent. I will  
10 collect his vote after.

11 Dr. Melius?

12 CHAIRMAN MELIUS: Yes.

13 MR. KATZ: Ms. Munn?

14 MEMBER MUNN: Yes.

15 MR. KATZ: Dr. Poston?

16 MEMBER POSTON: Yes.

17 MR. KATZ: Mr. Presley?

18 MEMBER PRESLEY: Yes.

19 MR. KATZ: Dr. Richardson?

20 MEMBER RICHARDSON: Yes.

21 MR. KATZ: Dr. Roessler?

22 MEMBER ROESSLER: Yes.

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1 MR. KATZ: Mr. Schofield?

2 MEMBER SCHOFIELD: Yes.

3 MR. KATZ: Dr. Ziemer?

4 MEMBER ZIEMER: Yes.

5 MR. KATZ: All in favor, 11 in  
6 favor, one vote to collect. The motion  
7 passes.

8 CHAIRMAN MELIUS: Excellent.

9 We are a little bit ahead of  
10 schedule. In fact, we are quite a bit ahead  
11 of schedule. We really shouldn't start  
12 discussing Linde until 9:30. We have one  
13 Board Member who will be on then as well as  
14 the petitioners.

15 So, why don't we start a little  
16 bit of our Board work session and catch up and  
17 maybe have a little longer break after Linde  
18 if we are on schedule?

19 So, Mark, since you're here and we  
20 skipped you yesterday, are you ready for the  
21 DR Subcommittee report or would you rather --

22 MEMBER GRIFFON: Can I do it

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1 later?

2 CHAIRMAN MELIUS: You can, yes.

3 MEMBER GRIFFON: I wasn't  
4 expecting the Work Group and Subcommittee  
5 updates yet.

6 CHAIRMAN MELIUS: Yes, okay. I  
7 will tell you your fellow Subcommittee Chair  
8 yesterday was also surprised, and she went  
9 right ahead.

10 (Laughter.)

11 MEMBER GRIFFON: She's better than  
12 I.

13 (Laughter.)

14 CHAIRMAN MELIUS: How about Los  
15 Alamos? We also skipped that. Would you  
16 rather wait on that one also?

17 MEMBER GRIFFON: Well, Los Alamos,  
18 I can probably do an update because there's  
19 not much information.

20 CHAIRMAN MELIUS: Yes.

21 MEMBER GRIFFON: The Los Alamos  
22 Work Group was scheduled to meet prior to this

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1 meeting, and it was cancelled at NIOSH's  
2 request because, basically, they weren't going  
3 to have much chance to finish action items  
4 prior to that Work Group meeting. So, we  
5 cancelled it. We rescheduled it in -- and I'm  
6 going off the top of my head here -- May. It  
7 is before the May Board meeting.

8 MEMBER BEACH: May 2nd.

9 MEMBER GRIFFON: May 2nd. Thank  
10 you. May 2nd.

11 So, the status stands from our  
12 last meeting. So, really nothing to report,  
13 but we did reschedule our next meeting and  
14 hope to make progress in the Work Group  
15 meeting before the next Board meeting.

16 CHAIRMAN MELIUS: Stu or anybody  
17 from NIOSH have comments?

18 MR. HINNEFELD: No, that's pretty  
19 much accurate. I mean it is the same  
20 situation as always. You know, competing  
21 interests and competing priorities and, also,  
22 getting information from the site. It is the

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1 same issues as always.

2 CHAIRMAN MELIUS: Okay. Pantex?

3 MEMBER CLAWSON: We did in January  
4 have a Work Group meeting that we came down  
5 with. Numerous issues that we have is  
6 adequacy of internal data, internal dose  
7 model, the estimates on plutonium, thorium,  
8 tritium.

9 But, basically, a lot of the key  
10 issues that NIOSH responded to us is their  
11 theory to be able to back-extrapolate from the  
12 1990s back into the late forties using 1990  
13 data. This has been tasked to NIOSH. They  
14 are to bring us their basis for this. This is  
15 one of the things that we are waiting on.

16 The tour I believe that we had  
17 down there helped out an awful lot to be able  
18 to understand the operations, and so forth,  
19 and the premise that NIOSH has that it was a  
20 clean site I think went somewhat away, but  
21 they are going to explain to us how they are  
22 going to be able to do the process. This has

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1       been tasked, and Mark Rolfes is working on  
2       that. They are supposed to have this for us  
3       for the next Work Group meeting.

4                       We don't have a Work Group meeting  
5       at this time scheduled until we have a due  
6       date for this information.

7                       CHAIRMAN MELIUS:       And on the  
8       schedule that Ted circulated, the due date  
9       appears to be late February.

10                      MEMBER CLAWSON:   Right. Well, now  
11       we do have some other issues. Dealing with a  
12       site like this, we have a lot of  
13       classification issues.

14                      CHAIRMAN MELIUS:   Right.

15                      MEMBER CLAWSON:   It is not going  
16       to be a Work Group meeting; it is going to be  
17       more of an informational sharing in Germantown  
18       with SC&A and NIOSH and Members of the Work  
19       Group, if possible, to able to review the  
20       information that is out there in a classified  
21       setting, to be able to discuss this.

22                      CHAIRMAN MELIUS:   Right.

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1                   MEMBER CLAWSON:     That should be  
2     coming up.   We are looking at possibly in the  
3     next month.

4                   CHAIRMAN MELIUS:     Okay.     And,  
5     then, what about NIOSH's response?     The  
6     schedule I have in front of me says the end of  
7     February.    I am just trying to get when you  
8     would actually have a Work Group meeting to  
9     deal with not the classification issues, but  
10    the SEC issues.

11                  MEMBER CLAWSON:     That we are still  
12    waiting for.   I have not had a response back  
13    yet of an exact due date.   We were looking at  
14    the end of February timeframe, but that is  
15    coming close.

16                  CHAIRMAN MELIUS:     Well, that is  
17    why I am trying to pin this down and get a  
18    Work Group schedule.   Sometimes it is easier  
19    to at least start getting dates while we are  
20    here rather than waiting.   So, I don't know if  
21    NIOSH has an estimated delivery date or a  
22    realistic delivery date for this information

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1 that we can do that.

2 Stu, if you want to check back and  
3 then we can talk about it later?

4 MR. HINNEFELD: I just was going  
5 to say the latest information I have is from  
6 our work planning document, which has that  
7 late February date.

8 CHAIRMAN MELIUS: Yes.

9 MR. HINNEFELD: I can check the  
10 validity of the date and talk to Brad about  
11 some potential dates.

12 CHAIRMAN MELIUS: Okay. Yes.

13 MR. HINNEFELD: Presumably, after  
14 the trip to Washington, which we are working  
15 to set up now.

16 CHAIRMAN MELIUS: Right. Yes.

17 MR. KATZ: Just to remind, I think  
18 what we said in the Work Group teleconference  
19 that we had was that we would have this secure  
20 meeting to look at these classified documents,  
21 and that that would be the right time to  
22 figure out a date for the Work Group meeting,

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1 but shooting for before the Board meeting.  
2 But that would make matters clearer as to the  
3 path forward, and then we should have in hand  
4 responses from DCAS as well.

5 CHAIRMAN MELIUS: Okay. Yes. I  
6 mean I just don't want to be too pushy on  
7 this, but this uncertainty about when the  
8 meeting is with DOE and then you wait, you  
9 know, if that doesn't occur until April, then  
10 by the time people clear their schedule and do  
11 that, then we are past our next meeting. So,  
12 if we can pin things down -- I understand the  
13 uncertainties, but maybe after Stu checks and  
14 talks to Brad, we can --

15 MEMBER CLAWSON: What Ted said was  
16 true, but at the last Work Group meeting NIOSH  
17 was tasked with bringing back their basis for  
18 why they feel that they can do this. This is  
19 supposed to have been being worked on because  
20 we have not got a basis of why they think they  
21 can back-extrapolate.

22 CHAIRMAN MELIUS: Right.

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1                   MEMBER CLAWSON:     And they have  
2     been working, they are supposed to have been  
3     working on that and get that.  Because this is  
4     the whole basis of what the issue is besides  
5     the data inadequacy, and so forth.

6                   But we had not been able to see  
7     each other's material that we had.

8                   CHAIRMAN MELIUS:    Thank you, Brad  
9     and Stu.

10                  Any other Board Members have  
11     questions?

12                  (No response.)

13                  No?  Okay.  Pinellas?

14                  MEMBER SCHOFIELD:  Pinellas?

15                  CHAIRMAN MELIUS:  Yes.

16                  MEMBER SCHOFIELD:     Tentatively,  
17     there are three items that should be ready in  
18     probably the next week, sometimes this month  
19     or part of next month.  I mean this month or  
20     next month.

21                  And once those come out and SC&A  
22     has had a chance to see them, then we are

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1 going to schedule a Work Group meeting for  
2 Pinellas.

3 CHAIRMAN MELIUS: Yes, I don't  
4 even see the site on the list.

5 Piqua?

6 MEMBER POSTON: At the last  
7 meeting, we realized that we had not tasked  
8 SC&A to look at the results from NIOSH. And  
9 so, they have done that. They have published  
10 a report. I haven't had a chance to digest it  
11 completely.

12 My understanding is that they  
13 basically do not have any issues. They agree  
14 with the way NIOSH is going to handle  
15 carbon-14 and tritium in the Piqua organic  
16 reactor.

17 And so, the next item of business  
18 would be to review that report and schedule a  
19 Work Group meeting probably by telephone  
20 because I think we are ready to take some  
21 action as soon as possible. But, first, I  
22 need to look at the report a little bit

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1 better. I think the Work Group Members also  
2 need to review that.

3 CHAIRMAN MELIUS: Good.

4 Mike, Santa Susana?

5 MEMBER GIBSON: Jim, as far as I  
6 know, we are still on schedule. I have NIOSH  
7 completing some actions in April and have a  
8 Work Group meeting during that month,  
9 hopefully.

10 CHAIRMAN MELIUS: Good.

11 Savannah River we will hear about  
12 later today.

13 SEC Issues Work Group, we need to  
14 do a followup on the 250-day issue. But other  
15 than that, we don't have anything outstanding  
16 for that.

17 TBD-6000? I know it has been  
18 renamed.

19 MEMBER ZIEMER: Right. We used to  
20 be 6000-6001, but that has been broken out.

21 There's three things. On  
22 TBD-6000, the document itself, all of the

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1 matrix issues have been resolved and there is  
2 a revision that is resulting from that. NIOSH  
3 is planning to revise the document. I don't  
4 believe a firm date has been established for  
5 that. But, basically, the Work Group is done  
6 with TBD-6000.

7 Then, there are two facilities,  
8 one of which we will hear about a little  
9 later this morning. That is Bliss & Laughlin.

10 Then, the other one is General Steel  
11 Industries.

12 You will notice on the first page  
13 of the list of various tasks that you have  
14 been referring to, Dr. Melius, we have  
15 something like 10 documents that NIOSH is  
16 working on which are the result of recent  
17 updates in the source-terms. So, NIOSH is  
18 developing exposure models for all of the  
19 various source-terms there and some related  
20 issues. That is the good news.

21 The bad news is we don't have  
22 scheduled dates on those. There are some

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1 concerns because General Steel, of course, has  
2 been before us for several years now, and I am  
3 just going to term it in that way. It has  
4 been a long time. I know the petitioners are  
5 quite anxious for the SEC petition to be acted  
6 upon. So, we do need to have NIOSH establish,  
7 with looking at the various priorities,  
8 schedules for these deliverables.

9 And, of course, once they are  
10 delivered, then SC&A will be reviewing them.  
11 So, there is concern that this will stretch  
12 out, you know, again. I will simply note for  
13 the record that the Work Group is concerned  
14 about the time schedule.

15 But that is the status of General  
16 Steel and, as I say, Bliss & Laughlin we have  
17 pretty much concluded, and we will have a  
18 recommendation here shortly on that at this  
19 meeting.

20 CHAIRMAN MELIUS: Stu, can you  
21 help us a little bit on some scheduling on  
22 General Steel? Is there anything?

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1                   MR. HINNEFELD:   We are doing what  
2                   we can internally to try to speed up this  
3                   process a little bit on General Steel by  
4                   making some reassignments of people and tasks  
5                   from people, so that the key people have more  
6                   time to work on this.   So, we are trying to  
7                   accelerate this as much as we can, yes.

8                   CHAIRMAN MELIUS:   If I understand  
9                   the assignment, I believe Dave Allen has been  
10                  Linde's --

11                  MEMBER ZIEMER:     Yes, and Dave  
12                  Allen, of course, has more than General Steel  
13                  that he is working on.

14                  CHAIRMAN MELIUS:   Right.

15                  MEMBER ZIEMER:   So, I think it is  
16                  a combination of personnel and resource  
17                  issues, and NIOSH has limitations as well.  Of  
18                  course, all of the Work Group Chairs know that  
19                  their site is the highest priority, and I  
20                  haven't been able to convince them all that it  
21                  is really General Steel.

22                                   (Laughter.)

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1                   But, in any event, NIOSH is  
2 working on this issue, and we appreciate that  
3 and hope to have these documents in the near  
4 future.

5                   CHAIRMAN MELIUS: Okay. Thanks.

6                   Anybody else have questions or  
7 comments?

8                   (No response.)

9                   Okay. TBD-6001?

10                  MEMBER ANDERSON: Yay, 6001!

11                  (Laughter.)

12                  We have a tentative --

13                  CHAIRMAN MELIUS: By far, the most  
14 important Work Group.

15                  (Laughter.)

16                  MEMBER ANDERSON: Right, the most  
17 important Work Group with three sites.

18                  We are currently holding March  
19 15th as a possible date. We are now querying  
20 to see where we are with NIOSH, and there may  
21 be some conflicts with some of the staff that  
22 would need to be there. So, we may be

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1 shifting that.

2 But, the best I can tell, we are  
3 moving along. So, March or April, we would  
4 certainly have a meeting.

5 CHAIRMAN MELIUS: Yes, and at  
6 least looking at the schedule for reports,  
7 that looks to be sort of the same issue we  
8 just talked about with Paul and the other 6000  
9 Work Group.

10 MEMBER ANDERSON: Yes. Yes.

11 CHAIRMAN MELIUS: So, we can get  
12 that, though it looks like those sites, at  
13 least in terms of SECs, there's not quite as  
14 much --

15 MEMBER ANDERSON: No.

16 CHAIRMAN MELIUS: -- aging or  
17 whatever we call that.

18 MEMBER ANDERSON: Right. Yes.

19 CHAIRMAN MELIUS: Okay. Anybody  
20 have questions for Henry on that?

21 (No response.)

22 Okay. Thank you.

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1                   Weldon Springs, Mike?

2                   MEMBER GIBSON:    We had a meeting  
3                   January 25th to work off some of the open  
4                   items on the issues matrix.    That is being  
5                   done, and we tentatively have another meeting  
6                   scheduled for March 23rd.

7                   CHAIRMAN MELIUS:    Okay.    Good.

8                   Questions, anybody?

9                   (No response.)

10                  Okay.    Thanks, Mike.

11                  And you're on again, Mike, Worker  
12                  Outreach.

13                  MEMBER GIBSON:    Worker Outreach,  
14                  we are still making progress.    At the present  
15                  time, we have assigned SC&A to go off and do a  
16                  small sampling of worker comments from Rocky  
17                  Flats and to trace those back through  
18                  documents, et cetera, the transcripts, to see  
19                  how they were responded to.    They are  
20                  currently doing that.    When that is done, we  
21                  should be able to have another Work Group  
22                  meeting.

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1                   CHAIRMAN MELIUS:    Okay.  Does SC&A  
2    have a timeline on that?  I notice John left.

3                   MR. FITZGERALD:    Actually, I have  
4    been involved in that.

5                   CHAIRMAN    MELIUS:            Oh,    okay.  
6    Great.

7                   MR. FITZGERALD:    No, as Mike has  
8    pointed out, that is actively underway.

9                   CHAIRMAN MELIUS:    Okay.

10                  MR. FITZGERALD:    We probably are  
11    halfway through.  I would say another four or  
12    five weeks before we have something as a  
13    product.  That is going to depend on, I think,  
14    the interchange between some of the interviews  
15    as well as the documents, but I would think  
16    four or five weeks.

17                  CHAIRMAN MELIUS:    Okay.  Great.

18                  Anybody have comments or questions  
19    on Worker Outreach?

20                  (No response.)

21                  Okay.  We are running ahead.  What  
22    else have we got?  If I can find the piece of

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1 paper? Here we go.

2 Two things. The most  
3 straightforward one is the Scientific Issues  
4 Work Group. As I indicated, this one we had  
5 lots of volunteers for, which is good, but we  
6 have to be careful. We are limited to eight,  
7 where we hit a quorum, and so forth. We are  
8 willing to push the limit on that.

9 I was thinking, since David  
10 volunteered and suggested this, he deserves to  
11 -- I don't know if that's good or bad -- to  
12 Chair it. And I also had Dick Lemen, Gen  
13 Roessler, Jim Lockey, John Poston, Paul  
14 Ziemer, and Bill Field all volunteered. And  
15 so, we are just going to assign everybody.  
16 Wanda was interested, but recognized she was  
17 very busy. So, I think it is seven and we  
18 will leave a space open, if other people are  
19 interested in participating and listening in  
20 or being involved, just as long as we keep  
21 under a quorum.

22 I guess I would only ask some

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1 flexibility. Getting seven people scheduled  
2 for something can be difficult. So, I think  
3 if everyone can be flexible and understand  
4 that maybe not everybody can be scheduled at  
5 any point in time for a Work Group, we will do  
6 that. I appreciate the go-ahead.

7           The other issue that came up was  
8 whether we needed a Work Group or some  
9 assignment of the General Electric facility to  
10 a Work Group. My personal thinking on that  
11 was that it was a situation where we have had  
12 a lot of activity. We have information that  
13 is on the O: drive that is important. NIOSH  
14 at some point may be doing a revised  
15 Evaluation Report or an addendum, or so forth.

16 But it has gone on long enough now that I am  
17 just afraid we sort of lose continuity having  
18 somebody responsible for keeping track of it,  
19 basically, and so forth. We decided not to do  
20 it, thinking that it was going to get resolved  
21 by the next meeting, and that was probably a  
22 year and a half ago. I can't recall exactly

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1 when it first came up.

2 So, we could either do a new Work  
3 Group or we could assign it to the SEC Issues  
4 Work Group, I believe would be that.

5 MEMBER BEACH: Jim, is that the  
6 Evandale one?

7 CHAIRMAN MELIUS: Yes.

8 MEMBER BEACH: Okay.

9 CHAIRMAN MELIUS: Yes, the GE  
10 Evandale.

11 MEMBER MUNN: It would seem  
12 reasonable for it to go to the SEC Work Group.

13 CHAIRMAN MELIUS: Yes. I mean,  
14 since it sort of revolves around sort of a  
15 Class Definition issue, that is where the SEC  
16 Work Group is doing it. Right now, the SEC  
17 Work Group does not have any sort of active  
18 individual sites. So, it is not competing  
19 with anything at this point.

20 So, I guess we need a motion to  
21 that effect.

22 MEMBER MUNN: I move that the GE

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1 Evandale SEC petition be handed to the SEC  
2 Work Group for further development and  
3 closure.

4 MEMBER BEACH: And I will second  
5 that.

6 CHAIRMAN MELIUS: Okay. Thank  
7 you.

8 And further discussion?

9 (No response.)

10 If not, all in favor say aye.

11 (Chorus of ayes.)

12 Opposed?

13 Abstain?

14 Okay. We have got that.

15 Ted, do you have anything else?

16 We probably should take a short break.

17 MR. KATZ: We could do the  
18 scheduling of Board meetings.

19 CHAIRMAN MELIUS: Why don't we do  
20 that, yes.

21 MR. KATZ: Does everyone have  
22 their calendars open? So, we have meetings

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1 scheduled through the summer, the summer Board  
2 meeting being in Hanford. Following that in  
3 the fall --

4 MEMBER GRIFFON: Can you give  
5 those dates, Ted?

6 MR. KATZ: Do you want me to  
7 confirm the dates? Sure. Hanford I believe  
8 is August 23rd through the 25th.

9 And also, some of you may have  
10 already done a Hanford tour, but I am sure all  
11 of you haven't; even maybe some of the older  
12 Board Members, longer-standing Board Members  
13 haven't. So, we are going to try to arrange  
14 for a Board tour. I understand from Brad it  
15 was very good the last time they did this. It  
16 was very helpful. Let me know, Board Members,  
17 if you would like to attend. That would be  
18 the day before, since the 23rd through the  
19 25th is Wednesday through Friday, I believe.  
20 So, it would be the 22nd.

21 MEMBER MUNN: It would be Monday,  
22 the 22nd.

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1                   MR. KATZ:   Okay.   I'm sorry.   So,  
2   we will work on that with Hanford, getting  
3   that set up.   If you will just let me know of  
4   your interest, potential interest, in  
5   attending?

6                   So, then, we need a teleconference  
7   following that, and about the right timeframe  
8   is October 11th through 14th or October 17th  
9   through 21st, those weeks.   We typically do  
10  these on a Wednesday, but how do your  
11  calendars look?   So, October the 13th would be  
12  Wednesday, but, of course, it doesn't have to  
13  be.   It's the 11th through 14th, okay.

14                  MEMBER ANDERSON:   The 12th is a  
15  Wednesday.

16                  MEMBER MUNN:    So, let's do the  
17  11th.

18                  MEMBER ANDERSON:    That is a  
19  Tuesday.

20                  MEMBER ANDERSON:    Yes.

21                  MR. KATZ:    All right.   There is a  
22  conflict on Monday; that's why, right.   So, do

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1 any of those dates the 11th through 14th work?

2 MEMBER MUNN: The 11th.

3 MR. KATZ: Okay. How about the  
4 17th through 21st?

5 CHAIRMAN MELIUS: I can do  
6 starting Thursday.

7 MR. KATZ: So, how is October 20th  
8 for folks? Good, everybody? Okay.

9 MEMBER ANDERSON: Ted?

10 MR. KATZ: The 11:00 for the  
11 westerners? Absolutely, absolutely, we're  
12 very accommodating here.

13 (Laughter.)

14 Okay. So, October 20th, 11:00  
15 a.m. Eastern.

16 And, then, again, going to the  
17 next --

18 CHAIRMAN MELIUS: We can move up  
19 to nine o'clock.

20 MR. KATZ: The next face-to-face  
21 Board meeting, the right timeframe is either  
22 the week of December 5th through 9th or the

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1 week of December 12th through 16th.

2 MEMBER PRESLEY: Where is it going  
3 to be?

4 MR. KATZ: Excuse me?

5 MEMBER PRESLEY: Where is it going  
6 to be?

7 MR. KATZ: Well, we haven't  
8 determined that. That is the other thing we  
9 will have to determine. That is around  
10 university finals time, somebody said?

11 MEMBER LEMEN: What week is  
12 university final time?

13 MR. KATZ: The following week, the  
14 second week of the options.

15 MEMBER LEMEN: So, the 5th would  
16 be better.

17 MR. KATZ: Well, let's see. Does  
18 anyone have difficulty with the 5th through  
19 the 9th, that whole week?

20 CHAIRMAN MELIUS: I can't --

21 MEMBER LEMEN: When did you  
22 decide?

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1                   MR. KATZ:     We haven't decided.  
2     We're discussing this.

3                   So, it sounds like the 12th  
4     through the 16th is problematic for people who  
5     have university posts. The 5th through the  
6     9th doesn't work as well because we need our  
7     Chair.

8                   Obviously, we can move on. It  
9     just means we are compressing the time between  
10    Board meetings.

11                  MEMBER LEMEN:    What is wrong with  
12    the first week? What's wrong with the last  
13    week in November?

14                  MEMBER MUNN:    I won't be in the  
15    country.

16                  MR. KATZ:     For the week of the  
17    29th, you're not in the country?

18                  MEMBER MUNN:    No, November is gone  
19    for me.

20                  MEMBER BEACH:    So, Ted, though,  
21    the 7th, 8th, 9th, that's not good, the end of  
22    the week? No?

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1                   MR. KATZ:     It doesn't work for  
2     Jim.

3                   MEMBER MUNN:    So, there were too  
4     many of us who couldn't make the week of the  
5     5th, the tail-end of that?

6                   MEMBER ZIEMER:   The Chair can't.

7                   MEMBER MUNN:    The Chair can't.  
8     Oh, well, hey.

9                   MEMBER ANDERSON:   So, the end of  
10    the week of the 12th or the start of it?

11                  CHAIRMAN MELIUS:    Well, let me  
12    check and see if I can move something, if that  
13    week of the 5th looks good otherwise.

14                  MR. KATZ:     Well, let me just make  
15    certain. Does that week work for everyone but  
16    the Chair?

17                  MEMBER MUNN:    Well, the end of the  
18    week does.

19                  MR. KATZ:     So, you were saying the  
20    7th, 8th, 9th?

21                  MEMBER MUNN:    The 7th, 8th, and  
22    9th would work, yes.

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1 MR. KATZ: Okay. So, we will see  
2 how this works for Jim.

3 MEMBER ZIEMER: Is Pearl Harbor  
4 Remembrance Day a government holiday?

5 MEMBER MUNN: I don't think so.

6 MEMBER ZIEMER: No?

7 MR. KATZ: It is not. It is not.

8 So, we are just going to pencil it  
9 in for now, the 7th through the 9th, but we  
10 will wait on Jim.

11 CHAIRMAN MELIUS: I should be able  
12 to --

13 MR. KATZ: Oh, okay. So, we're  
14 good for that.

15 MEMBER LEMEN: Someplace with a  
16 lot of snow would be interesting.

17 MR. KATZ: Yes. Well, one  
18 location we have tried to get to  
19 unsuccessfully, because there wasn't  
20 availability, was Nashville. That is probably  
21 not a problem, then, right, on a normal year?

22 I know this year has been extraordinary, but

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1 --

2 MEMBER PRESLEY: December is  
3 always cold in east Tennessee.

4 MEMBER ROESSLER: What is your  
5 definition of cold?

6 (Laughter.)

7 MEMBER PRESLEY: Well, not like it  
8 is in your area.

9 MR. KATZ: Yes, you're probably  
10 used to cold.

11 MEMBER POSTON: Ted, we have never  
12 been to Pinellas.

13 MR. KATZ: Never been to --

14 MEMBER POSTON: We have never been  
15 to Pinellas.

16 CHAIRMAN MELIUS: We were --

17 MEMBER POSTON: Did we? It must  
18 have been a long time ago.

19 CHAIRMAN MELIUS: Yes, a long time  
20 it was.

21 MR. KATZ: But speak up with other  
22 options for locations because that is

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1 something we would work on at the same time.

2 CHAIRMAN MELIUS: Are we going to  
3 be ready for doing something at Pinellas?

4 MEMBER SCHOFIELD: Yes, we should  
5 have something by then.

6 MR. KATZ: The question is whether  
7 we will be through with Pinellas by then.

8 MEMBER MUNN: Is anything going to  
9 be going on in California? Will we be  
10 anywhere near doing something with Santa  
11 Susana by then?

12 CHAIRMAN MELIUS: We could be  
13 back. I actually think Pinellas would be --

14 MEMBER CLAWSON: It has been a  
15 long time since we have been to Pinellas. I  
16 think that we owe them --

17 MR. KATZ: Is that the first  
18 choice then over Nashville? Tampa? Shall we  
19 have Nashville has a second option?

20 CHAIRMAN MELIUS: Yes.

21 MR. KATZ: Okay. We will work on  
22 that after we are certain we are doing it that

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1 week.

2 Thank you.

3 CHAIRMAN MELIUS: So, the next  
4 item on our agenda is the Linda Ceramics SEC.

5 MR. KATZ: And before we get  
6 started with that, I just want to note I have  
7 emailed to everyone a number of documents that  
8 I just emailed this morning. Two documents  
9 from one of the petitioners, Antoinette  
10 Bonsignore, that she sent me this morning I  
11 have sent to all of you at your various email  
12 addresses, and, also, a letter that went from  
13 Stu Hinnefeld, from DCAS, to Antoinette in  
14 response to an issue that she raised, I  
15 believe, at a teleconference as well as at one  
16 of the Work Group meetings. So, you should  
17 all have those.

18 Thank you.

19 CHAIRMAN MELIUS: Okay. So, Gen,  
20 do you want to -- I don't know if you were  
21 going to do a presentation or what the plan  
22 was for this meeting.

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1                   MEMBER ROESSLER: I think I should  
2 do a presentation. Could we check first to  
3 see if Dr. Lockey is on the phone?

4                   CHAIRMAN MELIUS: Yes, good point.  
5 Jim Lockey, are you on the line?

6                   MEMBER LOCKEY: Yes, Jim, I am.

7                   CHAIRMAN MELIUS: Okay, good. We  
8 are just starting Linde. I don't know how  
9 long you have been listening, but we are just  
10 getting going.

11                   MEMBER ROESSLER: Okay. Board  
12 Members should have two items in the  
13 information for the Board meeting. And  
14 actually, you got both of these items last  
15 week.

16                   There is the new NIOSH Evaluation  
17 Report that was issued on January 28th. I  
18 hope you have read that. My view of that is  
19 it is very concise, very well-written, and it  
20 covers all of the information items that you  
21 might need background information on.

22                   Also, I put in the packet the

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1 notes that I am going to go over here shortly.

2 So, you can look at that.

3 Just as a reminder, we are talking  
4 about the Linde Ceramics SEC-00107. That is  
5 the period from January 1st, 1954 through July  
6 31st, 2006. This is called the residual  
7 period.

8 I will briefly mention a few  
9 things about the operations at Linde. This is  
10 a pretty straightforward site, not a big site  
11 and not terribly complicated.

12 In 1942 to 1949, they did uranium  
13 separation there. Five buildings were  
14 involved. The buildings I have listed further  
15 down, primarily Building 30, the main  
16 operations building, and, then, also,  
17 Buildings 14, 31, 37, and 38.

18 The ore handling stopped in 1946,  
19 and the oxide or green salt handling ended in  
20 July 1949.

21 I have attached to this report,  
22 just so you can have easy access to it, if you

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1 have questions about any of the operations or  
2 the timeline, I have attached pages out of the  
3 ER, pages 15 and 16 and, also, a timeline on  
4 page 17 from the ER. So, you can refer to  
5 that.

6 From the time of shutdown in 1949  
7 and prior to 1954 was the decontamination and  
8 the comprehensive cleanup period.

9 The sources of exposure, again,  
10 pretty straightforward, were only due to  
11 uranium and uranium progeny in soils,  
12 buildings, and also in tunnels.

13 NIOSH has said that they have  
14 access to survey data, including air  
15 monitoring data for both the decontamination  
16 activities before 1954 and several distinct  
17 major investigations during this residual  
18 period. The latter were associated with the  
19 FUSRAP survey activities, and these include  
20 soil characterizations, building surveys, air  
21 sampling results. NIOSH also has source-term  
22 information for onsite uranium and uranium

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1 progeny during the operational period.

2 As far as the proposed method for  
3 calculating doses, there is much more detail  
4 in the revised ER. External doses, the  
5 workers during this period were not radiation  
6 workers. Therefore, monitoring was not  
7 required, was not believed necessary. And Jim  
8 Neton had more to say about this particular  
9 thing during residual periods yesterday.

10 There was limited external  
11 personnel dosimetry data. However, NIOSH has  
12 a proposal for calculating external doses, and  
13 I will comment that during our Work Group  
14 meetings there was really not much concern  
15 about this proposal.

16 The main concentration during our  
17 Work Group meetings was on calculating the  
18 internal radiation doses. Again, here I will  
19 note there was no personnel bioassay  
20 monitoring results available during this time.

21 We looked at primarily at Building  
22 30, the primary processing building, because

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1 it was the most contaminated according to the  
2 FUSRAP reports.

3 There are two areas of interest  
4 when doing the internal radiation doses for  
5 this facility. No. 1 is the air particulates.

6 This, for evaluation, was divided really into  
7 three periods.

8 For 1954 to 1969, it is assumed  
9 that the concentration at all times, the  
10 proposal to do dose calculations, the  
11 concentration at all times was equal to that  
12 measured during the earlier decontamination  
13 period when pneumatic hammers were used. This  
14 is thought to be a worst-case scenario. At  
15 that time, they used these hammers to remove  
16 the concrete floor.

17 Another period, then, was the  
18 first six years after 1969. As far as air  
19 particulates goes, it is proposed to use a  
20 1969 value in a straight line decay to the  
21 measured 1976 value. And, of course, there  
22 are much more details on this in the ER.

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1           For the third period, then, from  
2     1976 to 2006, this value would be held  
3     constant. This follow the OTIB-70 approach  
4     here in order to be claimant-favorable.

5           Another area would be the radon  
6     doses. Radon source-term was measured during  
7     production, and it would be used as a constant  
8     upper bound for the 1954 to 1969 renovation  
9     period.

10          Then, the radon level would be  
11     assumed to decline from the bounding 1969  
12     value to a lower 1981, and that is a measured  
13     value and held steady to 2006.

14          The other area that we discussed  
15     rather extensively during our Work Group  
16     meetings, and for which we have a revision or  
17     a revised approach in the new ER, is how to  
18     calculate doses in the utility tunnels. And  
19     again, here we have the two sources, the air  
20     particulates and radon. These exposures would  
21     have been from contaminated soils,  
22     contaminated walls, and surrounding soil.

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1           I will mention that these tunnels,  
2       built in 1957 and 1961, were not used to  
3       transport or to store radioactive materials.  
4       They were just used for, I assume, people  
5       walking back and forth, and so on.

6           The approach here, doses from air  
7       particulates would be based on bounding  
8       estimates from a 2001 survey. And the  
9       approach, then, that we had not had when I  
10      presented this whole information to you at our  
11      November meeting was on how to calculate radon  
12      in these tunnels. The method now that has  
13      been presented and agreed upon between NIOSH  
14      and SC&A, it is a method that Dr. Field  
15      suggested. It is that the bounding for the  
16      radon levels would be based on the known  
17      distribution of radon concentrations in  
18      basements near the Linde facility, quite a  
19      number of measurements there, and expanded by  
20      using all of the available Linde plant  
21      measurements from a set of boreholes in the  
22      soil. And if you have questions on any of

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1 this, I am sure we have people who can expand  
2 on that.

3           Anyway, then, NIOSH's evaluation  
4 -- and I will read it -- is that, "Based on  
5 its full research of the Class under  
6 evaluation, NIOSH has obtained air monitoring  
7 data, soil sampling data, and radiation  
8 contamination survey data from the cleanup  
9 period occurring prior to 1954, and for the  
10 time period evaluated in this report. Based  
11 on its analysis of these available resources,  
12 NIOSH found no part of the Class under  
13 evaluation for which it cannot estimate  
14 radiation doses with sufficient accuracy."

15           Of course, throughout this whole  
16 procedure, the Work Group and SC&A reviewed  
17 all of this. SC&A's review -- and I will read  
18 that -- "After extensive review and revised  
19 approaches by NIOSH for bounding of radiation  
20 doses, SC&A reported to the Work Group that it  
21 concurs with the NIOSH methodology in all  
22 aspects," all methods for bounding dose.

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1                   Now, with regard to the Work  
2                   Group, and you heard this when we made our  
3                   presentation -- Josie and I made a formal  
4                   presentation at our last face-to-face Board  
5                   meeting -- Dr. Lockey and I agree with the  
6                   NIOSH approach and SC&A's concurrence that  
7                   radiation doses can be reconstructed as per  
8                   EEOICPA and 42 CFR 83.13. I think we have  
9                   carefully reevaluated what our rules are with  
10                  regard to 42 CFR 83.13 to try to assure  
11                  ourselves that this is accurate.

12                  Our Work Group Members, Josie  
13                  Beach and Mike Gibson, disagreed. If you  
14                  recall, they presented, I think, three or four  
15                  slides with their concerns. I have tried to  
16                  summarize on here their type of concerns.  
17                  And, Josie and Mike, you can add to this if  
18                  you would like.

19                  They included the "lack of  
20                  bioassay film badge monitoring, air sampling,  
21                  field monitoring data for" -- and this was  
22                  their quote -- "the renovation period and use

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1 of surrogate data."

2 That is kind of the end of the  
3 report that you have in front of you. My  
4 thoughts I will add to this. And, then, if it  
5 is appropriate, I will go ahead and make a  
6 motion, so we get things moving here and can  
7 have some discussion.

8 CHAIRMAN MELIUS: Well, first, I  
9 think we need to, first, why don't you add  
10 your comments? I think we also need to hear,  
11 we should hear from the petitioners.

12 MEMBER ROESSLER: Oh, okay, sure.

13 CHAIRMAN MELIUS: Yes, because  
14 normally we do after a report. If people  
15 have, also, questions about the report, I  
16 guess the questions, I don't think that Gen  
17 should have to bear all the questions.

18 MEMBER ROESSLER: Thank you.

19 CHAIRMAN MELIUS: Because we have  
20 SC&A and NIOSH here also.

21 MEMBER ROESSLER: Okay. I guess  
22 my question to you would be, do you want a

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1 motion first or do you want discussion first?

2 CHAIRMAN MELIUS: Why don't we  
3 take discussions, so there's questions, and so  
4 forth?

5 MEMBER BEACH: Gen, we tabled the  
6 motion at the last meeting.

7 MEMBER ROESSLER: Did we have a  
8 motion?

9 MEMBER BEACH: Wanda made a motion  
10 for the radon, and it is tabled.

11 MEMBER ROESSLER: Oh, that's  
12 right. Then, I don't have to make a motion.

13 CHAIRMAN MELIUS: Okay. That  
14 would be fine.

15 MEMBER ROESSLER: So, I will just  
16 add one thing about my thoughts. I have  
17 already mentioned this, and maybe Dr. Lockey,  
18 who is on the phone, would want to make some  
19 comments, too, or maybe he wants to wait until  
20 later.

21 But my thought is that this is not  
22 a big or a complicated site. We only had one

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1 process going on there, nothing mysterious  
2 happening. There were five buildings in the  
3 utility tunnels. They are the only areas of  
4 exposure.

5 So, I think we have a pretty  
6 straightforward approach to doing the  
7 bounding, and bounding is an accepted way of  
8 approaching dose reconstruction.

9 So, that is just my comment.

10 CHAIRMAN MELIUS: Okay. I think  
11 we are going to follow normal order, and so  
12 forth. I didn't realize we had a motion that  
13 was tabled.

14 MEMBER ROESSLER: I didn't,  
15 either.

16 CHAIRMAN MELIUS: I think before  
17 we go into discussion, we probably should have  
18 done this right at the beginning, is we should  
19 probably get it off the table, would be the  
20 procedure.

21 So, I am looking for a motion to  
22 take this off the table.

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1                   MEMBER MUNN:     I move we remove  
2     this from the table.

3                   CHAIRMAN MELIUS:       Thank you,  
4     Wanda.

5                   A second to that?

6                   MEMBER PRESLEY:    Second.

7                   CHAIRMAN MELIUS:     A second from  
8     Bob.

9                   Okay. Any further discussion? If  
10    not -- yes, Josie?

11                  MEMBER BEACH:    Yes, I just want to  
12    remind everybody there's actually two issues.  
13    There's the particulate and the radon, and  
14    the motion only covers the radon at this time.

15                  CHAIRMAN MELIUS:    Well, as I  
16    recall the motion, it is that it covered the  
17    entire period that was in the SEC. I don't  
18    think the motion was specific to radon, as I  
19    recall. When Wanda made it, it was for the  
20    entire period as in the NIOSH SEC Evaluation  
21    Report.

22                  MEMBER BEACH:     I am pretty sure

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1 she said radon.

2 CHAIRMAN MELIUS: Well, then, we  
3 are going to have to get clarification from  
4 the transcript.

5 MEMBER MUNN: I would be glad to  
6 clarify my motion. My motion was to accept  
7 the NIOSH recommendation to proceed with their  
8 ability to complete dose reconstructions for  
9 this site.

10 MEMBER ROESSLER: For the dates  
11 under discussion?

12 MEMBER MUNN: Yes, for the dates  
13 given in the NIOSH --

14 MEMBER ZIEMER: Is that the motion  
15 that is to be removed from the table?

16 CHAIRMAN MELIUS: I recall. Now  
17 Josie recalls something differently. So, I  
18 think we need someone to --

19 MEMBER ANDERSON: Go to the  
20 minutes.

21 CHAIRMAN MELIUS: -- go to the  
22 minutes or we can just proceed. Is that okay,

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1 Josie, if we --

2 MEMBER BEACH: Oh, that's fine.

3 CHAIRMAN MELIUS: Yes, why don't  
4 we just proceed? Let's vote on getting the  
5 motion off the table, and then we can discuss,  
6 amend, whatever we need to do. But we  
7 certainly need some discussion here. Okay.

8 So, we have a motion, a second.  
9 Any further discussion?

10 (No response.)

11 If not, we need a vote.  
12 Technically, before we discuss an issue that  
13 is tabled we need to take it off the table.  
14 So, we probably should have done this before  
15 Gen actually did that.

16 So, all in favor of removing it  
17 from the table say aye.

18 (Chorus of ayes.)

19 Opposed?

20 Abstain?

21 Okay. Now we can move ahead. We  
22 have an active motion, and I think some

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1 further discussion -- first, I think if there  
2 are any questions for Gen, SC&A, or NIOSH, not  
3 necessarily in that order, we can ask them and  
4 try to get clarification. We will take an  
5 opportunity in a second to listen from the  
6 petitioners, also, before we move ahead.

7 So, Dick first.

8 MEMBER LEMEN: I just had a  
9 question, a clarification, on, I guess you  
10 would call it, an email or the memo that came  
11 to us about Linde. Have we resolved the issue  
12 of the tunnel construction? And, also, what  
13 is the significance of the tunnel construction  
14 if it were constructed in the 1940s, as  
15 contended by the petitioner, and NIOSH  
16 contends it was constructed in 1957? I just  
17 want to know what the significance is between  
18 the early construction tunnel and the later,  
19 and is that going to change the exposure  
20 calculations at all?

21 MEMBER ROESSLER: That is a good  
22 question, Richard. I am glad you brought it

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1 up. And Jim Neton is prepared to answer it.

2 DR. NETON: The residual period  
3 that we are discussing today for this petition  
4 starts -- is it 1955, I believe?

5 MEMBER ROESSLER: 1954.

6 DR. NETON: 1954. And so, the  
7 existence of the tunnels would only be  
8 relevant for the first few years, three years  
9 or so of the tunnel.

10 That being said, though, we have  
11 proposed a method, what we believe is bounding  
12 for the tunnels themselves, no matter when  
13 they were in existence. So, it is a matter of  
14 those first three years, whether the method  
15 that we are proposing would be applied to  
16 those three years or not. So, that I think is  
17 not necessarily to be resolved to move this  
18 petition forward.

19 Where it is of most relevance is  
20 in the petition for the covered period, the  
21 earlier period, where we believe that the  
22 tunnels were not in existence. And therefore,

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1 there's no reconstruction to be done inside  
2 the tunnels.

3 But the tunnels that were there  
4 were not contaminated with radium to the  
5 extent that we need to worry about radon  
6 inside those tunnels. So, for today's  
7 discussion, it is really relevant, the  
8 existence of the tunnels is relevant to the  
9 first three years of the residual period that  
10 we are talking about.

11 MEMBER LEMEN: I take it we will  
12 hear from the petitioner about that?

13 CHAIRMAN MELIUS: Yes, I believe  
14 we will.

15 MEMBER LEMEN: Okay.

16 CHAIRMAN MELIUS: I guess my  
17 question is there seems to be sort of some  
18 factual or documentation issues related to  
19 tunnels.

20 DR. NETON: Right.

21 CHAIRMAN MELIUS: And I guess,  
22 what are we doing to resolve those?

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1 DR. NETON: We believe we have  
2 resolved that.

3 Is Chris Crawford on the line?  
4 Christ is our subject matter expert on this  
5 site.

6 CHAIRMAN MELIUS: Yes.

7 MR. CRAWFORD: Yes, I am, Jim.

8 DR. NETON: Okay. Chris, could  
9 you provide the Board a brief summary of what  
10 we have done to resolve this tunnel issue and  
11 our current opinion on that?

12 MR. CRAWFORD: Yes. Specifically,  
13 about the timeline?

14 DR. NETON: Yes, exactly.

15 MR. CRAWFORD: All right. We  
16 found that the FUSRAP contractor, which was  
17 Shaw Environmental, in 2000 to 2002, did some  
18 investigation. And they sent a document to  
19 the Army Corps of Engineers at that time  
20 stating that they had found that the tunnels  
21 were constructed at various times on the Linde  
22 site, and they pointed out that the existing

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1 1936 tunnel that was running from Building 8 I  
2 believe to Building 10, past Building 14 --  
3 that's an east/west tunnel -- that,  
4 subsequently, in 1957, the tunnels were  
5 constructed in the ceramic plant area which  
6 were not connected to the earlier tunnel at  
7 that time. Then, in 1961, further tunnel  
8 construction was done which connected the  
9 ceramic tunnels to the original 1936 tunnel  
10 down near Building 14 and Building 8.

11 Then, we went and got the original  
12 drawings for the tunnels, both the 1936  
13 originals and the 1957-61 drawing. And the  
14 documentary evidence is being blamed on the  
15 drawings, that they were construction drawings  
16 and that the 1936 drawing only showed a tunnel  
17 there at Buildings 8, 14, and 1957 drawing,  
18 for instance, only shows new tunnels from the  
19 ceramic plant. It showed no tunnel at all  
20 going down toward Building 8. It also is  
21 plainly marked "Submitted for Bid" on January  
22 10th, 1957.

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1           So, there is all sorts of internal  
2 evidence that we have that Linde constructed  
3 on the date, the year at least, that are in  
4 our earlier statement.

5           CHAIRMAN MELIUS: Does that help?

6           DR. NETON: In summary, we believe  
7 that the tunnels that are relevant for the  
8 radon exposures were not in existence until  
9 1957.

10          CHAIRMAN MELIUS: Okay.

11          DR. NETON: That is our opinion,  
12 based on the original drawings --

13          MEMBER LEMEN: What about those  
14 three years before that?

15          DR. NETON: Well, we don't believe  
16 they were there in those three years.

17          MEMBER LEMEN: You don't believe  
18 they were there?

19          DR. NETON: We believe that the  
20 tunnels that have a relevance for  
21 reconstruction of radon exposure were not in  
22 existence until 1957. There was a tunnel

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1 there prior to that, but that tunnel was not  
2 contaminated with radium to the extent that it  
3 would be necessary to reconstruct the radon.

4 The radium came in from the tunnel  
5 that was near the plant that processed the  
6 ores. The original tunnel that was there in  
7 1936 ran from the utility plant to the pilot  
8 plant, and they didn't process any significant  
9 quantities of any material of decaying radium  
10 which would lead to the radon exposures.

11 MEMBER LEMEN: I guess I would  
12 like to hear from the petitioner if that's  
13 appropriate.

14 CHAIRMAN MELIUS: Yes, we will,  
15 but we will hear from the petitioner about a  
16 number of issues.

17 MEMBER ROESSLER: Jim, it might be  
18 also appropriate for SC&A to respond. They  
19 had the opportunity to look at all the  
20 materials.

21 CHAIRMAN MELIUS: John, do you  
22 have --

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1                   MEMBER ROESSLER:    And I think we  
2                   also have Steve Ostrow on the phone from SC&A.

3                   DR. OSTROW:     Hi.     This is Steve  
4                   Ostrow.

5                   I looked at the date that NIOSH  
6                   --

7                   MEMBER CLAWSON:    He is breaking  
8                   up.

9                   CHAIRMAN MELIUS:    Yes, we are  
10                  having trouble hearing you, Steve.

11                  John, can you maybe summarize it?

12                  DR. MAURO:     Yes.     When we were  
13                  looking at this issue, we were looking at it  
14                  two different ways.   One is this timing.   As  
15                  you just heard, that is the best information  
16                  we have, 1957.

17                  I would like to point out that  
18                  notwithstanding that issue, the fact is we  
19                  believe we -- whether the tunnels were there  
20                  starting in 1954, which is the start date of  
21                  this period that we are interested in, or it  
22                  started in 1957, whatever it actually turns

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1 out to be, the final judgment on what the  
2 right date is, we believe the doses from radon  
3 can be reconstructed.

4 So, we see it more as what I would  
5 usually call a Site Profile issue because we  
6 believe it sounds like the issue is pretty  
7 close to a resolution, the date. But,  
8 notwithstanding that, we believe that,  
9 whatever the date is, we have the information  
10 and the methods to reconstruct the exposures  
11 to radon in the tunnels.

12 CHAIRMAN MELIUS: I want to ask a  
13 followup question to, I guess, Jim Neton for  
14 NIOSH. Can someone just explain, this radon  
15 method keeps changing, and it is a little bit  
16 confusing. I just want to make sure everybody  
17 on the Board, including myself, sort of  
18 understands what the current method is and the  
19 basis for it because it is not  
20 straightforward.

21 DR. NETON: The current method is  
22 to evaluate, well, to use the available data

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1 for radon in basements surrounding the Linde  
2 facility. There is a fairly good database  
3 maintained by New York State, the Department  
4 of Health -- I'm not sure.

5 But it contains a lot of  
6 measurements. We took the data from the  
7 relevant county near the Linde facility and  
8 took that distribution and used that as a  
9 starting point.

10 Now we do know, however, that this  
11 radium in the soil at Linde surrounding the  
12 tunnels is slightly more elevated than the  
13 radon/radium naturally present in Erie County  
14 or the county surrounding Linde.

15 So, what we did was to increase  
16 the amount of radon in the tunnels by the  
17 ratio of the radium near the tunnels compared  
18 to that in the natural soils. So, we  
19 multiplied the radon by that ratio to arrive  
20 at an upper limit.

21 It was based on a probabilistic  
22 model, a Monte Carlo approach, where we

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1 propagated the uncertainties and we ended up  
2 at the 95th percentile of the distribution at  
3 100 picocuries per liter as our estimate of a  
4 bounding value for radon in the tunnels.

5 There's a little more than that,  
6 but that is pretty much the gist.

7 CHAIRMAN MELIUS: Yes. No, that's  
8 helpful.

9 Anybody have questions on that?

10 (No response.)

11 And that is the basis in the  
12 latest NIOSH Evaluation Report?

13 DR. NETON: Yes.

14 CHAIRMAN MELIUS: Yes, yes. At  
15 least what I found confusing, it keeps getting  
16 presented, well, we are going to use  
17 background data in that county, and it sort of  
18 doesn't make sense for this program directly  
19 because, normally, we don't reconstruct, but  
20 here we can't separate. And so, that forms  
21 the basis, combined with the information from  
22 the site.

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1 Brad, yes?

2 MEMBER CLAWSON: I am trying to  
3 follow this thing. It has taken a lot of  
4 different ones.

5 So, you are taking the information  
6 from surrounding areas? Is it an average or  
7 --

8 DR. NETON: It was a distribution.  
9 The county would report the median radon  
10 value with the geometric standard deviation.

11 MEMBER ANDERSON: In the  
12 basements?

13 DR. NETON: In the basements, in  
14 the basements of houses in the county where  
15 Linde Ceramics resides. And I forget the  
16 number, but it is hundreds of values.

17 We picked the high-end value?  
18 Okay. We picked the high-end value. So, we  
19 picked the high-end value of the radon. Using  
20 that distribution, we picked the high-end  
21 value, right.

22 And, then, we modified that by the

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1 difference in the radium in the soil at Linde  
2 versus the radium in the soil that is in Erie  
3 County because natural radium is about a  
4 picocurie per gram or something like that.  
5 And we knew that the radium at Linde,  
6 especially surrounding the tunnels, we had  
7 borehole samples around the tunnels. And so,  
8 we took, essentially, a weighted value of all  
9 of the borehole samples around the tunnels and  
10 applied that to increase the radon in the  
11 tunnels because we know that the source-term  
12 from radium in the soil at Linde is higher  
13 than actually present in the surrounding  
14 communities.

15 MEMBER CLAWSON: Now when we are  
16 talking about these tunnels, are these a  
17 production tunnel that they had?

18 DR. NETON: No. These are utility  
19 tunnels that were there for servicing the  
20 electrical cables and piping, that sort of  
21 thing, ran through there. There was no  
22 processed material ever run through there,

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1       although they were contaminated due to  
2       intrusion from flooding and that sort of  
3       thing. We know that the contamination levels  
4       were measured pretty well by a FUSRAP survey  
5       later on.

6                   MEMBER CLAWSON:    And what did the  
7       FUSRAP, what did they show?

8                   DR. NETON:        Well, the FUSRAP  
9       survey showed internal contamination of  
10      tunnels. They essentially did circumferential  
11      measurements every so often through the length  
12      of all the tunnels and came up with a grid map  
13      of the contamination levels. And there was  
14      radium contamination in the tunnels.

15                   So, there's two sources of radon  
16      inside the tunnels. One is the radium that is  
17      coating the inside of the tunnels that we can  
18      estimate. I don't think there's any dispute  
19      about that calculation. And, then, there is a  
20      radon that infuses in the tunnel from the  
21      ground that contains radium infiltrating into  
22      the tunnels.

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1           So, the radium inside the tunnels  
2 we have modeled, and, then, the radium coming  
3 from the ground we have used the approach that  
4 I just described. So, there's two sources in  
5 there.

6           MEMBER CLAWSON:   And we do have  
7 the FUSRAP data, the samples? They were smear  
8 samples or --

9           DR. NETON:   No, they were actually  
10 beta-gamma survey measurements. They went and  
11 took them and converted them to surface  
12 contamination measurements based on a  
13 calibration factor. But it is a pretty good  
14 survey.

15           Interestingly, when the FUSRAP  
16 survey did it, they were doing it for  
17 estimation purposes to see what needed to be  
18 remediated. Their level of radon was  
19 inconsequential that they estimated. So, they  
20 didn't consider the radon infusion from the  
21 soil, essentially. You can calculate the  
22 radon from the tunnels that is contamination,

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1 but the radon infusion they basically ignored.

2 CHAIRMAN MELIUS: Bill, you worked  
3 on this? Do you have anything to add or say?

4 MEMBER FIELD: No. I had some  
5 concerns, I guess, early on in the process  
6 because there was one radon measurement  
7 performed within the tunnels?

8 DR. NETON: No. A radon?

9 MEMBER FIELD: Yes.

10 DR. NETON: No, we had no radon  
11 measurements in the tunnels. You might be  
12 thinking of the --

13 MEMBER FIELD: A different --

14 DR. NETON: There was another  
15 tunnel. One of our original previous  
16 approaches was to use the radon that was  
17 measured in a conveyor tunnel that actually  
18 conveyed work product.

19 MEMBER FIELD: And do you recall  
20 what that was?

21 DR. NETON: That value was --  
22 Chris, do you recall the value? I want to say

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1 it was somewhere around 30 picocuries per  
2 liter.

3 MEMBER FIELD: That sounds about  
4 right. I guess back at that time I thought it  
5 was a lot to infer from another tunnel over to  
6 this tunnel, but I think this approach that  
7 was developed, I think when SC&A first  
8 developed the approach they came up with about  
9 200 picocuries per liter. And, then, that was  
10 based on a somewhat biased sampling of the  
11 soil. I think with the new sampling of the  
12 soil it comes up to be about 100 picocuries  
13 per liter.

14 So, I think the method, you know,  
15 I think it is a bounding measurement. I don't  
16 know in all of New York, but I would be  
17 doubtful if there's radon measurements much  
18 above 100 in basements, maybe a percent or so.

19 But this is a different scenario.  
20 It is a tunnel. It has increased radium  
21 concentrations. But based on the Monte Carlo  
22 that was done, I think it is a very good

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1 bounding estimate.

2 CHAIRMAN MELIUS: Okay. Thanks,  
3 Bill.

4 Henry?

5 MEMBER ANDERSON: Do we know  
6 anything about the ventilation in the tunnels?

7 DR. NETON: My recollection is  
8 most of the tunnels were unventilated, but  
9 there were some sections that had ventilation.  
10 That is not very well known, what the  
11 ventilation patterns were in the tunnels.

12 MR. CRAWFORD: Jim?

13 DR. NETON: Yes?

14 MR. CRAWFORD: This is Chris  
15 Crawford.

16 The FUSRAP people had estimated  
17 one air change in 10 hours in the tunnel.

18 DR. NETON: So it is about 1.1  
19 change per hour? Would that be right?

20 MR. CRAWFORD: Yes.

21 DR. NETON: Right. And that was,  
22 I think, based on the fact that most of it was

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1 not ventilated, but I do think there was a  
2 couple of locations that might have had some  
3 sort of positive ventilation.

4 MEMBER ANDERSON: Good. And,  
5 then, did you talk to the radon program in New  
6 York, and do they have an opinion on the use  
7 of your -- I know, for instance, in Wisconsin,  
8 if you did that, they would be up in arms  
9 because we will see differences in one house,  
10 the neighbor's house will be quite different.

11 DR. NETON: Right, but I remind  
12 you we picked the upper value of the radon of  
13 the values that were measured as a starting  
14 point.

15 MEMBER ANDERSON: I understand,  
16 but the implication, then, would be that you  
17 are sort of saying that a house of anybody in  
18 New York, this is a good, this is a reasonable  
19 estimate of what their basements would be  
20 like.

21 DR. NETON: No, I am saying that  
22 it would be no higher than, the starting point

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1 for the tunnels at Linde would be no higher  
2 than the highest basement in the State in the  
3 surrounding community around Linde, as a  
4 starting point.

5 CHAIRMAN MELIUS: Any more  
6 questions on radon or tunnels? Brad?

7 MEMBER CLAWSON: Well, I thought  
8 we had more issues than just the radon. I  
9 thought there was particulate --

10 CHAIRMAN MELIUS: Well, we do. I  
11 am trying to do an issue --

12 MEMBER CLAWSON: Okay, yes, let's  
13 put that one to rest.

14 CHAIRMAN MELIUS: Well, get  
15 questions out. I mean "put to rest" may be  
16 optimistic, but at least we have said it  
17 before. But let's sort of concentrate on one  
18 issue at a time, and I think it is just easier  
19 in terms of discussion.

20 So, I guess my question is, are  
21 there any more comments or questions at this  
22 time on radon in tunnels?

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1 (No response.)

2 Okay. Then, there is at least one  
3 other issue. There's an issue --

4 MEMBER RICHARDSON: Can I ask one  
5 question?

6 CHAIRMAN MELIUS: I'm sorry. Yes.

7 MEMBER RICHARDSON: I am  
8 understanding the radon part. I want to go  
9 back to the radium on the tunnel walls.

10 So, in 1982, there were field  
11 survey measurements done, is that right?

12 DR. NETON: I am not sure it is  
13 1982, but, yes, somewhere in that timeframe.

14 MEMBER RICHARDSON: Let's say, I  
15 mean I think that is what I read.

16 DR. NETON: Yes, it was later,  
17 yes.

18 MEMBER RICHARDSON: And from that,  
19 there is going to be inferences made about the  
20 radium contamination on the walls from the  
21 period 1956 forward?

22 DR. NETON: Right.

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1                   MEMBER RICHARDSON:     And is that  
2     modeled?   Is it assumed to be at the level in  
3     1982?

4                   DR. NETON:     Assumed to be at the  
5     level.

6                   MEMBER RICHARDSON:     And what's the  
7     basis for that?

8                   DR. NETON:     Chris, could you help  
9     me out with that?   I have forgotten.   We had  
10    gone through this scenario.

11                   MR.     CRAWFORD:           The     actual  
12    measurements   were   made   in,   I   believe,  
13    2000-2001 for the tunnel, for contamination on  
14    the tunnel wall.   We took the 95th percentile  
15    and also assumed that they were uniformly  
16    contaminated, which was not true, by the way.

17                   It was highly biased.   Only certain areas of  
18    the tunnel were contaminated.

19                   But     we     figured     our     radon  
20    contamination of the entire tunnels at the  
21    95th percentile level.

22                   MEMBER RICHARDSON:     In 2000?

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1                   MR. CRAWFORD: That is correct, in  
2                   2000.

3                   MEMBER RICHARDSON: I mean you  
4                   just have to help me because I am just trying.  
5                   I mean I am going to concede that in 2000  
6                   that is a very claimant-friendly assumption.  
7                   But help me understand, what are the processes  
8                   that lead to the deposition and perhaps  
9                   removal of radium along that wall over this  
10                  50-odd-year period that leads you to think  
11                  that the assumption in 2000 is a conservative  
12                  one, back-extrapolating a decade, two decades,  
13                  four decades?

14                  MR. CRAWFORD: Well, there are a  
15                  number of factors. First, we have to consider  
16                  that we believe, and we believe the evidence  
17                  shows, that those were constructed in 1957 and  
18                  thereafter at the ceramic plant. Furthermore,  
19                  the primary mechanism for the diffusion into  
20                  the soils and water seepage in all likelihood,  
21                  also the borehole samples that were done later  
22                  showed relatively little penetration in depth.

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1 Most of the radium contamination was confined  
2 to the upper four feet of soil, often at the  
3 upper two feet.

4 So, we felt that over time the  
5 situation would be that the radium would make  
6 its way deeper into the soil very, very  
7 slowly, and that in 2000 it potentially could  
8 be a worst case as, say, 1957 or anytime  
9 thereafter.

10 MEMBER LOCKEY: Jim Lockey.

11 The production at that facility  
12 stopped in --

13 MR. CRAWFORD: Dr. Lockey, I  
14 didn't quite catch that.

15 MEMBER LOCKEY: I was just saying  
16 the production at the facility stopped in  
17 1954, and these tunnels were constructed in  
18 1957 and 1961. So, they really weren't there  
19 during the production phase of the facility.

20 MR. CRAWFORD: The actual  
21 production stopped the middle of 1949. The  
22 last radium-contaminated soil or ores, I

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1 should say, after 1946, just to be a little  
2 bit more clear.

3 MEMBER RICHARDSON: So, to go  
4 back, the question is, your conjecture is that  
5 the source of the radium on the inside of the  
6 tunnel is transport of it through the soil  
7 into the tunnel, leaching the coating around  
8 it? So that the radium is physically being  
9 moved.

10 And so, if we were to go there  
11 today, if I am going to continue this line of  
12 argument, your conjecture is that the radium  
13 contamination would be even higher than it was  
14 when it was measured in 2000 and higher than  
15 it was in 1990?

16 So, the model that you are laying  
17 out for us is that it is accumulating and it  
18 is never going down? Or that we should  
19 believe that it is as high or --

20 DR. NETON: I think that is  
21 correct. And I don't know that I would want  
22 to suggest that it would be even higher today.

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1       There was some cleanup done in very recent  
2       years that may have prevented it from becoming  
3       more contaminated.

4                   But it is also suggested by the  
5       fact, I believe -- and, Chris, correct me if I  
6       am wrong -- most of the high values that were  
7       measured were not on the floors of the  
8       tunnels, but were on the ceilings of the  
9       tunnels, suggesting a source-term just as a  
10      water infiltration sort of thing, not tracking  
11      of the material through the tunnels.

12                   CHAIRMAN MELIUS:     Paul, you had  
13      comments?

14                   MEMBER ZIEMER:     Yes.    So, I think  
15      they are postulating no removal process, is  
16      what my understanding was, that it is a  
17      cumulative term.

18                   DR. NETON:     Yes, that is correct.

19                   MEMBER     ZIEMER:             So,    the  
20      2000-whatever-it-was, the 2002 level would be  
21      higher or at least no lower than the previous  
22      years.

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1 DR. NETON: I would just add one  
2 more thing. It turns out that the radon  
3 contribution from the tunnels is a smaller  
4 component of the contamination inside the  
5 tunnels. The infiltration of radon model  
6 provided a much higher source-term.

7 MEMBER RICHARDSON: I was just  
8 trying to wrap my head around what the  
9 mechanisms were being positive for these  
10 various components of the dose.

11 CHAIRMAN MELIUS: Let me interrupt  
12 a second because I think we are done with this  
13 specific topic, and there are some others to  
14 discuss.

15 But I believe Melissa Fratello.

16 MS. FRATELLO: Hi.

17 CHAIRMAN MELIUS: I'm sorry, we  
18 are a little bit off-schedule here, but you  
19 had wanted to make some comments? Go ahead.

20 MS. FRATELLO: I just have a brief  
21 statement to read on behalf of Senator  
22 Gillibrand and Senator Schumer as well. I

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1 will go ahead --

2 MR. KATZ: Melissa, I'm sorry to  
3 interrupt. This is Ted Katz. Your voice is  
4 breaking up. I am wondering if you are on a  
5 speaker phone or something.

6 MS. FRATELLO: I am.

7 MR. KATZ: Okay. Could you try  
8 picking up the phone? That might be a better  
9 quality. It is hard to transcribe you.  
10 Thanks.

11 MS. FRATELLO: Is that better?

12 MR. KATZ: Much, yes.

13 MS. FRATELLO: Okay. Shall I  
14 start over?

15 CHAIRMAN MELIUS: Yes, why don't  
16 you, Melissa?

17 MS. FRATELLO: Okay, no problem.

18 CHAIRMAN MELIUS: Yes.

19 MS. FRATELLO: Good morning. I  
20 want to briefly address the Advisory Board  
21 regarding an issue that concerns Senator  
22 Gillibrand and Senator Schumer. Today the

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1 Board will be discussing and voting on the  
2 Linde SEC petition. Senator Gillibrand joins  
3 Senator Schumer in expressing concern about  
4 what appears to be a tendency for NIOSH to  
5 disregard the 180-day deadline for issuing an  
6 SEC Evaluation Report.

7 It is the Senators' understanding  
8 that the Act and the regulations implementing  
9 the Act require NIOSH to submit the Evaluation  
10 Report to the Advisory Board within 180 days  
11 after the submission is received by NIOSH.

12 However, NIOSH appears to be  
13 ignoring this mandate time and again. The  
14 result is a seemingly endless delay in  
15 resolving several SEC petitions.

16 We request that the Advisory Board  
17 take a look at this problem regarding the  
18 180-day rule and examine whether this practice  
19 is not only a violation of the overall  
20 congressional intent of the EEOICPA, but may  
21 also may defeat the very purpose of the SEC  
22 program.

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1           Both Senators' offices will be in  
2           contact with Dr. Howard in the near future to  
3           discuss this matter.

4           Senators Gillibrand and Schumer  
5           urge the Board to approve the Linde SEC  
6           petition and hope that NIOSH and the Advisory  
7           Board will seriously consider the consequences  
8           of this policy today when voting on the Linde  
9           SEC petition and for all SEC petitions going  
10          forward.

11          Thank you.

12          CHAIRMAN MELIUS:     Okay.     Thank  
13          you.

14          MS. JACQUEZ-ORTIZ:   Ted?

15          MR. KATZ:     Yes?

16          MS. JACQUEZ-ORTIZ:   Ted, this is  
17          Michelle from Senator Udall's office. Will I  
18          be able to speak?

19          CHAIRMAN MELIUS:     We are having  
20          trouble understanding.

21          MR. KATZ:     It is Michelle Ortiz.

22          CHAIRMAN MELIUS:     Okay.

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1                   MR. KATZ:     So, Michelle, hi.     I  
2     had sent you an email asking if you couldn't,  
3     since this is on Linde, if you couldn't take  
4     one of the work sessions that we have as an  
5     opportunity to provide your comments.

6                   MS. JACQUEZ-ORTIZ:   Yes.   Ted, I'm  
7     sorry.   We have been emailing back and forth  
8     all day, and I don't think you have received  
9     any of my email responses --

10                  MR. KATZ:     Michelle, I'm sorry,  
11     your voice is also breaking up.   I don't know  
12     if you are also on a speaker phone, but it is  
13     very hard to make out what you are saying.   Do  
14     you want to try just picking up the telephone  
15     if you are on a speaker phone?

16                  MS. JACQUEZ-ORTIZ:   Yes.   Ted, I  
17     will call back at the specified time.

18                  MR. KATZ:     Okay.   Great.   Okay.  
19     Thank you.

20                  CHAIRMAN MELIUS:   Linde, so any  
21     further questions on the radon or tunnels or  
22     comments at this point?

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1 (No response.)

2 Okay. There is at least one other  
3 issue, which is the issue that Mike and Josie  
4 raised, and I have also done some followup on  
5 it. There is a -- I guess we are calling it  
6 the renovation period. There was originally a  
7 decontamination period for the building, which  
8 is not a point of discussion now, but there is  
9 a period of time during which the building,  
10 particularly Building 30, apparently, was  
11 renovated.

12 And my understanding -- and  
13 someone can correct me -- is that this was a  
14 period of time when there's not a lot of  
15 records on it. There's some information and  
16 there's certainly reports from the workers  
17 there at the time, but there is not a lot of  
18 detail on what was done during that time  
19 period and how many people were involved and  
20 how extensively it went on for.

21 The time period was then, my  
22 understanding is the method that is being

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1 proposed to be used for this time period was  
2 to take some sampling data -- I think it is  
3 about a week's worth of sampling data that was  
4 done during the decontamination period -- and  
5 using one of the higher decontamination  
6 activities -- there was personal monitoring  
7 that went on that applies to internal doses --  
8 use the highest; I believe it was  
9 jackhammering that was used. And basically,  
10 to apply that to all the workers at the site  
11 for this time period and for that method to be  
12 done assuming people, essentially, did  
13 jackhammering nearly all the time, I believe,  
14 and some other assumptions about their shifts,  
15 and so forth. The new Evaluation Report from  
16 NIOSH has more details of that.

17 I guess the concern that Josie and  
18 Mike raised, and I share that concern, is that  
19 we have a method that certainly for people  
20 actually doing the renovation, at least for  
21 those activities, may be an appropriate  
22 method. However, given sort of the lack of

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1 information about who was doing what, how long  
2 these activities went on for, exactly what  
3 were the activities, and the fact that the  
4 renovation appears to be limited to Building  
5 30, when in fact there are four or five other  
6 buildings that had other activity going on  
7 during this time period, I have concerns that  
8 this method is sort of inappropriate. It may  
9 be appropriate for people actually in the  
10 renovation, but we don't appear to know how  
11 many of these people even did renovation and  
12 how many of them were actually involved in  
13 this level of activity.

14 So, in terms of an individual dose  
15 reconstruction method for that individual  
16 worker, it may make sense. However, applying  
17 it to the whole site for such a long period of  
18 time, I have some serious concerns about it.

19 To me, the lack of information --  
20 and we have no sampling data during this  
21 renovation time period. We have very little  
22 information on what was done at the site

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1 during this time period and who was involved,  
2 and how many people were involved, that it  
3 seems to me that is just as appropriate to be  
4 designated a Special Exposure Cohort.

5 I think putting it into our terms,  
6 we may have a bounding dose, but is it a  
7 plausible bounding dose, given how little  
8 information we have and the fact that most of  
9 these people probably weren't engaged in the  
10 activity that we have done the dose  
11 reconstruction for?

12 So, I don't know, Josie or Mike,  
13 if you have anything to add based on your  
14 participation?

15 Yes, David?

16 MEMBER RICHARDSON: So, there was  
17 a decontamination period, is that right?

18 CHAIRMAN MELIUS: Yes, there was a  
19 decontamination period, and, then, the site  
20 was turned back over to Linde. so, it is  
21 during the residual period. And, then, there  
22 is a period of -- what? -- 15 years, I

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1 believe, something like that, 16 years, where  
2 the site was operating, but the Linde site  
3 people, the operational people, were doing  
4 other activities there, but they also  
5 conducted what appears to be fairly extensive  
6 renovations of the Building 30.

7 MEMBER RICHARDSON: After it had  
8 been decontaminated?

9 CHAIRMAN MELIUS: After it had  
10 been decontaminated. So, part of this period,  
11 there is sampling at the end of the  
12 decontamination, during the decontamination,  
13 but then nothing during this renovation period  
14 and for this long period of time.

15 And, then, once the renovation --  
16 at least a date has been given for what  
17 appears to be the end of renovation -- then it  
18 reverts back to sort of more of the OTIB-70  
19 approach for doing the dose reconstructions  
20 for these people.

21 And, then, there is a further  
22 decontamination done. So, remember, this is

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1 an early -- I don't know what you call it --  
2 an early decontamination. It was felt it was  
3 up to standards at the time, at least was felt  
4 to be appropriate at the time, but not the  
5 level of decontamination that would be done  
6 now. So, there was a further decontamination.

7 The main concern I have is so the  
8 method makes sense for the workers that might  
9 have been involved in doing the renovation,  
10 but applying it to everybody on the site,  
11 frankly, seems like a stretch because we just  
12 have so little information, at least from what  
13 I could gather from the records and the  
14 transcripts and discussion of this, that we  
15 don't know, is it appropriate to apply it to  
16 everybody at the site?

17 MEMBER ROESSLER: Just to clarify,  
18 I think what you are talking about is your  
19 concern that the doses may be overestimated.

20 CHAIRMAN MELIUS: Well, they are  
21 inappropriately -- they are overestimating for  
22 many of the workers.

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1                   MEMBER ROESSLER: I just wanted to  
2 get that overestimating concern --

3                   CHAIRMAN MELIUS: Yes, it is  
4 overestimating for many of the workers and  
5 possibly underestimating people doing some of  
6 the renovation because we know so little about  
7 the renovation activity itself.

8                   MEMBER ROESSLER: I would like to  
9 have Chris respond --

10                  CHAIRMAN MELIUS: Yes.

11                  MEMBER ROESSLER: -- but I think  
12 we have another question here or comment.

13                  CHAIRMAN MELIUS: Yes, Paul?

14                  MEMBER ZIEMER: I would like to  
15 raise kind of a counter-argument, Dr. Melius.

16                  It seems to me a lot of this revolves around  
17 what we consider to be a bounding dose. In  
18 fact, if you look at virtually all sites where  
19 we have used bounding doses, I think you could  
20 argue that the bounding dose applies to  
21 virtually a very small percent of the people  
22 in many cases. The argument is that those

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1 folks would not have a dose higher than the  
2 most highly-exposed group. Even in cases  
3 where we know that there have been different  
4 activities, those bounding doses would still  
5 apply.

6 So, I think, philosophically, you  
7 could make the argument that they don't have  
8 to be doing the same work. The point at which  
9 I would agree with your argument is, if there  
10 are other renovation activities for which this  
11 is not bounding, it seems to me  
12 philosophically that is the question we have  
13 to ask. Is it truly bounding?

14 Because, clearly, when you do  
15 bounding, you are covering a lot of workers  
16 who do other things. You know, the  
17 secretaries or the maintenance people or the  
18 guards, and so on, are doing different things  
19 than chemical operators, for example. But we  
20 use those kinds of approaches.

21 So, the only concern I would have  
22 would be to convince us that we are truly

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1 bounding. I mean all agree not everybody is  
2 using a jackhammer eight hours a day for the  
3 extended period. But this is true in a lot of  
4 cases where we bound; not everybody is doing  
5 all the things that we use for those bounding  
6 figures.

7 CHAIRMAN MELIUS: I think the  
8 issue is, and I understand your argument,  
9 Paul, but where do we draw the line with that?

10 Because, I mean, carried to an extreme, we  
11 could take any site, we could take Savannah  
12 River, and we could come up with what we think  
13 is the highest possible exposure at that site  
14 that would occur, and that would be bounding,  
15 and apply that to everybody that ever worked  
16 at the site.

17 I think it is the question of, is  
18 that a plausible bound? And, then, who are we  
19 trying to characterize? And, then, that is  
20 probably the most vague part of how we  
21 approach these. Are we trying to characterize  
22 the bounding dose for carpenters or renovators

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1 or the bounding dose for security guards or  
2 the bounding dose for Building 30, and so  
3 forth? That is not clear.

4 And it becomes much more difficult  
5 the more meager our information is. And in  
6 this case, we have, as I understand it, very,  
7 very little information on what the  
8 renovations were, what the time period for  
9 those were. They clearly weren't going on for  
10 a full 16 years because they were doing other  
11 work at the plant. But we just don't know how  
12 long they were doing it.

13 So, we have a lot of uncertainty,  
14 and the uncertainty leads to a bounding level  
15 that is quite high in order to be bounding, to  
16 try to take into account what is happening at  
17 the site. But it is a dilemma we have dealt  
18 with before, and it is difficult.

19 So, Gen? Is that you, Jim Lockey?

20 MEMBER ROESSLER: Let's hear from  
21 Jim Lockey.

22 CHAIRMAN MELIUS: Okay, Jim first,

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1       then Gen, then Bill, then Wanda.

2                   MEMBER LOCKEY:    I can appreciate  
3       certainly what Jim is saying, trying to do  
4       dose reconstruction on historical cohorts.  If  
5       we fall in that track of thinking going  
6       forward, then it is becoming what seems to be  
7       a reasonable upper bound and worst-case  
8       situation.  We are really, then, asking  
9       ourselves to produce essentially personal  
10      exposure information on each particular job  
11      task at any one site.

12                   It would be very difficult to say  
13      that for a guard, for instance, we are being  
14      unreasonable in setting a high exposure level  
15      for that guard because we don't have exposure  
16      records, but we do have for electricians or  
17      for a concrete worker.

18                   I think that really will present  
19      us an impossible situation going forward  
20      because one can always argue there is not  
21      enough data to say that, in fact, this is a  
22      reasonable, plausible upper limit for each job

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1 task at a jobsite.

2 I think we have to use the best  
3 science available and follow what our  
4 regulations say. Is it plausible and is it  
5 claimant-friendly? And I think in this  
6 situation that the answer is yes to both of  
7 those.

8 CHAIRMAN MELIUS: Okay. Thanks,  
9 Jim.

10 Gen?

11 MEMBER ROESSLER: Wanda was  
12 actually before me.

13 MEMBER MUNN: There is an enormous  
14 difference between making statements about  
15 bounding doses for a highly-complex, large  
16 site that employs thousands of people and a  
17 relatively small, straightforward type of  
18 operation that essentially does the same kind  
19 of thing over a long period of time. The  
20 latter is what we have before us here.

21 We have established, not only by  
22 precedent in this Board, but also through

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1 conversation and through all of our exchanges  
2 that have gone on, that bounding is a valid  
3 method for approaching the kinds of situations  
4 that we have here.

5 We do not have a situation where  
6 there is a long, unexplained period of  
7 potential extremely high exposure. We have a  
8 relatively short period of activity that takes  
9 place after decontamination, where the  
10 probability of extremely high doses is  
11 extremely low. The bounding dose that has  
12 been established is not likely to have been  
13 exceeded if it were at all, certainly not for  
14 any period of time.

15 If we are going to take a position  
16 that it is impossible for us to make bounding  
17 calculations as a reasonable argument, then we  
18 ought to be very straightforward about that  
19 and say we are not going to allow that, even  
20 though it has been specifically prescribed, as  
21 I understand it, by the legislation, that that  
22 is okay.

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1                   CHAIRMAN MELIUS:     I would just  
2     make one comment on that.  It is just that I  
3     think part of our difficulty with this area is  
4     that our regulations prescribe two different  
5     approaches.       One being when we lack  
6     information, one being the SEC; the second  
7     being the bounding dose and individual dose  
8     reconstruction.  And, unfortunately, the way  
9     the regulations are, there is not always clear  
10    dividing line between those two.  I think it  
11    is difficult.

12                   Go ahead, Gen, I think.

13                   MEMBER ROESSLER:     What you are  
14    discussing seems to me to be an overarching  
15    concern about all sites.  I am thinking in  
16    terms of consistency or precedence, you know,  
17    looking to what we have already done and what  
18    we might do in the future.

19                   I am having a very difficult time  
20    understanding what you are saying with regard  
21    to the scientific approach to this, the  
22    difference between Linde and anything we have

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1 done before or anything we might do in the  
2 future. That is what I just can't figure out.

3 CHAIRMAN MELIUS: Well, yes, it is  
4 a question of where is the line. I think that  
5 is the issue. We can call on precedents from  
6 both sides. And we probably haven't always  
7 been consistent about that, partly because we  
8 have evolved our approach over time working  
9 with NIOSH. So, it is difficult. At some  
10 point, we need to try to develop consistency  
11 as best we can.

12 Henry, then Bill.

13 MEMBER ANDERSON: Yes, I think, I  
14 mean, the bounding issue is also one of  
15 NIOSH's evaluation saying it is sufficiently  
16 accurate. And to me, the issue is, when you  
17 are using jackhammer particulate data to bound  
18 60 years, is that sufficiently accurate? It  
19 is certainly a bounding, an upper bounding,  
20 but is it a realistic sufficient accuracy.

21 And the same would be for the  
22 radon. I mean the method used is a fine

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1 method, but, again, is it sufficiently  
2 accurate? I would say, compared to the other  
3 sites where we have done bounding, they are  
4 quite different than using the values that we  
5 are using here to bound versus some of the  
6 other surrogate data or coworker-type data.

7 So, to me, the issue is, one, not  
8 is it bounding, but is it sufficiently  
9 accurate? Or is it simply finding the highest  
10 possible value and then using that? That I  
11 think is sort of concerning to me.

12 But the other is, would there be  
13 other activities there that we are missing  
14 using this? You know, there may well be  
15 because we don't have good descriptions. So,  
16 kind of on both sides I see that this case is  
17 different than the other ones that we have  
18 used.

19 CHAIRMAN MELIUS: Bill?

20 MEMBER FIELD: Jim, I agree with  
21 what you said about the need for consistency  
22 between sites. But one of the factors that go

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1       into consistency is, when we talk about  
2       plausibility of bounding, are we talking about  
3       is it a plausible bound for the potentially  
4       highest-exposed worker or is it a plausible  
5       bound for the lowest-exposed worker? I guess  
6       that is a fine distinction.

7                   In this case, I think it is a  
8       plausible bound for the potentially  
9       highest-exposed worker. Is it plausible for  
10      the lowest-exposed worker? Yes, that is  
11      probably unlikely. So, I guess it is, who are  
12      talking about plausibility for?

13                   CHAIRMAN MELIUS: So, how do we  
14      group and how much information do we need  
15      about a site? I mean I think what is striking  
16      about this site and this situation is how  
17      little information there is. So, it makes it  
18      hard to make distinctions.

19                   MEMBER LOCKEY: This is Jim  
20      Lockey.

21                   I agree with what Bill said. If  
22      we are going down a route to evaluate

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1     plausibility and lower exposures, that is a  
2     whole new area that we are going into. And  
3     one could argue at the individual worker  
4     level, if you don't have personal exposure  
5     data, you can't provide for that  
6     determination.

7             And so, I think we have to stay  
8     with our previous guidelines to establish the  
9     exposure level that is plausible and  
10    reasonable at the high level, and that will  
11    cover the contingencies of other people in a  
12    situation.

13            Otherwise, we are going to be  
14    dealing with individual job tasks, job  
15    positions, lack of personal exposure data. It  
16    becomes a never-ending argument.

17            CHAIRMAN MELIUS: Brad?

18            MEMBER CLAWSON: You know, I am  
19    sitting here listening and I have been  
20    listening to the straightforward processes and  
21    everything else like that. And I totally beg  
22    to differ. We don't even have the information

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1 here.

2 We could go to every site out  
3 there and throw out a whole bunch of numbers  
4 and say, yes, we got everybody bounded, but  
5 what was this program set up for? The bottom  
6 line is, if we don't have the data they've got  
7 an SEC out there, that is what was put here  
8 for us.

9 We go through this, and when we  
10 don't have the information -- this isn't a  
11 science project. I have said this numerous  
12 times before. If we don't have the data  
13 there, we don't have the data.

14 The thing is, scientifically, yes,  
15 you know what? We have got some of the  
16 smartest people in the world, and we could hit  
17 pretty close. But to what percentage are we  
18 really hitting at? We can say we are hitting  
19 the 95 percentile, but are we really missing  
20 somebody or not? I just feel that we need to  
21 think about why these SECs were put in there.

22 These are radionuclides. These

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1 are cancer-causing. This is what it was set  
2 up for, in my opinion.

3 I sit here and look at a lot of  
4 the work that we do on this. The bottom line  
5 to me is, if we don't have the data there, it  
6 is not to dream up something. It is just my  
7 opinion.

8 CHAIRMAN MELIUS: Gen?

9 MEMBER ROESSLER: I disagree with  
10 you that we don't have data. It is always  
11 easy to say that we just don't have data; we  
12 just don't know. But I think in this  
13 particular case we do have data. Of course,  
14 this is my view. I think we are applying it  
15 in the way that the rule stated that it should  
16 be applied.

17 The other thing is, as I hear  
18 comments, I am concerned that they are  
19 overarching, that we do have to think about  
20 what we have done in the past. Whatever you  
21 are saying here could very well apply to other  
22 sites we have already acted on. And if we are

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1 going to use a new approach, I think we have  
2 to sit and think about what happens on future  
3 sites.

4 CHAIRMAN MELIUS: Dick?

5 MEMBER LEMEN: I would just like  
6 to agree with Brad and disagree with you,  
7 Genevieve, concerning that we shouldn't base  
8 our decisions on what we have done in the  
9 past. If we were wrong in the past, we should  
10 move forward and correct that.

11 CHAIRMAN MELIUS: Paul?

12 MEMBER ZIEMER: Well, I have got  
13 to respond to that. I don't think what we  
14 have done in the past is wrong. We have  
15 applied the rules as we have understood them.  
16 We are still trying to do that.

17 We do recognize there are  
18 differences at various sites, and often this  
19 issue of bounding does come down to whether it  
20 is both sufficiently accurate and plausible.  
21 I think, basically, those are the questions  
22 being raised.

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1           We still need to use bounding. We  
2           have a fair amount of data for this site. The  
3           law does not call for us simply to give a  
4           stamp of approval on every SEC. We are called  
5           upon to determine whether or not dose can be  
6           reconstructed with sufficient accuracy and in  
7           a plausible way. And if not, then we do go  
8           the SEC route.

9           So, I think each of us, you know,  
10          these lines I think, as the Chair has  
11          described them, are ones that are not  
12          clear-cut always. This is why we are here.  
13          If these things were easy, they wouldn't need  
14          this Board.

15          So, we have to make these  
16          decisions. We don't necessarily all have to  
17          agree as to where those lines are. And I  
18          don't think we should take that as a bad  
19          thing. It is good to debate these issues. If  
20          we feel individually that the criteria have  
21          been met in a certain way, that is how we are  
22          led to vote.

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1           So, I don't want to assert that we  
2           have been perfect in the past, but I would  
3           strongly reject the idea that what we have  
4           done in the past is incorrect, and now we are  
5           going to do in a newly different way. I think  
6           we always have this tie-in; we are always  
7           trying to improve. We do change things as we  
8           discover new approaches and new methodologies  
9           and new insights. That is fine, but what we  
10          have done in the past has been done in good  
11          faith to the best of our abilities and with  
12          the information that we have had in hand.

13                 MEMBER LEMEN: I have to respond  
14          to that. You misunderstood what I said. I  
15          didn't accuse you of doing something wrong in  
16          the past. I simply said we cannot base our  
17          actions today on what we have done in the  
18          past. That is what I am saying.

19                 I am not trying to say something  
20          was wrong in the past, but because we did  
21          something one way in the past doesn't mean we  
22          have to do what we are doing today the same

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1 way we did it in the past.

2 MEMBER ZIEMER: And I agree with  
3 that, Richard. Actually, I think we are both  
4 saying the same thing, and we are willing to  
5 improve our methodologies as we learn new and  
6 better ways of doing things. So, I agree with  
7 what you say there and I appreciate your  
8 comment.

9 CHAIRMAN MELIUS: I would say one  
10 element of this where to draw the line and how  
11 we approach this, I think it is sort of, how  
12 much of a dose are we dealing with or  
13 potential dose?

14 And with the residual period, we  
15 are going to have lots of situations -- we  
16 have already had them -- where we don't have  
17 very much information on the activities and  
18 the ability, usually very little sampling  
19 data. We are going to be using OTIB-70 a lot  
20 in these situations without knowing much about  
21 what individuals did on the site.

22 I think when Jim Neton was

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1 presenting that, I think one of the issues  
2 that he raised, and it has come up a little  
3 bit with Dow, it will come up with Norton,  
4 where Norton is a site, and I am not saying it  
5 is the exact same situation here because I  
6 think maybe they are different in some ways.

7 But, actually, for part of the  
8 residual period where there was  
9 decontamination going on, NIOSH is proposing  
10 an SEC. And, then, after that decontamination  
11 period, it is going back to more of an OTIB-70  
12 approach, as I recall.

13 And the reason for that is that  
14 the decontamination is a different activity.  
15 Again, it differs. They have very little  
16 information there. So, again, it is not an  
17 exact comparison or analogy, but it is a  
18 situation where there may be higher exposures  
19 during that part of the residual period.

20 And therefore, I think we sort of  
21 logically want to say, well, we need to be a  
22 little bit more careful with dose

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1 reconstruction during that time period;  
2 whereas, during a residual period there may be  
3 different activities, but it is unlikely to  
4 lead to as high exposures or unusually high  
5 exposures. And so, the OTIB-70 approach is  
6 probably something that is appropriate and  
7 something I am personally comfortable with in  
8 these situations.

9 I think, can we recognize  
10 situations where there's unusual or different  
11 activity during the residual period that might  
12 lead to higher exposures? Then, how do we  
13 handle that?

14 And again, I don't think that  
15 negates any of the arguments that people have  
16 made, but I think it is one way we need to  
17 think about this residual period and how we  
18 approach it.

19 Brad, you had further comments?

20 And, then, Mark.

21 MEMBER CLAWSON: I just wanted to  
22 know, from 1954 on, how much bioassay do they

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1 have?

2 CHAIRMAN MELIUS: I believe from  
3 1954 to 1969, which is the renovation period,  
4 I don't believe they have any.

5 MEMBER ROESSLER: Chris is on the  
6 line.

7 CHAIRMAN MELIUS: Yes.

8 MEMBER ROESSLER: Let's let him  
9 answer that.

10 MR. CRAWFORD: This is Chris  
11 Crawford.

12 The building was relieved without  
13 restriction at Linde in 1954. So, there was  
14 no reason for anyone to have urinalyses. And  
15 in fact, we are not aware of any urinalysis or  
16 any personal dosimetry of any kind in the  
17 residual period.

18 MEMBER CLAWSON: So, that would be  
19 no, correct? You have no bioassay?

20 CHAIRMAN MELIUS: Correct.

21 MEMBER CLAWSON: Okay. Here is  
22 part of my thing, and I have got to drop back

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1 to my knowledge of today. We have numerous  
2 facilities at numerous sites that have shown  
3 up clean; we're great.

4 We are dealing, one, with Hanford  
5 right now that was a great facility and we  
6 tore it up, and we have got hundreds and  
7 hundreds of R. We don't know what went on in  
8 these facilities like this. They cleaned them  
9 up to certain standards. But, also, there's  
10 lots of areas that they never got into and  
11 cleaned.

12 You know, we all have one vote,  
13 and we can vote how we feel. It is just that  
14 is the most important thing there.

15 CHAIRMAN MELIUS: Thank you, Brad.  
16 Mark?

17 MEMBER GRIFFON: Yes, I am trying  
18 to fill in the gaps on my knowledge on this  
19 site. But, you know, I look at the sufficient  
20 accuracy argument that has been circulating.

21 First of all, I think, you know,  
22 the renovation period is troubling from my

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1 practical experience with these type of sites.

2 Obviously, in 1954, the site was released  
3 without restrictions. And, then, in 1978,  
4 they do surface surveys showing grid average.

5 I think these are grid average values. They  
6 might be maximum values with alpha  
7 contamination on the floor ranging up to  
8 3,000-4,000 dpm.

9 I mean that doesn't even talk  
10 about the rafters and the walls. They get  
11 much higher in those areas.

12 So, then, you question what  
13 happened in our renovation period? If they  
14 are pulling down ductwork and things like  
15 that, I think this approach may bound for lots  
16 of workers, but those directly involved in  
17 maintenance or these renovation activities, it  
18 could not bound them. I don't think we are  
19 overbounding in all cases necessarily. I  
20 don't buy that argument.

21 I am still not clear exactly how  
22 you are extrapolating back from 1974. The

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1 other interesting tidbit, and maybe those that  
2 have researched this much more than I have can  
3 enlighten me, but all this jackhammering  
4 activity is constantly referenced. If they  
5 were actually doing sandblasting and  
6 jackhammering in these areas, I am very  
7 curious how 20 years later they still have  
8 these significant decontamination levels left  
9 on the floors.

10 I mean I have been in several  
11 facilities where we have found very little  
12 contamination on the grid floors. We actually  
13 ended up looking in cracks in between cement  
14 slabs and ended up tearing down half the  
15 facility based on cracks because they filled  
16 in footprints where old process equipment was.

17 When we lifted those footprints out, we found  
18 lots of contamination.

19 So, then, the question was, where  
20 the maintenance workers that were in those  
21 areas or, you know, doing more intrusive work,  
22 were they potentially exposed to much higher

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1 values than we are anticipating with the model  
2 that NIOSH is proposing?

3 So, you know, I think people  
4 should look at the 1978 data and ask, well, in  
5 1954, they say they basically released without  
6 restrictions, but, obviously, these are not  
7 minor levels that were leftover. They are not  
8 just barely -- and these are just scoping  
9 surveys by ORNL as well. They are just  
10 deciding, do we need to clean this site up or  
11 not? They are not doing this as an exposure  
12 assessment study. This is to determine  
13 whether the area, the entire building, what  
14 areas need to be D&Ded later on?

15 So, these kind of levels, I guess  
16 another question I have is, which values are  
17 extrapolated back from 1978 to 1969, I guess  
18 it is? Are you using like floor average  
19 values? I think Jim said something about  
20 beta-gammas. Maybe I missed that part.  
21 Because there is a very big discrepancy  
22 between the average floor grade values and the

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1 walls and the rafters. So, I don't know  
2 exactly how that was handled.

3 But, to me, there's a lot of  
4 uncertainty extrapolating back from an ORNL  
5 scoping survey to a 1969 data point, which in  
6 itself a little uncertain to me. So, I think  
7 I have trouble with the approach. It doesn't  
8 convince me that it is bounding, especially  
9 for those renovation workers or maintenance  
10 workers in those timeframes.

11 CHAIRMAN MELIUS: Josie, and then  
12 --

13 MEMBER GRIFFON: Maybe, Jim --

14 CHAIRMAN MELIUS: Actually, go  
15 ahead.

16 DR. NETON: I just have one  
17 question for Mark. You were talking about  
18 extrapolating from 1969 to 1974. That is  
19 outside of the renovation period. That is not  
20 part of the renovation period. It is a  
21 different issue, but it is not what has been  
22 discussed here.

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1                   MEMBER GRIFFON:    I thought I was  
2                   saying extrapolating back from 1978 data to  
3                   1969.

4                   DR. NETON:        Right, but that is  
5                   outside of the renovation period.   That's a  
6                   different -- see, there's several --

7                   MEMBER GRIFFON:       That is after  
8                   renovation was over.

9                   DR. NETON:        The renovation was  
10                  over in 1969.

11                  MEMBER GRIFFON:     Right, but the  
12                  data point in 1969 is derived from 1954,  
13                  right?

14                  DR. NETON:        Right. Right.

15                  MEMBER GRIFFON:     So, that is a  
16                  little bit of speculation.

17                  DR. NETON:        But what I am saying,  
18                  though, that is a different --

19                  MEMBER GRIFFON:     It's not like you  
20                  measured in 1969 after the renovations.

21                  DR. NETON:        What I am saying is  
22                  that is a different time period than what has

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1       been discussed for the last half-hour or so.  
2       Right now, the discussion has centered around  
3       the renovation period itself.       Once the  
4       renovation period is over, then we have the  
5       standard TIB-70 approach where it declines.  
6       And you're right, it goes back -- we don't  
7       have anything to hang our hat on in 1969.  So,  
8       we go back to 1954.

9                   MEMBER GRIFFON:     Right.     That's  
10       what I was saying.

11                   DR. NETON:     That is the starting  
12       point.  It can't get any higher than that.

13                   MEMBER GRIFFON:     I'm saying I'm  
14       uncertain in all three of those data points.

15                   DR. NETON:     Okay.

16                   CHAIRMAN MELIUS:     Josie?     And,  
17       then, I will hear next after Josie from the  
18       petitioners.

19                   MEMBER BEACH:     Well, then, the  
20       renovation period, during that time, it is my  
21       understanding the workers' testimony stated  
22       that they removed large pieces of process

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1 equipment, which is where I believe the  
2 jackhammering came into play.

3 CHAIRMAN MELIUS: Is it a quick  
4 question?

5 MEMBER ZIEMER: Well, just a  
6 comment. It was my understanding that during  
7 the renovation period they had air samples not  
8 only from jackhammering, but from like six  
9 different operations. Was that not correct?

10 CHAIRMAN MELIUS: It was the  
11 decontamination period.

12 DR. NETON: That was for the  
13 decontamination period.

14 MEMBER ZIEMER: Oh, okay.

15 DR. NETON: Yes, we picked what we  
16 thought was the highest value for  
17 decontamination, the jackhammering, concrete  
18 had already been sandblasted.

19 CHAIRMAN MELIUS: Yes, there was a  
20 survey. But I want to get to the petitioners.  
21 We have got some time issues. And, then, we  
22 will come back and there will be more

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1 discussion, and we need a break. So, I want  
2 to get the petitioners before we get to that  
3 point. It is obviously going to take longer  
4 than allotted.

5 So, can we hear from the  
6 petitioners? Antoinette, first, please.

7 MS. BONSIGNORE: Yes, can everyone  
8 hear me?

9 CHAIRMAN MELIUS: Yes, we can.

10 MS. BONSIGNORE: Okay. Good  
11 morning, Dr. Melius. First, I want to thank  
12 you on behalf of the Linde workers and their  
13 families for the opportunity to address the  
14 Board this morning.

15 I would also like to thank the  
16 Linde Working Group for their efforts of two  
17 and a half years during the Linde SEC  
18 evaluation.

19 The Linde SEC, one issue was filed  
20 in March of 2008 and qualified for review on  
21 July 18th, 2008. The first ER for this was  
22 released by NIOSH on November 5th, 2008. One

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1 day before, on November 4th, NIOSH also issued  
2 a revised Site Profile.

3 The revised Site Profile was  
4 intended to incorporate and resolve issues  
5 raised by SC&A in their July 2006 review of  
6 the January version of the Site Profile. The  
7 revised November 2008 Site Profile represented  
8 the third version of the Site Profile since  
9 May 2000.

10 Since November 2008, the Linde  
11 workers and their families have not only been  
12 waiting for resolution of this SEC petition,  
13 but an additional SEC petition covering the  
14 operational time period from 1947 through  
15 1953.

16 During my presentation to the  
17 Board in November of last year, I spoke  
18 primarily about timeliness and the lack of  
19 transparency with the SEC evaluation process.

20 Regarding the issue of timeliness,  
21 this SEC evaluation process has had the  
22 unfortunate consequence of delaying the

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1 appropriate and timely review of  
2 previously-denied individual dose  
3 reconstruction claims covering the residual  
4 radiation period.

5 NIOSH has refused to issue a  
6 Program Evaluation Report to reflect necessary  
7 changes that must be incorporated in the next  
8 revision of the Linde Site Profile, which will  
9 be revision No. 5. And consequently, the  
10 Department of Labor refuses to reopen those  
11 previously-denied.

12 In effect, the Linde workers are  
13 being penalized because they filed this SEC  
14 petition. To add insult to injury, DCAS has  
15 now chosen to ignore the specific  
16 prescriptions of both the statute and their  
17 own implementing regulations by issuing a  
18 revised Evaluation Report on January 28th of  
19 this year.

20 The original ER was issued nearly  
21 two and a half years ago. That original ER  
22 was within the general confines of the 180-day

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1 deadline for issuing an ER. NIOSH now has  
2 decided to ignore that deadline and issue a  
3 revision and is asking this Board to recommend  
4 the denial of this SEC petition, not based on  
5 the original ER analysis, but the new ER  
6 analysis.

7           When DCAS issued the revised ER on  
8 January 28th, they, in effect, conceded that  
9 their November 2008 ER failed to provide a  
10 plan to reconstruct dose for these workers  
11 with sufficient accuracy, as prescribed by the  
12 statute and the regulations.

13           The policy DCAS is now using to  
14 justify ignoring the statute and ignoring  
15 their own regulations directly contradicts why  
16 deadlines were specifically delineated for the  
17 SEC program. The 180-day deadline was put in  
18 place to avoid exactly what has happened with  
19 the petition. The deadline exists so that  
20 NIOSH and DCAS specifically cannot drag out an  
21 SEC evaluation for years and years, so they  
22 cannot keep revising ERs ad infinitum until

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1 they think they finally have it right.

2 DCAS is presenting this Board with  
3 an explicit admission that they failed to meet  
4 their statutory and regulatory obligation when  
5 they issued the November 2008 ER. The  
6 Department of Health and Human Services has  
7 the explicit authority to interpret provisions  
8 within EEOICPA when the legislative intent is  
9 unclear.

10 NIOSH has abused this authority by  
11 ignoring the very clear mandate to produce and  
12 evaluate an ER within 180 days of when a  
13 petition is filed. What these workers do not  
14 understand, what is ambiguous or unclear about  
15 an 180-day deadline? How does 180 days give  
16 NIOSH the wiggle room to go to a  
17 two-and-a-half-year extension of that  
18 deadline?

19 Congress never intended to empower  
20 NIOSH to ignore this restriction. NIOSH  
21 issued a response to this issue to me in a  
22 letter dated January 31st of this year. That

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1 letter, which was distributed to the Board  
2 this morning, doesn't even address this issue.

3 It simply doesn't even address that there is  
4 a statutory deadline for issuing an ER. And,  
5 quite frankly, I was perplexed by the  
6 statements from DCAS simply ignoring the  
7 question that I posed to them about the  
8 180-day deadline.

9 The problem with this policy is  
10 not only that workers are expected to wait  
11 years for claims to be resolved. The problem  
12 is that DCAS has confused the purpose of the  
13 SEC program and the remedy it was intended to  
14 provide to workers and their families with the  
15 actual revising of the Site Profile.

16 These two parts of the Part B  
17 program should be distinct. DCAS cannot  
18 choose to ignore the fact that Congress put in  
19 place a specific deadline for the SEC  
20 evaluation process simply because they are  
21 still trying to figure out how best to justify  
22 a recommendation for denying the petition.

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1           The legislative history is clear  
2 here.     Congress intended there to be a  
3 specific deadline here.     NIOSH is ignoring  
4 that legislative history.

5           DCAS's health physicists and their  
6 contractor in ORAU evaluate SECs in a  
7 theoretical vacuum, ignoring the fact that  
8 these are real people who are seeking  
9 compensation under this program because they  
10 are sick or because the families that have  
11 been left behind are seeking some semblance of  
12 justice for their family members that have  
13 died.

14           This is not an epidemiological  
15 study.     This is a reparative compensation  
16 program.   And as such, DCAS cannot simply pick  
17 and choose what parts of the statute they  
18 comply with and what parts they can  
19 systematically ignore.

20           The first flawed Site Profile was  
21 issued by DCAS back in 2005.     That Site  
22 Profile has since been revised four times and

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1 it will need to be revised again, notably  
2 because none of the previous Site Profiles  
3 ever considered worker exposures in the Linde  
4 underground tunnel system.

5 Workers not only worked in those  
6 tunnels for a specific maintenance and repair  
7 duty, but they also used those tunnels to  
8 travel from building to building, particularly  
9 during the cold winter months.

10 I wanted to emphasize that  
11 particular point about the tunnels. The  
12 revised ER makes no mention of that fact, even  
13 though the workers who were interviewed by  
14 SC&A back in May of last year discussed that  
15 very issue of how and why this was used by  
16 workers.

17 But, more importantly, the  
18 November 2008 ER, the original Evaluation  
19 Report, makes no mention of the Linde tunnels.

20 DCAS has known about this potential worker  
21 exposure since July of 2006, when SC&A raised  
22 the issue in their Site Profile review and

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1 recommended that DCAS investigate the issue  
2 further.

3           However, I believe that DCAS  
4 specifically chose to ignore the tunnels as a  
5 potential exposure pathway because DCAS did  
6 not believe that anyone ever worked in or ever  
7 used those tunnels. That fact alone indicates  
8 that DCAS failed to propose a model for  
9 reconstructing dose in a sufficiently-accurate  
10 and claimant-friendly manner when they issued  
11 the original ER. And now they are coming to  
12 this Board conceding that fact while  
13 simultaneously asking you to ignore that fact.

14           Another problem with the revised  
15 ER deals with DCAS's unequivocal contention  
16 that the Linde tunnels under the original  
17 uranium ore processing building aren't  
18 constructed until after the operational time  
19 period had ended. The only truth that DCAS is  
20 relying on for this allegation is based upon  
21 an unsourced document prepared by a contractor  
22 used by the Army Corps of Engineers for the

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1 FUSRAP program. Those documents from Shaw  
2 Environmental were prepared back in 2004, and  
3 they provide absolutely no indication of what  
4 evidence or documentation Shaw Environmental  
5 relied on to conclude when specific tunnels  
6 were constructed.

7 DCAS has no contemporaneous  
8 evidence whatsoever, absolutely none, proving  
9 that these specific tunnels were constructed  
10 during the residual radiation period. They  
11 have no building permits or any evidence from  
12 the 1940s to counter statements from workers  
13 that those tunnels existed prior to the  
14 residual radiation period.

15 With respect to this issue of  
16 tunnel reconstruction dates, I would advise  
17 all the Board Members to read the memo that  
18 Ted distributed this morning carefully because  
19 on page 1 of that memo I noted that there is  
20 an August 1945 memo that discusses how  
21 effluent overflow was redirected from  
22 injection wells at the northwest end of the

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1 site to the southeast end of the site. There  
2 were injection wells near the ceramics  
3 building and there were injection wells near  
4 the area south, near the southeast end of the  
5 site, which was also called Plant 1. And they  
6 redirected the overflow from the ceramics  
7 building injection wells to the injection  
8 wells located near the Plant 1 at the end of  
9 the site. They did that using pipe tunnels.

10 Now these pipe tunnels were  
11 located in the underground utility pump. And,  
12 quite frankly, I don't understand how there is  
13 any other explanation, any other explanation  
14 as to how they redirected that effluent if the  
15 tunnels didn't exist during that time period.

16 So, I would ask the Board Members  
17 to particularly look at that memo with respect  
18 to this issue.

19 The workers need to believe in the  
20 integrity of the SEC evaluation process, and  
21 specifically, the integrity and the  
22 objectivity of the SEC scientific analysis,

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1 because the workers have no real way of  
2 challenging that information. I think the  
3 conversation and the discussion that the Board  
4 Members are having today probably could have  
5 been in a foreign language for most of the  
6 people who are listening today who are Linde  
7 workers or surviving family members.

8 When workers are not provided with  
9 an independent, objective analysis, the very  
10 issues that are dispositive in the SEC  
11 evaluation, they lose confidence in the  
12 decisionmaking process.

13 Neither ORAU nor SC&A represent  
14 the workers. When there is no representation  
15 of the workers on the technical side of the  
16 issue, the process becomes completely opaque  
17 to them.

18 This lack of transparency is a  
19 fundamental defect to how the SEC program is  
20 being administered and how the individual dose  
21 reconstruction cases are evaluated.

22 In conclusion, I respectfully

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1 request that the Board consider two specific  
2 issues. First, why does the Board believe  
3 DCAS can ignore the statutory and regulatory  
4 180-day deadline and use that policy as a  
5 justification for recommending that an SEC  
6 should be denied by asking this Board to  
7 evaluate their denial recommendation solely  
8 upon the analysis that is contained within the  
9 revised ER? What empowers DCAS to pick and  
10 choose what parts of the statute they want to  
11 comply with? Why is this admissible when the  
12 policy being used here is being used to the  
13 detriment of these workers?

14 I ask that the Board review the  
15 memo dealing with, the second memo that I sent  
16 this morning, dealing with its itemization of  
17 the analysis of every instance where DCAS has  
18 issued a revised ER and the reasons for doing  
19 so, as well as the resolution of those SECs.

20 You will note that the Linde  
21 revised ER is the first time that DCAS has  
22 issued a revised ER wherein they initially

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1 recommended denial, and are still recommending  
2 denial, despite the fact that there are  
3 material changes to the methodology in the  
4 revised ER.

5 I would submit to the Board that  
6 this is this revision is a very unique  
7 situation and that NIOSH is ignoring the very  
8 mandate of the SEC program.

9 The information developed by DCAS  
10 and SC&A after the 180-day deadline passed two  
11 and a half years ago should be used to revise  
12 the obviously inaccurate and incomplete Site  
13 Profile that NIOSH used to evaluate the SEC in  
14 the first place, and has been using to  
15 evaluate individual dose reconstruction  
16 claims.

17 However, the Linde petitioners  
18 respectfully request that the Board ensure  
19 that the significant and material changes that  
20 have been made from the original ER are not  
21 used to justify recommending denial of this  
22 petition. Allowing that would undermine the

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1 very purpose of the SEC program.

2 All of the Linde claims that have  
3 been denied since issuing the Site Profile in  
4 2005 have not been evaluated by NIOSH using an  
5 accurate and complete Site Profile. The  
6 singular and inescapable reality of the tunnel  
7 exposure issue has never been addressed, and  
8 any of the four versions of the Site Profile  
9 demonstrates this fact.

10 We ask that now, after five years  
11 of unfairly evaluated dose reconstruction  
12 claims, and after two and a half years of an  
13 SEC evaluation process, and it has openly  
14 ignored the 180-day statutory deadline, that  
15 the Linde workers should be granted immediate  
16 relief by this Board today. These workers and  
17 their families have waited far too long for  
18 some semblance of justice.

19 Finally, I would ask that the  
20 Board pick up any remaining issues regarding  
21 the OTIB-70 discussion from yesterday and  
22 address some of the questions that were raised

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1 that were posed by Dr. Lemen, Dr. Melius, and  
2 Dr. Poston that may affect the Linde SEC  
3 petition analysis. We urge the Board to  
4 recommend the approval of the Linde SEC-107.

5 I want to thank the Board for your  
6 time and consideration today. I would like to  
7 thank Senators Schumer and Gillibrand for  
8 their tireless efforts.

9 And most importantly, I would like  
10 to thank all the Linde workers and their  
11 families who have waited for a very long time.

12 It has been an honor to work with them.

13 Thank you.

14 CHAIRMAN MELIUS: Thank you,  
15 Antoinette.

16 Is Linda Lux on the line? I have  
17 some indication that she --

18 MS. LUX: Can you hear me?

19 CHAIRMAN MELIUS: Yes, we can.  
20 Thank you.

21 MS. LUX: Okay. After reading  
22 over the revised Evaluation Report that NIOSH

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1 presented for the Linde Site, I have some  
2 concerns how these numbers would be  
3 implemented if it is agreed or voted that  
4 NIOSH's proposal should be used for any dose  
5 reconstruction.

6 The Evaluation Report does not  
7 disclose how the 95th percent dose amount  
8 would be applied to the workers for the height  
9 of the construction or renovation period from  
10 1954 to 1969. And I say height because I  
11 believe that reading that report -- it is my  
12 understanding, that renovation did go on  
13 beyond 1969.

14 In the past NIOSH uses job  
15 classification to decide what dose amount each  
16 job category receives. While a very few might  
17 receive 95 percent most workers receive a much  
18 lower dose down to 5 percent.

19 In the case at the Linde Site  
20 during the construction period, job  
21 classifications are meaningless. There is no  
22 documentation as to what building or where on

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1 the site the workers were.

2 As NIOSH states in the revised  
3 report, Building 30 was used for evaluation  
4 purposes although many other contaminated  
5 buildings were being renovated all over the  
6 site. Many times the buildings were occupied  
7 in a business as usual way, and being used as  
8 offices or other purposes while construction  
9 went on in the same building. So it would be  
10 impossible to use job classification in this  
11 instance.

12 The construction at Linde went on  
13 in all seasons of the year. In the summer  
14 months, because there was no air conditioning,  
15 windows and doors would have been open  
16 exposing not only the buildings being  
17 renovated but the neighboring buildings as  
18 well.

19 I think we can all relate to  
20 excess dust in our own homes when a  
21 construction project is going on nearby and  
22 our windows are left open, so that scenario

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1 would not be unreasonable.

2 In the winter months the  
3 building's windows and doors would have been  
4 closed up, keeping the dust and airborne  
5 radioactivity closed up as well. For NIOSH to  
6 say on page 23 of the report that most of the  
7 airborne contamination would fall after 30  
8 minutes is not taking into account that the  
9 workers are still walking over the dust  
10 stirring it up, the heaters and fans are  
11 blowing dust around, and most likely everyone  
12 is drinking coffee along with the dust that  
13 had fallen in it. No one was thinking  
14 radioactive dust therefore no precautions were  
15 taken.

16 Although this report is focused on  
17 Building 30, over the years many contaminated  
18 buildings on the site were being renovated,  
19 and it is noted on page 22 of the report that  
20 these locations or building numbers were not  
21 documented, so therefore workers cannot be  
22 placed in specific areas.

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1           Most of these buildings in later  
2 years after 1969 were still found to be  
3 contaminated and had to be torn down after  
4 repeated attempts at cleaning them up. Torn  
5 down because they still could not be used for  
6 a healthy work environment.

7           So again I ask how can NIOSH  
8 accurately apply a formula to the Linde  
9 workers for this 12 year and beyond  
10 construction period. NIOSH has not been  
11 forthcoming with how they can accomplish this  
12 and for the Board Members to agree that  
13 NIOSH's proposal is claimant favorable, over-  
14 arching, or even fair to the Linde workers  
15 without knowing how the numbers would be  
16 applied, would be irresponsible and a flagrant  
17 disregard to the task that they were hired to  
18 perform. In regard to radon in the utility  
19 tunnels --

20                           (Telephonic interference.)

21           MR. KATZ:       I'm sorry, Linda.  
22 Linda, I'm sorry to interrupt you, but someone

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1 else has their phone open and they are making  
2 a lot of noise.

3 Everyone else on this phone except  
4 for Linda should have their phone muted.  
5 Press \*6 if you don't have a mute button.

6 MS. LUX: Okay.

7 MR. KATZ: Okay. Well, why don't  
8 you try now, Linda? Just continue.

9 MS. LUX: Okay. I will go back to  
10 the radon --

11 MR. KATZ: Yes, I think that is  
12 about where it got very difficult.

13 MS. LUX: Okay. If the goal of  
14 the Board is to determine the amount of radon  
15 in the tunnels at the Linde Site, it is  
16 inaccurate and factually incorrect to use all  
17 of Erie county as an average even for the  
18 lower bound. The radon present in the tunnels  
19 that may well have come from seepage and  
20 flooding from the wells that were drilled into  
21 the ground and filled with radioactive slurry  
22 is no way common to today's readings of

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1 residential neighborhoods county wide. This  
2 petition is in regard to the Linde Site only  
3 and therefore all information needs to come  
4 from the Linde Site in the time period of  
5 1954-2006 to be the most accurate for this  
6 petition that it can be.

7 I hope the Board will consider  
8 these important but overlooked issues with  
9 this Linde petition. Thank you for letting me  
10 make my comments.

11 CHAIRMAN MELIUS: Okay. Thank  
12 you, Linda.

13 We are running behind schedule.  
14 We do have the Bliss & Laughlin Steel  
15 scheduled. Actually, it should have started  
16 already.

17 I think we need a break. So, what  
18 I am going to propose we do, about a  
19 15-20-minute break and try to start again a  
20 little after 11:30 with Bliss & Laughlin  
21 because we do have petitioners that want to  
22 listen in for that.

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1           And, then, we come back, we have a  
2 work period. We do Fernald at 1:30, and,  
3 then, at two o'clock we will start back up  
4 with Linde. And we also have Dow to deal  
5 with, if we can, during that time period. But  
6 we have another Board work session later in  
7 the afternoon we can use to do that.

8           So, we will reconvene about 11:30  
9 to 11:35 and start with Bliss & Laughlin.

10           MS. BONSIGNORE: Dr. Melius?

11           CHAIRMAN MELIUS: Yes?

12           MS. BONSIGNORE: This is  
13 Antoinette.

14           Just repeat what time the Linde  
15 session will begin.

16           CHAIRMAN MELIUS: We will start  
17 around two o'clock, but we may be a little bit  
18 before, depending on how long the Fernald  
19 discussion goes on. So, I would be back on  
20 the line by 1:45 Eastern time.

21           MS. BONSIGNORE: Okay.

22           CHAIRMAN MELIUS: We will not

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1 start before that time, but we will start  
2 sometime between there and roughly two  
3 o'clock.

4 MS. BONSIGNORE: Okay. There was  
5 something that Linda mentioned that I wanted  
6 to address again at that time, if you could  
7 give me a moment --

8 CHAIRMAN MELIUS: Sure.

9 MS. BONSIGNORE: To make one  
10 additional comment.

11 CHAIRMAN MELIUS: That would be  
12 fine.

13 MS. BONSIGNORE: Okay. Thank you.

14 CHAIRMAN MELIUS: Thank you.

15 (Whereupon, the above-entitled  
16 matter went off the record at 11:19 a.m. and  
17 went back on the record at 11:38 a.m.)

18 CHAIRMAN MELIUS: Why don't we  
19 reconvene?

20 And the first item on the agenda,  
21 and the only item between now and lunch, is  
22 discussion of the Bliss & Laughlin Steel SEC.

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1                   Are there people on the line  
2 listening in?

3                   (No response.)

4                   Again, why don't we get started?

5                   Dr. Ziemer is going to make a  
6 presentation on Bliss & Laughlin.

7                   MEMBER ZIEMER:     Thank you, Dr.  
8 Melius.

9                   I want to report on the Work  
10 Group's findings or recommendations from a  
11 meeting that occurred just this past week.  
12 But, before I start in the slides that I have  
13 prepared, let me also refer you to the  
14 distribution that Ted Katz made last Thursday  
15 where he sent a copy of the slides that Sam  
16 Glover presented to the Board last July, I  
17 believe it was, where we had the formal  
18 presentation of the NIOSH Evaluation Report  
19 for this site. A copy of that with some minor  
20 revisions made in the slides that are based on  
21 the outcome from the Work Group, that should  
22 have been in your mail on this past Thursday

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1 as an attachment, basically, the original  
2 Evaluation Report as well as Sam's original  
3 presentation with some minor revisions that  
4 were indicated on his slides in red.

5 Just to remind you that Bliss &  
6 Laughlin Steel, they were a site where in a  
7 sense there were very minimal activities.  
8 There were five, or possibly six, individual  
9 machining operations done on specific days in  
10 1951 and 1952. That was the extent of the  
11 work there, basically, five or six days of  
12 work during that two-year period.

13 In 1992, it was declared to be a  
14 FUSRAP site and there was cleanup there in  
15 1998 and 1999.

16 The original Evaluation Report was  
17 reviewed by SC&A, and SC&A had seven findings  
18 which came to the TBD-6000 Work Group and we  
19 worked on those at two different meetings, one  
20 last fall and then the recent meeting this  
21 past week. So, I will give you the bottom  
22 line on those.

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1 I would like to point out that I  
2 have the Work Group recommendations on each of  
3 the findings. Mark Griffon was not able to be  
4 with us during the meeting last week. So,  
5 Mark did not actually vote on these, and he  
6 certainly can have the opportunity to comment.

7 Also, on the first one of the  
8 seven I believe Josie either abstained or had  
9 some concerns about it.

10 But, overall, there is a consensus  
11 recommendation on the individual findings as  
12 well as the bottom line.

13 So, let me go through the  
14 individual slides here.

15 Basically, what I will do is  
16 identify each of the findings, the SC&A  
17 findings. Also, I do want to insert here, I  
18 believe Sam may be on the slide.

19 Sam Glover, are you on the line as  
20 well?

21 DR. GLOVER: Yes, sir, I am.

22 MEMBER ZIEMER: Good. Sam is here

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1 if there are specific technical questions of  
2 NIOSH, and John Mauro is here. And I think  
3 somebody is on the line, Bill Thurber.

4 Is Bill Thurber --

5 MR. THURBER: I am.

6 MEMBER ZIEMER: Yes. So, Bill was  
7 the person from SC&A who was involved with  
8 this as well. So, those are both represented  
9 as well.

10 The Work Group, in addition to me,  
11 is Josie, Mark, Wanda, and John.

12 Finding No. 1 was that NIOSH  
13 should describe and reference the procedural  
14 standards for performing individual dose  
15 reconstructions.

16 The SC&A review indicated that  
17 there wasn't clarity in the ER exactly as to  
18 how they were performing these. NIOSH  
19 subsequently prepared a detailed summary  
20 document and some spreadsheets that gave  
21 details that were not presented in the ER.  
22 SC&A basically agreed with the DR approach set

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1       forth by NIOSH, and the Work Group agreed that  
2       we should close this issue.

3               I am going to insert here as an  
4       added comment that the description that I am  
5       giving here of what NIOSH did in response here  
6       is very abbreviated.     Of course, the Work  
7       Group had fairly extensive discussions on each  
8       of these.

9               So, this is really a high-level  
10       summary, as it were, in the sense that it is  
11       very brief.   If you have questions on any of  
12       these as I go along or later, please be sure  
13       to ask those.

14              So, that is the first issue.   And  
15       it was not seen by SC&A as a major issue,  
16       simply one of providing the details necessary  
17       to understand how dose reconstructions were  
18       purportedly going to be done.

19              The next finding was that NIOSH  
20       should ensure that the text of the SEC  
21       Petition Evaluation Report is consistent with  
22       the spreadsheet and the text correctly

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1 describes the analysis. They seemed to find  
2 some discrepancies at that point.

3           And I want to also comment on the  
4 word "insure", which when I sent these slides  
5 out for comment, one comment I got back was  
6 that that's the wrong word. It should be  
7 "ensure" with an "e", and that is quite  
8 correct, but I point out that the SC&A finding  
9 used the word "insure." So, that is the  
10 finding. I have checked the dictionary and  
11 "insure" is an acceptable, but not preferred  
12 use of what should be "ensure". If the court  
13 reporter can get the "e's" and "i's" correct  
14 on that, we will have a good transcript.

15           CHAIRMAN MELIUS:           We will  
16 interpret the finding accordingly.

17           MEMBER ZIEMER:    Yes. It is "i"  
18 before "e", apparently.

19           In any event, NIOSH reviewed the  
20 data which were used and they provided, again,  
21 a detailed Excel spreadsheet that matches well  
22 with the text of the Evaluation Report. There

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1 weren't changes needed in the Evaluation  
2 Report, but, again, more consistent detail on  
3 how the doses were to be reconstructed. SC&A  
4 indicated they understood them, how NIOSH is  
5 doing the calculations, and they agree with  
6 the general approach.

7           Also, it was agreed that this,  
8 actually, is not an SEC issue, but the  
9 differences there were simply clarification in  
10 how doses would be reconstructed. And we  
11 agreed that the issue should be closed.

12           The third finding, NIOSH needs to  
13 be prescriptive as to how calculations are to  
14 be performed for a bounding analysis. And,  
15 basically, after we discussed this, we all  
16 concluded that NIOSH's response to issue one  
17 also satisfied this issue because they were  
18 very descriptive in how they would carry out  
19 the dose calculations.

20           And SC&A agreed that these details  
21 as they were provided in the spreadsheet were  
22 responsive, and the Work Group agreed to close

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1 that issue.

2 Finally, four, SC&A agrees that it  
3 is possible to bound inhalation exposures  
4 during the residual period. This one is a  
5 bounding issue, we will note. SC&A does not  
6 believe that assuming a source-term depletion  
7 of 1 percent per day is an appropriate  
8 bounding approach.

9 This turns out to be largely an  
10 OTIB-70 issue, and NIOSH did agree that, where  
11 site data are available, they should be  
12 evaluated to determine factors such as  
13 depletion factors. And appropriate  
14 adjustments have been made using some actual  
15 data from the site as the starting point for  
16 the calculation for this period, for the  
17 residual period.

18 It turns out that NIOSH will  
19 actually use values that are significantly  
20 higher than the OTIB-70 method because they  
21 actually will use as a starting point the  
22 values from the site.

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1           Actually, they have Bliss &  
2 Laughlin data both for air and surface  
3 contamination. So, they can do some relations  
4 between those as well.

5           And SC&A accepted the approach now  
6 proposed. Again, it follows the general  
7 principles of OTIB-70, but uses actual site  
8 data as well. And the Work Group agreed that  
9 the issue should be closed.

10           Now Finding 5 was actually not a  
11 finding. It was a comment in the original  
12 document that SC&A concurred with NIOSH that  
13 external operation exposures can be bounded  
14 based on tables in TBD-6000. And so, it  
15 wasn't really a finding, although it was  
16 called that in the report. It is just a  
17 comment that they agreed with NIOSH in the  
18 report. And so, we closed that issue as well.

19           Then, Finding 6, SC&A said, while  
20 we believe that it is possible to use the  
21 information in TBD-6000 to make a bounding  
22 calculation for external exposure at Bliss &

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1 Laughlin, use of Table 5.1, which is from that  
2 TBD, as the basis may not be bounding since,  
3 it should say, it is based on an assumed air  
4 concentration of 7 dpm per cubic meter, a  
5 value neither supported in the source document  
6 nor by measurements at Bliss & Laughlin.

7 NIOSH indicated that the site data  
8 were used to determine the air concentration  
9 and surface loading values in the revised  
10 spreadsheet. This issue is linked to the  
11 OTIB-70 resuspension factors. And SC&A agreed  
12 with the proposed approach, which uses those  
13 resuspension factors in combination with the  
14 actual source data from the site. And the  
15 Work Group agreed to close that issue as well.

16 And, then, finally, Sections  
17 3.4.21 -- and that may be 2.1, I'm not sure; I  
18 may need to correct that -- and Section 7.1.5  
19 of TBD-6000 offer different approaches to  
20 estimating surface contaminations.

21 I am pausing here a minute because  
22 I am looking back at the finding to see if

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1       there should be a decimal point in there, but  
2       I won't spend time on that now. I think it is  
3       3.4.2.1 is what it probably is.

4                 In any event, NIOSH should make  
5       clear when it is appropriate to use either  
6       approach and should correct such in 7.1.5 to  
7       indicate that deposition occurs for 16 hours  
8       per day.

9                 NIOSH's response was that Bliss &  
10       Laughlin had only a handful of campaigns, and  
11       for the purposes of the calculations  
12       presented, they actually are using a 8.8-hour  
13       workday, and they assume a constant  
14       application of the air concentration level of  
15       5,480 dpm per cubic meter. And there are  
16       documents that detail how that is derived, so  
17       I am not going to go into that here, but that  
18       is the value, and they compare well with data  
19       collected during the operation of the fans as  
20       well -- or, I'm sorry. Comparison of the data  
21       collected during operation of the fans is well  
22       below this value and also bounds all the data

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1 collected when the fans were not utilized.  
2 And SC&A concurred with that approach. The  
3 Work Group agreed to close that issue.

4 And, then, the bottom line, based  
5 on the review of the Bliss & Laughlin SEC  
6 Evaluation Report by the Board's contractor,  
7 SC&A, and on the resolution of the issues at  
8 the Work Group meeting of October 12th, 2010,  
9 and February 16th, 2011, the TBD-6000 Work  
10 Group proposes that the Advisory Board accept  
11 the NIOSH Evaluation Report and recommend to  
12 the Secretary that an SEC Class for Bliss &  
13 Laughlin be denied.

14 And that ends my report.

15 CHAIRMAN MELIUS: Okay. Thank  
16 you, Dr. Ziemer.

17 Any questions for Dr. Ziemer?

18 (No response.)

19 PUBLIC PARTICIPANT: Hello.

20 CHAIRMAN MELIUS: Yes?

21 PUBLIC PARTICIPANT: I have a few  
22 things to say here.

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1                   CHAIRMAN MELIUS:     Are you the  
2     petitioner?

3                   PUBLIC PARTICIPANT:   Yes, I am.

4                   CHAIRMAN MELIUS:     Okay.  Our usual  
5     procedure is that we ask the Board Members to  
6     ask questions about the presentation and,  
7     then, I will call on you.  So, if you can just  
8     wait a few minutes, a very few minutes, we  
9     should be asking you.  So, thank you.

10                  PUBLIC PARTICIPANT:   Thank you.

11                  CHAIRMAN MELIUS:     Okay.  Josie?

12                  MEMBER BEACH:     Yes, I just wanted  
13     to state for the record that my objection to  
14     one and three was that part of NIOSH's  
15     response, why they were very descriptive in  
16     how they were going to do the reconstruction,  
17     they are going to develop a standalone  
18     appendix.  They haven't done that already.  
19     So, I just wanted to make that clear.

20                  MEMBER ZIEMER:     Yes, and I should  
21     point out that this is not unlike some other  
22     cases where the issue of making a standalone

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1 appendix basically is equivalent of a Site  
2 Profile. It is not an SEC issue. It simply  
3 will delineate in more detail what these dose  
4 reconstruction methods would be.

5 But I don't know if either Sam or  
6 Jim would like to comment further on that.

7 MEMBER BEACH: Just to add that,  
8 my main concern is just the followup --

9 MEMBER ZIEMER: Right.

10 MEMBER BEACH: Because there  
11 really isn't any after we close this.

12 MEMBER ZIEMER: Right. There is a  
13 commitment to actually produce a formal  
14 appendix to TBD-6000 for Bliss & Laughlin  
15 which will outline these procedures in detail.

16 CHAIRMAN MELIUS: And, I mean, one  
17 possibility is that the Work Group, the  
18 TBD-6000 Work Group, could continue to follow  
19 up. So, when that appendix comes out --

20 MEMBER ZIEMER: Oh, yes.

21 CHAIRMAN MELIUS: It follows it.  
22 That is one thing.

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1                   MEMBER ZIEMER:   Well, we would do  
2                   that in any event.

3                   CHAIRMAN MELIUS:     Yes.     And I  
4                   think Josie's comments are also appropriate.  
5                   We have usually, we have tried, in general, to  
6                   say, well, show us; let's see the actual  
7                   method, and so forth.  So, it somewhat depends  
8                   on the level of confidence that that method  
9                   will work, I guess.

10                  MEMBER ZIEMER:     Well, the Work  
11                  Group assumed methods, and SC&A had seen the  
12                  methods.  So, it is a matter of actually  
13                  putting them in a document.

14                  CHAIRMAN MELIUS:   Okay.

15                  MEMBER ZIEMER:     But I don't know,  
16                  Jim, do you or Sam on the line, do you want to  
17                  comment on that, and maybe even the time  
18                  table?

19                  DR. NETON:     I guess I will give  
20                  Sam the first crack at it.  He is more close  
21                  to this than I am.

22                  (Laughter.)

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1 Sam?

2 DR. GLOVER: Yes. This is Sam  
3 Glover.

4 The methods that are put forth in  
5 the letter provided to the Board are very  
6 detailed, and essentially all I am really  
7 going to add is just some more of the  
8 descriptive material, which will be pulled  
9 mostly out of the Evaluation Report. And so,  
10 I will combine those.

11 I kept my response to the Working  
12 Group very abbreviated, so that it would be  
13 focused, not lose the calculations.

14 So, anyway, it will not a great  
15 deal of time to prepare an appendix.

16 CHAIRMAN MELIUS: Thanks.

17 Any other Board Members have  
18 questions or comments?

19 (No response.)

20 Mark, do you? Okay. Okay. Thank  
21 you.

22 Okay. Now we will take the

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1 opportunity to hear from the petitioner. I  
2 believe you said you had some comments and  
3 questions. So, go ahead.

4 PUBLIC PARTICIPANT: Thank you.

5 I have in front of me a  
6 memorandum, the United States Government, we  
7 have gotten it from the library. Oh, my gosh,  
8 it was a couple of years ago, and everything  
9 was sent in.

10 And how it reads on one page in  
11 here -- it is File 52, Bliss & Laughlin Steel  
12 Company, Buffalo, New York, machining and  
13 scraping operations on uranium rods.

14 And I will go to the next  
15 paragraph. "Available records indicate  
16 uranium machining occurred at the site during  
17 September and October 1952, and that  
18 rod-turnings were generated by the Bliss &  
19 Laughlin activity is unknown."

20 So, these records describe the  
21 full extent of the Bliss & Laughlin work, no  
22 records indicating the total quantity of

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1 uranium handled at this site have been  
2 located. There is no mention of possible  
3 earlier Atomic Energy Commission work at the  
4 site in the October 1951 correspondence, which  
5 indicated that several drums of high uranium  
6 oxide had been accumulated.

7 Based on the operations performed  
8 at this site, the potential contaminants would  
9 be processed natural uranium. And I would add  
10 here, too, surveys of the facility conducted  
11 by National Lab Ohio at the time of the  
12 rod-turning operations identified  
13 contamination in the turning machine.

14 The machine used for this work  
15 replaced disposition of the old equipment is  
16 not known. No records indicating the  
17 radiological condition of this site following  
18 the uranium machining have been located.

19 I also have more information.

20 Surveys were conducted by NLO  
21 during rod-turning operations. And, then, it  
22 gives a lot of scientific information through

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1 here.

2 The onsite visit was conducted by  
3 the Department of Energy and, also, the  
4 Institute for Science and Education in 1992.  
5 This survey determined that residual uranium  
6 was present in the floor of the building above  
7 DOE guidelines.

8 I have a little more information.

9 Just a minute, please --

10 MR. KATZ: I am sorry, if you  
11 could just repeat yourself? Whatever you just  
12 said, this last sentence or two, it was  
13 inaudible.

14 PUBLIC PARTICIPANT: Okay.

15 MR. KATZ: Thank you.

16 PUBLIC PARTICIPANT: I understand  
17 there is something on the line.

18 MR. KATZ: I'm sorry to interrupt  
19 you again. Perhaps you are on a speaker  
20 phone, but it is almost impossible to --

21 PUBLIC PARTICIPANT: Is that  
22 better?

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1                   MR. KATZ:       That's much better.  
2       Thank you.

3                   PUBLIC PARTICIPANT:    What I keep  
4       seeing over and over again in information I  
5       have in my records, it is that records are not  
6       completed for all time periods.   And that is  
7       on page 9.3.1 of the Evaluation Report.  
8       Records are not completed for all time  
9       periods.

10                  And what about data?   How much  
11       more data do we need to send in?

12                  Thank you.

13                  CHAIRMAN MELIUS:   Thank you.

14                  Any responses or comments to those  
15       questions or comments?

16                  MEMBER ZIEMER:    I don't know if  
17       Sam wants to comment on any of the technical  
18       issues.

19                  The time period, of course, has  
20       been spelled out by the agencies.   So, we are  
21       locked into that period.

22                  CHAIRMAN MELIUS:    Right, the

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1 covered time period --

2 MEMBER ZIEMER: The covered  
3 period.

4 CHAIRMAN MELIUS: For those  
5 activities. So, while there may be  
6 information/suggestion that there are other  
7 time periods, we are obligated to focus on  
8 just the time period that is listed by DOL and  
9 DOE.

10 Sam, do you have any further  
11 comment?

12 PUBLIC PARTICIPANT: Well, I am  
13 looking at the SEC Evaluation Report, the  
14 first page, January 1951 to December 1952.  
15 And if I can find it now --

16 CHAIRMAN MELIUS: We need to move  
17 along with our process here.

18 PUBLIC PARTICIPANT: I can't find  
19 it right now, but it stated that there was  
20 possible operations before that date, too.  
21 But, like you just said, you have the dates.

22 CHAIRMAN MELIUS: We are fixed by

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1 the dates that have been issued, listed as the  
2 covered period. That information that you  
3 obtained is another covered period, another  
4 operations that aren't within this time  
5 period, though, there are procedures for  
6 getting that information to DOL and DOE to be  
7 evaluated. Sam or somebody from NIOSH can  
8 follow up and explain that to you.

9 Yes, Paul?

10 MEMBER ZIEMER: I did have one  
11 question myself that I wanted to raise, and  
12 that is procedural. I am not certain, were  
13 the revised materials that NIOSH prepared for  
14 the Work Group last week distributed to the  
15 petitioner as well? Do we know? Or, Sam, do  
16 you know?

17 DR. GLOVER: Dr. Ziemer, I  
18 provided those to Josh Kinman. I believe that  
19 he provided those, obviously, to the  
20 petitioner.

21 MEMBER ZIEMER: Okay. I just  
22 wanted to make sure that they were provided.

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1 Thank you.

2 CHAIRMAN MELIUS: Any further  
3 questions or comments from Board Members?

4 (No response.)

5 Okay. If not, does somebody want  
6 to recommend -- the Work Group has a formal  
7 recommendation, I take it?

8 MEMBER ZIEMER: The last slide was  
9 the recommendation. It comes from the Work  
10 Group. I think it constitutes a motion.

11 CHAIRMAN MELIUS: Okay. We will  
12 do that. We need a second.

13 MEMBER ANDERSON: I will second  
14 it.

15 CHAIRMAN MELIUS: Henry? Okay.  
16 Any further discussion?

17 (No response.)

18 And the motion would be this  
19 slide, which is to accept the -- well, it is  
20 based on review, that the TBD-6000 Work Group  
21 proposes that the Board accept the NIOSH  
22 Evaluation Report and recommend to the

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1 Secretary that an SEC Class for Bliss &  
2 Laughlin be denied.

3 So, if there is no further  
4 discussion, Ted, do the vote.

5 MEMBER GRIFFON: The only other, I  
6 mean one other point I would make is that I  
7 think this is, and we talked about this a  
8 little bit, that it is a site-specific issue  
9 here as opposed to an endorsement of the  
10 TIB-70 approach in all cases.

11 You know, I think in this case the  
12 data supports it, and it is very limited  
13 operations, very limited period. I think  
14 there are still open items for TIB-70 as  
15 regard to the overall approach. I think Paul  
16 went over that, but go ahead.

17 MEMBER ZIEMER: Right. Although  
18 the TIB-70 approach is used here, and Sam can  
19 explain this a little more in detail if  
20 necessary, but it is coupled with the starting  
21 source-term there. They had surface  
22 contamination in air-sampled data which gives

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1 a starting point. So, we are not using simply  
2 a surrogate value out of TBD-6000.

3 Also, then, I think here we are  
4 still talking about the 10 to the minus 6,  
5 which everybody has accepted for a  
6 previously-cleaned-up site. Recognizing,  
7 again, that becomes -- actually, it is not an  
8 SEC issue per se. It is a calculational  
9 issue, you know.

10 MEMBER GRIFFON: I just wanted to  
11 make that point, so that we don't think that  
12 we are also buying off on the entire TIB-70  
13 approach in all cases.

14 So, that's all I have.

15 CHAIRMAN MELIUS: Okay. Yes,  
16 ready, let's go ahead.

17 MR. KATZ: Dr. Anderson?

18 MEMBER ANDERSON: Yes.

19 MR. KATZ: Ms. Beach?

20 MEMBER BEACH: Yes.

21 MR. KATZ: Mr. Clawson?

22 MEMBER CLAWSON: Yes.

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1 MR. KATZ: Dr. Field?

2 MEMBER FIELD: Yes.

3 MR. KATZ: Mr. Gibson?

4 MEMBER GIBSON: Yes.

5 MR. KATZ: Mr. Griffon?

6 MEMBER GRIFFON: Yes.

7 MR. KATZ: Dr. Lemen?

8 MEMBER LEMEN: Yes.

9 MR. KATZ: Dr. Melius?

10 CHAIRMAN MELIUS: Yes.

11 MR. KATZ: Oh, I didn't check.

12 Dr. Lockey, are you on the line?

13 (No response.)

14 I didn't believe so. I just  
15 wanted to make certain. Okay.

16 Ms. Munn?

17 MEMBER MUNN: Yes.

18 MR. KATZ: Dr. Poston?

19 MEMBER POSTON: Yes.

20 MR. KATZ: Mr. Presley?

21 MEMBER PRESLEY: Yes.

22 MR. KATZ: Dr. Richardson?

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1 MEMBER RICHARDSON: Yes.

2 MR. KATZ: Dr. Roessler?

3 MEMBER ROESSLER: Yes.

4 MR. KATZ: Mr. Schofield?

5 MEMBER SCHOFIELD: Yes.

6 MR. KATZ: Dr. Ziemer?

7 MEMBER ZIEMER: Yes.

8 MR. KATZ: It is unanimous with  
9 one Member absent. I will collect the vote  
10 afterwards. All in favor; the motion passes.

11 CHAIRMAN MELIUS: Okay. Thank  
12 you.

13 Thank you, Paul. That was a  
14 helpful presentation on this.

15 We are scheduled for lunch, and we  
16 will take lunch. Why don't we try to get back  
17 here at 1:30, certainly no more than five  
18 minutes later, because we have a busy  
19 afternoon ahead of us and a long afternoon?

20 (Whereupon, the above-entitled  
21 matter went off the record for lunch at 12:11  
22 a.m. and went back on the record at 1:38 p.m.)

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1 kind of let you know where we are at. So,  
2 with that, I will start with that.

3 Issue 1 is a coworker model for  
4 uranium internal exposures. The issue  
5 concerns regarding the completeness and  
6 adequacy of the uranium bioassay data  
7 available for dose reconstruction and  
8 supporting the Fernald internal dosimetry  
9 coworker model, which is OTIB-78, dated  
10 November 6.

11 The issue is resolved except for  
12 the matter related to applicability to the  
13 coworker model to the Fernald construction  
14 workers. NIOSH is to perform an analysis of  
15 the construction worker coworker model versus  
16 the construction worker bioassay data for  
17 OTIB-78 and deliver a report to us.

18 Issue 2 is validation of the  
19 HIS-20 database. This is Issue 2A. This  
20 completes the validation of the accuracy with  
21 which hard-copy dosimetry data was converted  
22 into electronic data in the HIS-20 database.

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1 NIOSH delivered a complete validation study  
2 which resolved all of these issues. So,  
3 there's no action items with this at this  
4 time.

5 But Issue 2, which is the  
6 validation of the HIS-20 database, concerns  
7 regarding the integrity of the hard-copy  
8 bioassay data, as raised by the petitioner.  
9 SC&A has delivered a report describing  
10 possible strategies for determining the degree  
11 to which data integrity issues could adversely  
12 affect the ability to reconstruct internal  
13 dose. The Work Group agreed that any such  
14 investigation would require considerable time  
15 and cost and would likely be inconclusive.

16 One of the biggest issues that we  
17 are getting into right now is Issue No. 3,  
18 which is the recycled uranium. The issue  
19 concerns the default concentrations of Pu-239  
20 and Np-238, and other isotopes associated with  
21 the recycled uranium at Fernald, may not be  
22 bounding for some classes of workers,

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1 activities, buildings, and time periods.

2 The issue status is numerous White  
3 Papers have been exchanged where NIOSH  
4 provides the technical basis in support of the  
5 default values and SC&A provides the reasons  
6 it believes that the default values may not be  
7 bounding for all workers and time periods.

8 At the last Work Group we had an  
9 action item for NIOSH to provide a White Paper  
10 response to SC&A's second recycled uranium  
11 White Paper that focuses on the key findings  
12 that (a) the NIOSH default uranium contaminant  
13 levels may not be bounding for some classes of  
14 workers and (b) the questionable basis for the  
15 existing default value levels. The response  
16 should not simply reframe NIOSH's previous  
17 position on the issue. Specifically, the  
18 response should focus on:

19 High Pu and neptunium  
20 concentrations in some dust collector samples;

21 High plutonium concentrations in  
22 some air particulate samples collected at the

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1 site boundaries;

2 The magnesium fluoride, dolomite  
3 problem that we have got into;

4 Lack of data and limited health  
5 physics controls in the early years;

6 Limitations associated with DOE's  
7 report upon which the NIOSH default values are  
8 based;

9 And a one-size-fits-all issue.

10 Issue 4, the use of uranium breath  
11 data for reconstructing doses due to the  
12 inhalation of -- is it radium? -- radium and  
13 thorium-230.

14 SC&A agrees that radium breath  
15 analysis is a scientifically-valid method for  
16 reconstructing the intake of radium-226 and  
17 thorium-230 when the intake ratios of the two  
18 radionuclides are known and the impacted  
19 worker population can be identified. However,  
20 issues remain regarding identifying the  
21 impacted workers and reconstructing the  
22 internal doses to thorium-232 when the 232

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1 intake is not accompanied by equivalent or  
2 known quantities of radium-226.

3 White Papers have been exchanged,  
4 and the main issue remaining is identifying  
5 and reconstructing internal doses to workers  
6 who might have been exposed to thorium-230  
7 which may not be accompanied by radium-226.

8 I am missing a little bit of this.

9 The action item is, NIOSH is to  
10 provide a response to SC&A's White Paper  
11 entitled, "Review of the NIOSH White Paper on  
12 Fernald Th-230 and Other Associated  
13 Radionuclides - Rev. 7".

14 Issue 5 is review of radon  
15 emissions from the K-65 silos and associated  
16 exposures. The issue: SC&A believes that,  
17 one, the radon release rate from the K-65  
18 silos as estimated by NIOSH has been  
19 substantially underestimated, and, two, the  
20 method used to derive the atmospheric  
21 dispersion factors, given the source-term, is  
22 scientifically-flawed, but results in an

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1 overestimate of the atmospheric dispersion  
2 factors at the receptor location.

3           The status of this is, numerous  
4 White Papers have been exchanged. Both sides  
5 agree to disagree. As a practical matter,  
6 NIOSH believes that this issue has little  
7 significance with respect to the dose  
8 reconstruction for actual claimants, and both  
9 parties, NIOSH and SC&A, agree that this is  
10 not an SEC issue.

11           Except the action item was, NIOSH  
12 will evaluate which cases might be impacted by  
13 SC&A's findings regarding the applicability of  
14 the atmospheric dispersion model and the  
15 veracity of the source-term. NIOSH to  
16 consider rescinding its technical guidance  
17 regarding the K-65 silos based on what SC&A  
18 believes is a flawed source-term and the  
19 atmospheric dispersion model and its  
20 conclusions regarding the validity of their  
21 model based on the Pinney reports.

22           Item 6 is reconstruction of

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1 internal exposures from the inhalation of  
2 thorium-232. The description: use of  
3 breathing zone and general air-sampling data  
4 and associated daily weighted exposures for  
5 the purpose of reconstructing thorium-232  
6 intakes pre-1969. NIOSH has a White Paper,  
7 March 11, 2009.

8 The issue: numerous White Papers  
9 have been exchanged. SC&A has accepted  
10 NIOSH's last White Paper on this issue as  
11 being scientifically-sound and  
12 claimant-favorable. However, there remain a  
13 few technical questions that require  
14 attention.

15 NIOSH to respond to SC&A's revised  
16 daily weighted report entitled, "Focused  
17 Review of Uncertainty and Variability in  
18 Historical Time-Weighted Average Exposure  
19 Data" -- this is Davis and Strom, 2008 -- and  
20 its applicability in dose reconstruction under  
21 EEOICPA.

22 Issue 6, reconstruction of

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1 internal exposures from inhalation of  
2 thorium-232, continued.

3 Description of the issue: use of  
4 chest counts to reconstruct thorium-232  
5 exposure post-1968.

6 The status of the issue: to date,  
7 the issue has not been discussed in detail at  
8 Work Group meetings, but there has been an  
9 exchange of White Papers.

10 SC&A believes that there are  
11 significant SEC issues that need to be  
12 resolved with respect to this matter. The  
13 Work Group would like NIOSH to provide a  
14 response to SC&A's concerns.

15 One of the reasons that we are  
16 bringing this before the Board, like I say, I  
17 would like to be able to bring this to the  
18 full Board next meeting, is we basically  
19 haven't moved too much in the last two years.

20 These are what the outlying issues are, and I  
21 wanted to bring before the Board to be able to  
22 see before our next Work Group meeting if

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1       there is any concerns that Board Members have  
2       that they would like us to be able to address  
3       before our next Work Group meeting.

4                   I was going to task SC&A and also  
5       NIOSH to be able to send out these papers that  
6       I have quoted on here to all the Board  
7       Members, so that they can see what our issues  
8       are.

9                   So, that is the conclusion of my  
10       presentation, if there are any questions.

11                   CHAIRMAN MELIUS:   Anybody have any  
12       questions for Brad?

13                   (No response.)

14                   I thought this was helpful.   I  
15       think what would be important when you bring  
16       this to the Board at the next meeting is that  
17       we have some of the background documents and  
18       assemble those, so we know.   They are not  
19       always readily available on the website, at  
20       least all of them.   So, if you can identify,  
21       check the website, and the Work Group can  
22       identify sort of key documents, especially

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1 things that -- one is sort of, tell us which  
2 ones are the key ones. Secondly, if they  
3 aren't readily identifiable on the website,  
4 then let us know and we will let Ted know so  
5 we can get them out to the Board. I think it  
6 is helpful.

7 I think that is the most helpful  
8 thing. So that, when we come to the next  
9 meeting, we are prepared as best we can to at  
10 least discuss the issues and, then, hopefully,  
11 reach a resolution on them or at least a path  
12 forward.

13 MEMBER CLAWSON: And that is very  
14 true, and this is why I am trying to bring  
15 them before us now. What I will try to do is  
16 forward these key ones.

17 One of the most important ones  
18 that I would like the Board to really look at  
19 is the recycled uranium and the issues that we  
20 have on this, especially where we have got --  
21 and John Stiver did a marvelous job on this.  
22 I will have SC&A help me, and we will put

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1 together these papers. And NIOSH has still  
2 got several responses, they're going to be --  
3 and I will forward those on as the time goes  
4 on.

5 CHAIRMAN MELIUS: Yes. I mean,  
6 personally, I don't see any additional issues.

7 I think it is just focusing, I think the  
8 priority would be the SEC issues, because we  
9 are trying to deal with the SEC. So, if it is  
10 simply a Site Profile issue at this point in  
11 time, that is not going to affect the SEC,  
12 then I think it would have lesser priority.  
13 That doesn't mean we shouldn't be apprised of  
14 it, but I think the first decision I think we  
15 were trying to reach is on the SEC.

16 MEMBER CLAWSON: And one of the  
17 things that has come up is many of these, if  
18 we can't come to a conclusion, they basically  
19 become an SEC issue. But if we can come to a  
20 resolution on them, they become more of a Site  
21 Profile.

22 One of the things I do want to

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1 bring forth is that what is interesting about  
2 this site, and every site that we deal with  
3 has its own unique parts to it, Fernald was  
4 run as a heavy metals plants for years. So,  
5 they do have urinalysis for uranium. They  
6 have, I believe, 230,000 or 250,000 bioassays,  
7 but that is it, nothing else to it.

8 And this is part of the issue.  
9 You have such good urinalysis bioassay for  
10 uranium, but you don't have anything for any  
11 of the others. This is what we have been  
12 trying to deal with in the Work Group.

13 Are there any other questions?

14 CHAIRMAN MELIUS: Anybody else  
15 have comments or questions? Yes, Wanda?

16 MEMBER MUNN: I have a suggestion.

17 It sounds as though there is a significant  
18 number of these documents, background  
19 documents, that would be helpful to read. If  
20 they are not already on the O: drive, it would  
21 be very helpful, I think, to accumulate them  
22 into a file and just tell us where to find

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1       them.

2                   CHAIRMAN MELIUS:       Yes, that is  
3       what I was asking for. And I should have been  
4       more clear. If there are O: drive-type  
5       documents, also, reference those, or if we can  
6       put a set in just a folder on the O: drive,  
7       keyboard documents or something, because it is  
8       very hard on the O: drive to identify, to find  
9       documents.

10                  MEMBER CLAWSON:     I think I have  
11       mentioned that several times.

12                  CHAIRMAN MELIUS:     Yes. It's being  
13       fixed.

14                  MEMBER CLAWSON:     What I will do is  
15       I will have Mark Rolfes put together NIOSH's  
16       responses and SC&A, and we will put them in a  
17       clean folder where they will be easier to  
18       find.

19                  MR. KATZ:       Yes, and what I would  
20       suggest, too, we do is not only put everything  
21       but the kitchen sink in there, it all should  
22       be in there, but let's try to come up with a

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1 prioritized list that's most useful for the  
2 Board Members to get up to snuff because there  
3 is probably an overwhelming amount of  
4 information.

5 MEMBER CLAWSON: There actually  
6 is, and this is what, as the Work Group, this  
7 is the key points that we came into on this.  
8 This is why I was keying in on them.

9 CHAIRMAN MELIUS: Yes, exactly.  
10 If the Board then wants more information on a  
11 subject or one issue becomes more important as  
12 we discuss it, then we can always get more  
13 documents, if needed, or people. But you can  
14 just do the best you can and make it  
15 manageable and so forth. It is difficult,  
16 though. We see that with Linde. We see it  
17 with a lot of these sites. You know, it is a  
18 lot of information.

19 So, anyway, thanks, Brad.

20 Oh, sorry, Paul.

21 MEMBER ZIEMER: Well, the only  
22 comment is that I think that all of these

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1 findings dealt with issues that were from the  
2 SEC petition. So, in one sense, these ones  
3 that Brad has enumerated, I think, all have to  
4 be resolved as far as SEC is concerned because  
5 they are from that SEC document.

6 MEMBER CLAWSON: Right, and the  
7 one issue that I want to make sure that people  
8 realize is, as any site that we have been at,  
9 the petitioner raised a concern about the  
10 actual validity of the data that was put onto  
11 the HIS-20 database. And we, as a Work Group,  
12 we understood that, and we understood and saw  
13 documentation of her concern and why, but we  
14 didn't have anything that we could really, how  
15 we could really validate the corruption of it,  
16 or so forth.

17 We wanted to make sure that we  
18 addressed it because we felt that her concerns  
19 had merit and that we needed to look into how  
20 we could do that. And SC&A did spend an awful  
21 lot of time trying to develop for us how we  
22 could check the database to see if there was

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1 anything fraudulent or destroyed. We just  
2 couldn't come up with anything.

3 So, this was another part to it,  
4 and this is why it was brought up on this. We  
5 did spend an awful lot of time looking into  
6 how we could justify this and look at it, but  
7 we didn't come up with anything at the very  
8 end that we could really sink our teeth into  
9 and say yes or no.

10 CHAIRMAN MELIUS: That is  
11 something we can discuss also. Okay.

12 MEMBER CLAWSON: Right.

13 CHAIRMAN MELIUS: Thanks, Brad.

14 We are now going to move on or  
15 move back, however you want to term it, to the  
16 Linde Site and Linde SEC. I believe that --

17 MEMBER CLAWSON: Jim?

18 CHAIRMAN MELIUS: Yes.

19 MEMBER CLAWSON: We have the  
20 petitioner on the line.

21 CHAIRMAN MELIUS: I know. Oh, for

22 --

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1 MS. BALDRIDGE: Hello. This is  
2 Sandy Baldrige for Fernald.

3 CHAIRMAN MELIUS: Go ahead, if you  
4 would like to say a few words.

5 MS. BALDRIDGE: Am I being heard?

6 CHAIRMAN MELIUS: Yes.

7 MS. BALDRIDGE: Okay, I wasn't  
8 sure. I was told that I could make a couple  
9 of comments about how I felt this has been  
10 handled to this point.

11 The notation that Brad made  
12 earlier about it being four or five years,  
13 this petition was submitted in December of  
14 2005, which means the discussion period is  
15 entering its sixth year since it was  
16 presented.

17 I confirmed about the timeliness  
18 issues. The problem, I think, in the delay,  
19 as I perceived it, is, one, NIOSH was trying  
20 to fill in a lot of gaps and correcting the  
21 Site Profile with some of the data concerning  
22 the thorium processes, which maybe diverted

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1 their attention a little more away from the  
2 SEC issues.

3 And also, in the five years, they  
4 have never presented their material, submitted  
5 their presentation materials with adequate  
6 time for review by the Working Group prior to  
7 the meeting, or to the point that I was even  
8 given access to the discussion materials.  
9 They all needed to be redacted before they  
10 could be made available, and I feel that they  
11 should have provided the Board and myself a  
12 little more courtesy in getting those  
13 materials to them and available to me.

14 Another complaint about NIOSH is  
15 that my name was posted online as petitioner  
16 of this petition, which is a violation of my  
17 right to privacy. Now that error was  
18 corrected, but I don't know how long that  
19 information was available. And it was against  
20 my wishes that that information be made  
21 available to the public.

22 One of the issues that has been

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1     dealt with, even in the evaluation of  
2     materials and data presented, is the  
3     management at Fernald, their recordkeeping  
4     practices and philosophy almost, in some cases  
5     and for some periods of time, make it  
6     impossible to determine where people were  
7     working. Well, if you don't know where a  
8     person is working, it makes it difficult to  
9     assign them a dose correctly.

10             Let's see. I think those are  
11     probably my primary concerns at this time.  
12     You know, enough is enough.

13             There is information that was  
14     provided to NIOSH over five years ago that has  
15     yet to be applied to individual dose  
16     reconstruction. They have used the SEC  
17     petition as an excuse not to correct the dose  
18     reconstructions that were done that were  
19     deficient in areas, particularly concerning  
20     thorium.

21             I also discovered that there were  
22     gaps that they should have been able to

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1 accurately fill those gaps. I mean, when they  
2 are dosing people based on their future work  
3 assignment, and they can't realize that there  
4 is only one plant open and one plant  
5 operational, do they not realize that is the  
6 only place they could have been working?

7 Some of the processes which  
8 probably fall under their methodology, I just  
9 feel are very illogical and areas of  
10 contention in this whole process.

11 I do appreciate all the work that  
12 the Working Group and Advisory Board Members  
13 have put in. They have been diligent. They  
14 have been persistent. SC&A has been as  
15 helpful, not only to them, but to explain and  
16 answer questions that I've had during the  
17 meetings, and I appreciate that.

18 I hope they can proceed in a more  
19 timely manner from this point on.

20 Thank you.

21 CHAIRMAN MELIUS: Thank you.

22 Now we will move on to the Linde

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1 SEC petition. And first, before we do  
2 anything, Antoinette indicated she had a  
3 couple of more comments.

4 MS. BONSIGNORE: Yes, thank you, I  
5 just wanted to --

6 CHAIRMAN MELIUS: Excuse me one  
7 second. I just want to make sure, also, that,  
8 Jim Lockey, are you on the line?

9 MEMBER LOCKEY: Yes, I am, Jim.

10 CHAIRMAN MELIUS: Okay. Thanks.

11 Go ahead, Antoinette.

12 MS. BONSIGNORE: Okay. Thank you.

13 Yes, I just wanted to make a brief  
14 statement about something that Linda Lux had  
15 mentioned in her statement regarding the  
16 renovation time period.

17 Renovation work at Linde did  
18 extend into the early '70s, and many of the  
19 workers have stated this in interviews over  
20 the years.

21 NIOSH misrepresents itself when  
22 they insist that they have specific dates of

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1 when the renovation work started and when it  
2 ended. They don't have that information.  
3 They have very little information about the  
4 kind of renovation work that was conducted at  
5 Linde and when the renovation work started and  
6 when it ended. For NIOSH to insist that it  
7 ended definitively in 1959 is just -- it's  
8 simply an inaccurate statement. I wanted to  
9 raise that, I wanted to emphasize that to the  
10 Board.

11 And also, because workers have  
12 indicated that renovation work continued into  
13 the 1970s, to me, this is just another example  
14 of a pattern that has, unfortunately, occurred  
15 with the way NIOSH has evaluated workers'  
16 statements over the past few years.

17 Workers' statements have been  
18 dismissed, disregarded, and met with extreme  
19 skepticism over the years. And I am convinced  
20 that this is a very serious problem that I  
21 think NIOSH needs to evaluate internally, but  
22 also something that the Board really needs to

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1 consider in evaluating some of the unequivocal  
2 definitive statements that NIOSH insists on  
3 making in the revised Evaluation Report.

4 That is all I have. Thank you.

5 CHAIRMAN MELIUS: Thank you,  
6 Antoinette.

7 Okay. Gen, I believe you have  
8 comments?

9 MEMBER ROESSLER: This is in  
10 response to some other comments. The first  
11 one I have is very short, and it was Brad's  
12 comment about there was no bioassay during the  
13 residual period.

14 That is not a surprise because in  
15 most of the sites during the residual period  
16 there's no bioassays. So, that is not really  
17 unusual.

18 Then, I think, in response to  
19 Mark, I think Dr. Lockey is going to address  
20 that, if he is on the line. So, I will put  
21 that off just a minute.

22 With regard to Antoinette and the

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1 dates, maybe we have Chris or Jim who could  
2 respond to that, the accuracy of the dates.

3 CHAIRMAN MELIUS: Which dates are  
4 you talking about?

5 MEMBER ROESSLER: I think she is  
6 questioning the dates of the renovation.

7 CHAIRMAN MELIUS: Renovation,  
8 okay. Because we had talked earlier about the  
9 tunnels. That is just why I was trying to --

10 MEMBER ROESSLER: Yes, she was  
11 referring to renovation.

12 CHAIRMAN MELIUS: No, I knew that.

13 DR. NETON: Is Chris Crawford on  
14 the phone?

15 MR. CRAWFORD: Yes, Jim.

16 DR. NETON: I think that Chris is  
17 a better person to answer this than I am.

18 MR. CRAWFORD: I believe this is  
19 probably maybe better taken up in the Work  
20 Group. It was not brought up during the last  
21 technical call that we had or teleconference  
22 call we had in the Work Group. But,

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1       nonetheless, I will do my best.

2                   Of the workers' testimony I have  
3       seen, as usual for personal witnesses, it is  
4       not completely consistent.     We have sworn  
5       testimony, that is, testimony under oath, that  
6       the major period of renovations was between  
7       '62 and '68.     We have other testimony, in  
8       fact, from the same witness, much later,  
9       handwritten, saying that, oh, it was '50s,  
10      '60s, and '70s.

11                   It is very hard to evaluate this  
12      because there is only a single incident of  
13      renovation that is cited in all the testimony  
14      that I have seen from the witnesses.   That is  
15      the 1966 project to move a machine about 30  
16      feet from one place to another in Building 30.

17      It took about six months and involved some  
18      jackhammering.

19                   So, we have done our best by  
20      assigning a period from 1954 to 1961 -- I  
21      mean, sorry, 1969.   I think we have been very  
22      claimant-friendly.

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1           And, of course, almost all sites  
2           are going to have some degree of renovation  
3           during very long residual periods, such as the  
4           one that we have. I think what we are looking  
5           for is, was there an extraordinary amount of  
6           it, and did it involve a lot of extraordinary  
7           disruptive work such as jackhammering?

8           So, we have to weigh the evidence,  
9           in other words, that is presented to us by a  
10          witness' statement. And we have done our best  
11          to do that.

12                   CHAIRMAN MELIUS:     Jim Lockey was  
13          going to respond to Mark's comments. So, Jim?

14                   MEMBER LOCKEY:     Not so much to  
15          Mark, but to you, Jim, but perhaps more so to  
16          Mark. When I went back and looked at these  
17          documents again in regard to deciding the  
18          higher exposure limit based on the renovation  
19          work, the jackhammering, the reason that I did  
20          it, and I think SC&A agreed to this, is that  
21          this really would represent an upper bound  
22          under most all circumstances, because they

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1       were assigned that level as if somebody was  
2       doing this over a 24-hour day for 15 years,  
3       which brings up to your point, Jim, though,  
4       that it is very unlikely that anybody was at  
5       that upper bound over a 15-year period of  
6       time, but it certainly is a claimant-friendly  
7       upper bound.

8                       Now whether it truly is a  
9       plausible upper bound for all the other  
10      workers at the plant site, is the issue I  
11      think, Jim, that you raised. I am not sure  
12      how to address that going forward.

13                      But I am confident that, the way  
14      NIOSH designed this, it is unlikely that  
15      anybody would have a higher exposure based on  
16      that upper bound limit.

17                      CHAIRMAN MELIUS: Thanks for the  
18      clarification, Jim.

19                      Gen has one more comment. You can  
20      have more than one, too, if you want.

21                      (Laughter.)

22                      MEMBER ROESSLER: Well, mine is in

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1 response to Mark's comments. When Mark was  
2 talking about being uncertain about stuff that  
3 might be up in the rafters and that sort of  
4 thing, it brought a visual picture to me. If  
5 you look at the material that you were  
6 provided for this part of the discussion and  
7 look on page 16 in the revised ER, in the  
8 middle of there there's a nice paragraph that  
9 talks about what they did to clean up.

10 It says, and I will read parts of  
11 it, that I think you will see that I don't  
12 think we have to be concerned that there was  
13 any stuff left in the rafters, and so on.

14 It says, "Shortly after the  
15 shutdown of Step 3" -- and that was in 1949 --

16 CHAIRMAN MELIUS: Can you repeat  
17 what page you are on, Gen?

18 MEMBER ROESSLER: I am on page 16  
19 in the ER.

20 CHAIRMAN MELIUS: Okay. Thank  
21 you.

22 MEMBER ROESSLER: And it is right

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1 below the table there. And I won't read it  
2 all because you can read it.

3 I think it does say how well they  
4 cleaned the place up.

5 It says, "After removal of the  
6 bulk of the process equipment, the entire  
7 building was vacuum-cleaned and flushed with  
8 water. Afterwards, a systematic radiation  
9 survey was conducted to identify areas of  
10 contamination. Decontamination was  
11 accomplished primarily by removing  
12 contaminated parts of the building", and so  
13 on, "and by abrading surfaces, mostly by  
14 sandblasting", and they used oxygen/acetylene  
15 torches.

16 "After each area was  
17 decontaminated, it was again cleaned and  
18 flushed, and a final radiation survey was  
19 performed."

20 To me, that takes away any  
21 question about how clean the building was.

22 CHAIRMAN MELIUS: Yes, you are

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1 speaking to the decontamination that occurred  
2 before the renovation? Is that correct?

3 MEMBER ROESSLER: Yes. I think  
4 what I took was he was sort of saying, could  
5 there have been some leftover stuff in the  
6 rafters and in the building?

7 MEMBER GRIFFON: I can clear up my  
8 comment, too. I wasn't basing it on words. I  
9 was basing it on numbers. If I look at the  
10 survey data in '78, it is clear that there is  
11 still significant levels there. Now the  
12 clean-up criteria, obviously, were different  
13 in the early '50s than in '78, but it was  
14 clear that there was still significant levels  
15 left over. So, that was kind of my point.

16 MEMBER ROESSLER: There are  
17 numbers for that.

18 MEMBER GRIFFON: Huh?

19 MEMBER ROESSLER: I mean, they did  
20 surveys and there are some --

21 MEMBER GRIFFON: Yes, there are  
22 numbers.

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1 MEMBER ROESSLER: Yes.

2 MEMBER GRIFFON: There are  
3 numbers.

4 MEMBER ROESSLER: Okay. I just  
5 wanted to read that part into the record.

6 MEMBER GRIFFON: Right, right.

7 CHAIRMAN MELIUS: But, then, you  
8 also had renovation activities like  
9 jackhammering going on on surfaces that were  
10 -- at least the building was decontaminated,  
11 but there were certainly residuals. So that,  
12 then, where material found later on came from  
13 could have come also from the renovation  
14 period, would not necessarily speak to the --  
15 what was on decontamination.

16 As I think it has been pointed  
17 out, we know so little about this whole period  
18 in terms of documentation; it is hard to tell  
19 really.

20 But that is helpful, Gen, though,  
21 I think.

22 MS. BONSIGNORE: Dr. Melius, could

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1 I just make one comment about what Gen just  
2 raised?

3 CHAIRMAN MELIUS: Yes, just one.  
4 Go ahead.

5 MS. BONSIGNORE: Okay. Again,  
6 this issue about how dusty the buildings were  
7 during the residual radiation period when  
8 there was dust on the rafters, the workers  
9 have provided countless, countless statements,  
10 affidavits, statement after statement after  
11 statement, talking about how, when they would  
12 have lunch in any of these buildings, the same  
13 buildings that they worked in, they ate their  
14 lunch in, dust would be falling into their  
15 food. Dust would be falling from the rafters  
16 into their coffee. Their hard hats would be  
17 covered with huge amounts of dust any time  
18 they walked through these buildings. This has  
19 been documented time and again by the workers  
20 in numerous statements.

21 I know a good deal of the workers  
22 are listening right now to this discussion,

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1 and I can assure you that they are extremely  
2 frustrated when they hear statements  
3 suggesting that these buildings were perfectly  
4 clean or that there wasn't any dust in the  
5 rafters or that they weren't exposed to huge  
6 amounts of dust by inhalation and ingestion on  
7 a daily basis. They were, and they have  
8 testified to this over and over and over  
9 again.

10 CHAIRMAN MELIUS: Okay. Thank  
11 you.

12 Well, I have a question. I think  
13 it is probably for Chris, but, Jim, maybe the  
14 Work Group also.

15 I am just trying to understand the  
16 basis for the 16-year renovation period. So,  
17 that is one either contract or building permit  
18 for a six-month period or something in the  
19 middle of that time period, and then  
20 statements from some of the workers? Is that  
21 what -- Chris, could you clarify that?  
22 Because one of the problems I had, and I read

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1 all the transcripts, and so forth, and the  
2 reports, it was just hard to -- there wasn't a  
3 lot of discussion of sort of the factual  
4 documentation behind that. Now it doesn't  
5 mean there wasn't any, but it just never came  
6 up in the Work Group with a lot of detail.

7 Chris?

8 MR. CRAWFORD: This is Chris  
9 Crawford.

10 Essentially, the entire concept of  
11 the renovation period and the length of it is  
12 based on workers' testimony, which is to say  
13 we don't have documentary evidence during the  
14 residual period. They have not made any  
15 available to us and their successor company of  
16 Linde.

17 So, we did, in fact, take account  
18 of the worker testimony and tried to be quite  
19 worker- and claimant-friendly in defining some  
20 period that we could call the renovation  
21 period. It could have been as short as '62 to  
22 '68. We elected to make it from the beginning

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1 of the period right through to '68.

2 That is about what I can tell you  
3 about that.

4 CHAIRMAN MELIUS: Okay.

5 MR. CRAWFORD: I would urge the  
6 Board to read the Heatherton 1950 document  
7 that we sent out where it specifically  
8 mentions vacuum-cleaning the rafters, for  
9 instance.

10 It can be a little confusing to  
11 talk about dust in the rafters. Where else is  
12 it normally dusty? It is not surprising there  
13 would be dust in the rafters at all times  
14 during the residual period.

15 The point is, the removable  
16 contaminants were, in fact, removed in the  
17 '50s by vacuum-cleaning. What was left to  
18 contaminate the building was mostly fixed  
19 contaminant that would then be covered over by  
20 the dust, the dust from subsequent activity.  
21 It is all non-radioactive.

22 Just a little clarification to Ms.

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1       Bonsignore's comments on that.

2                   CHAIRMAN MELIUS:   Thank you.

3                   Josie has a comment?

4                   MEMBER BEACH:       Not to belabor  
5       this, but on page 17 of the ER report it says  
6       from 1962 to 1970, major renovation of  
7       Building 30 took place.   And they do talk  
8       about the former workers indicating that this  
9       was a period of almost continuous disruption  
10      within the building activities that could have  
11      potentially released and resuspended formerly  
12      inaccessible contamination.

13                  So, underneath those huge machines  
14      that they moved, I believe is what they are  
15      talking about.

16                  CHAIRMAN    MELIUS:    Any    other  
17      comments?

18                  (No response.)

19                  We have a motion on the table.   If  
20      there are no further comments or questions or  
21      suggestions --

22                  MEMBER GRIFFON:   What exactly is

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1 the motion on the table?

2 CHAIRMAN MELIUS: The motion is to  
3 accept the NIOSH Evaluation Report for the  
4 residual period.

5 MEMBER GRIFFON: So, it is not  
6 radon?

7 CHAIRMAN MELIUS: No, it is not  
8 radon. We double-checked that, and it is to  
9 essentially accept the NIOSH conclusion.

10 If there's no further discussion,  
11 go ahead, anywhere you want.

12 (Laughter.)

13 MR. KATZ: I am going to start at  
14 one end or the other, with Paul or -- I'll  
15 start with you, then, Andy, since you're  
16 smiling.

17 MEMBER ANDERSON: No.

18 MR. KATZ: Ms. Beach?

19 MEMBER BEACH: No.

20 MR. KATZ: Mr. Clawson?

21 MEMBER CLAWSON: No.

22 MR. KATZ: Mr. Field?

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1 MEMBER FIELD: Yes.

2 MR. KATZ: Mr. Gibson?

3 MEMBER GIBSON: No.

4 MR. KATZ: Mr. Griffon?

5 MEMBER GRIFFON: No.

6 MR. KATZ: Dr. Lemen?

7 MEMBER LEMEN: No.

8 MR. KATZ: Dr. Lockey?

9 MEMBER LOCKEY: Yes.

10 MR. KATZ: Dr. Melius?

11 CHAIRMAN MELIUS: No.

12 MR. KATZ: Ms. Munn?

13 MEMBER MUNN: Yes.

14 MR. KATZ: Dr. Poston?

15 MEMBER POSTON: Yes.

16 MR. KATZ: Mr. Presley?

17 MEMBER PRESLEY: Yes.

18 MR. KATZ: Dr. Richardson?

19 MEMBER RICHARDSON: Yes, I think I

20 might need to abstain.

21 MR. KATZ: Okay.

22 MEMBER RICHARDSON: Abstain.

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1 MR. KATZ: Dr. Roessler?

2 MEMBER ROESSLER: I have forgotten  
3 the motion, but I think --

4 MR. KATZ: The motion is to  
5 support --

6 MEMBER ROESSLER: I think I ought  
7 to vote yes. That was so traumatic.

8 (Laughter.)

9 MR. KATZ: Well, you need to have  
10 the motion clear in your mind.

11 (Laughter.)

12 MEMBER ROESSLER: Yes.

13 MR. KATZ: Mr. Schofield?

14 MEMBER SCHOFIELD: No.

15 MR. KATZ: Dr. Ziemer?

16 MEMBER ZIEMER: Yes.

17 MR. KATZ: So, I have seven yeses  
18 and I have one abstention and I have eight  
19 nos, I believe. Yes.

20 MEMBER ZIEMER: What is it again?

21 MR. KATZ: I have eight nos, one  
22 abstention, and seven yeses, which means the

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1 motion fails, I believe.

2 Is that correct, Dr. Ziemer,  
3 right, with an abstention?

4 MEMBER ZIEMER: I believe that is  
5 correct, yes. Yes, the motion fails. I  
6 believe that is correct.

7 MR. KATZ: Let us make sure.

8 CHAIRMAN MELIUS: Does someone  
9 have an alternative motion or suggestion for  
10 moving forward?

11 MEMBER BEACH: I would like to  
12 make a motion that we approve the SEC for  
13 Linde.

14 MEMBER LEMEN: I will second that.

15 MR. KATZ: For what period?

16 MEMBER ZIEMER: It is the reverse  
17 motion.

18 MEMBER BEACH: Well, I was  
19 hesitating because I am not sure if I can do  
20 it through the renovation period or for the  
21 whole time period.

22 CHAIRMAN MELIUS: You can do

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1       either one, but we have just voted, we have  
2       just had a vote on the entire period.

3               MEMBER BEACH:     Okay.     So, accept  
4       the SEC for the entire period.   Thank you.

5               MEMBER LEMEN:     And I will still  
6       second that.

7               CHAIRMAN MELIUS:   Okay.   Okay.

8               MEMBER GRIFFON:   Any discussion?

9               CHAIRMAN MELIUS:   Any discussion?

10              MR.    HINNEFELD:       This   is   Stu  
11       Hinnefeld.

12              Just for our benefit, it would be  
13       helpful to know -- there have been a couple of  
14       things argued here about what cannot be  
15       reconstructed -- and to know clearly what  
16       doses cannot be reconstructed for the period,  
17       so that we can then determine what to include  
18       in the non-presumptive dose reconstructions.  
19       So, it would be helpful for us as part of this  
20       motion to understand what is the non-feasible  
21       part.

22              CHAIRMAN    MELIUS:           Or    the

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1 justification for it. That has to be part of  
2 the motion.

3 MR. HINNEFELD: Yes. Right. I  
4 mean at some point.

5 CHAIRMAN MELIUS: Yes.

6 MR. HINNEFELD: It doesn't have to  
7 be part of the motion.

8 CHAIRMAN MELIUS: Yes. But we can  
9 do that now when it is discussed.

10 MEMBER LOCKEY: Hello?

11 CHAIRMAN MELIUS: Jim, did you  
12 have a comment? Sorry. Somebody was in the  
13 background.

14 MEMBER LOCKEY: Jim?

15 CHAIRMAN MELIUS: Yes?

16 MEMBER LOCKEY: Josie, are you  
17 saying that we should go into 2006?

18 MEMBER BEACH: Yes.

19 MEMBER LOCKEY: And before, I  
20 think at the meetings you had said that you  
21 thought an earlier date, and after that date  
22 most likely they could do dose reconstruction.

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1 I take it you're changing your mind?

2 MEMBER BEACH: Yes.

3 MEMBER LOCKEY: So, what we are  
4 doing is approving this population from 1954  
5 to 2006? That is your proposal?

6 MEMBER BEACH: That is correct.

7 CHAIRMAN MELIUS: Well, I have a  
8 comment. I guess I am not in favor of that.  
9 I am in favor of the renovation period. I  
10 think for the residual period after the  
11 renovation period, I think I am comfortable  
12 with what has been proposed, including, I  
13 guess, the main issue that was a problem there  
14 was the radon. I think I am comfortable with  
15 the method that has been approved there. So,  
16 I would have a problem with voting for that  
17 motion. That is just a comment.

18 MEMBER LEMEN: What is the date of  
19 the renovation? What is the date?

20 CHAIRMAN MELIUS: It is up through  
21 1969. And so, from 1969 --

22 MEMBER LEMEN: Forward, you are in

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1 concurrence? You are saying we should not  
2 approve an SEC for that period after '69?

3 CHAIRMAN MELIUS: After '69.

4 MEMBER LEMEN: Okay.

5 MEMBER BEACH: Yes. So, then, can  
6 I offer a friendly amendment? Because that  
7 was my hesitation upon making the motion.

8 CHAIRMAN MELIUS: Yes.

9 MEMBER BEACH: But I do want a  
10 clarification, Jim. You said the problem was  
11 with the radon?

12 CHAIRMAN MELIUS: No. No, I said  
13 the issue --

14 MEMBER BEACH: No, it was not with  
15 the radon?

16 CHAIRMAN MELIUS: The issue that  
17 we had discussed and that was earlier  
18 problematic was the radon.

19 MEMBER BEACH: Correct.

20 CHAIRMAN MELIUS: And I actually  
21 thought that that had been appropriately  
22 addressed --

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1 MEMBER BEACH: Okay.

2 CHAIRMAN MELIUS: -- with the  
3 latest revision or version of that, that  
4 methodology.

5 MEMBER BEACH: Okay.

6 MEMBER GRIFFON: Up to '69, not to  
7 '78.

8 MEMBER BEACH: Up to the end of  
9 '69.

10 CHAIRMAN MELIUS: Up to the end of  
11 '69.

12 MEMBER BEACH: Then I would offer  
13 that as a friendly amendment to my first  
14 motion for the SEC from '54 through the end of  
15 '69.

16 CHAIRMAN MELIUS: So, that would  
17 be a single motion. Do we have a second to  
18 that?

19 MEMBER SCHOFIELD: Second.

20 CHAIRMAN MELIUS: Okay.

21 MEMBER LEMEN: So, do you mean we  
22 are voting on --

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1                   CHAIRMAN MELIUS: Well, we are not  
2 voting on anything. We are just having  
3 discussions of a motion.

4                   MEMBER LEMEN: But when we do  
5 vote, just discussing the order, would we vote  
6 on the first motion or is the first motion  
7 withdrawn from the table?

8                   MEMBER ZIEMER: It is not  
9 withdrawn; it was defeated.

10                  CHAIRMAN MELIUS: No, no, no. The  
11 second motion, Josie's motion, she then  
12 modified to cover a shorter --

13                  MEMBER LEMEN: Does that mean,  
14 even though I seconded what she did the first  
15 time --

16                  CHAIRMAN MELIUS: Yes, and do you  
17 accept her friendly amendment then?

18                  MEMBER LEMEN: No.

19                  CHAIRMAN MELIUS: That was my --

20                  MEMBER LEMEN: No.

21                  CHAIRMAN MELIUS: Okay.

22                  MEMBER LEMEN: So, do you need to

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1       vote on that first, though?

2                   CHAIRMAN MELIUS:       Well, we can  
3 either vote on the amendment or we can have  
4 somebody else offer an amendment, which I  
5 think would be the more proper thing.

6                   Paul?

7                   MEMBER ZIEMER:    I think I can do  
8 this without having a vote. I think anyone  
9 can request that a motion be split and that we  
10 vote on the separate parts. I propose that we  
11 vote on the first part. I forget the exact  
12 years.

13                   CHAIRMAN MELIUS:   '54 through the  
14 end of '69.

15                   MEMBER ZIEMER:    Right. And then  
16 vote on the other part.

17                   MEMBER LEMEN:    That is what I was  
18 asking. Thank you, Paul.

19                   MR. KATZ:     While we are still in  
20 comment, the comment phase of this, before we  
21 start voting, though, my one concern is about  
22 that second piece, then, about the post-'69

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1 period, if you are going to vote on that as  
2 well as the second part? That is what you are  
3 suggesting, right?

4 MEMBER ZIEMER: Yes.

5 MR. KATZ: Two votes? So, my only  
6 concern about that is I think it needs to be  
7 clear for the record what the basis would be  
8 for that second part, because I am a little  
9 concerned about how much discussion and basis  
10 there is for the second part versus the first  
11 part.

12 So, I mean, someone may just want  
13 to reiterate some things if you feel like it  
14 has been adequately addressed, but I have a  
15 bit of a concern about that.

16 MEMBER ZIEMER: Right now, as the  
17 motion stands, since the seconder didn't  
18 change, it is a motion for everything. So, if  
19 you were in favor of it, the first part, you  
20 would vote yes. But if you did not want the  
21 SEC to cover the second, you would have to  
22 vote no on the second part. And, then, it

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1 would require an additional action.

2 MR. KATZ: I guess maybe you  
3 didn't understand what I was saying. My  
4 concern was not procedural. My concern was  
5 that the discussion of the Board today really  
6 heavily emphasized the justification related  
7 to the first part, but it didn't really go  
8 very far in justifying the second part.

9 And for the Secretary's sake,  
10 should that vote pass, she needs a very clear  
11 basis there. That is my concern.

12 CHAIRMAN MELIUS: So, I think  
13 people that are going to -- are in support of  
14 the second part I think need to clarify why  
15 they continue to have concerns about the radon  
16 method or any other issue related to that time  
17 period.

18 MEMBER MUNN: After 1969.

19 CHAIRMAN MELIUS: After 1969,  
20 correct.

21 So, if anybody has concerns -- if  
22 not, it may actually depend on the vote. I

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1 mean, it's sort of a cart-and-horse issue.

2 MR. KATZ: I think discussion  
3 would ordinarily come first.

4 CHAIRMAN MELIUS: Yes. No, I  
5 know. No, I agree with that. I am just  
6 saying it is a cart-and-horse, though, because  
7 I can't tell, predict votes.

8 So, I guess if anybody has  
9 continued concerns about the radon method or  
10 any other issue, I think it is important to  
11 get it on the table now.

12 MEMBER ZIEMER: Again, point of  
13 order, if we split the vote, we are discussing  
14 only the first part, I think, right now.

15 CHAIRMAN MELIUS: You are correct.  
16 Yes, that is a good point. So, let's do the  
17 first one, that'll make it --

18 Is there any further discussion on  
19 the first part?

20 MEMBER MUNN: Be very clear what  
21 the first part is.

22 CHAIRMAN MELIUS: Well, the first

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1 part is to approve an SEC for the time period  
2 from 1954 through the end of 1969.

3 MEMBER MUNN: Thank you. Since  
4 that was the second part of the motion --

5 CHAIRMAN MELIUS: Yes. We are  
6 doing a good job of confusing ourselves,  
7 probably, with that.

8 So, any further discussion?

9 MEMBER RICHARDSON: I mean, I can  
10 speak to what I was struggling with as I was  
11 even struggling with the vote. We started off  
12 with an enumerated list of concerns about dose  
13 reconstruction. These involve, as they are  
14 listed here, lack of bioassay, film badge, air  
15 sampling, field monitoring data for the  
16 renovation period and the use of surrogate  
17 data.

18 I went through those and I felt  
19 like I was able to feel satisfied in checking  
20 off a number of those concerns. Lack of film  
21 badge data, for example, I felt like, well,  
22 there is some bounding that could be done.

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1 The use of surrogate data, I thought that the  
2 discussion about trying to understand how  
3 here, I believe here the surrogate data is the  
4 information on basement radon levels, you  
5 know, I think it is not ideal, but it is  
6 workable for this purpose in bounding.

7 What I was left feeling like I  
8 wasn't fully confident about was the bounding  
9 in this renovation period, not that it  
10 couldn't be done, but the question of whether  
11 it was truly bounding or not. I think -- not  
12 even that it was, you know, not this issue of  
13 plausibility or anything, but kind of we have  
14 a limited number of data points and we are  
15 trying to draw some curves back into time.  
16 And I find it very -- that is what I was  
17 struggling with. Do I really feel like those  
18 are truly bounding values or not? To me, it  
19 wasn't clear-cut.

20 I mean, in terms of my discussion,  
21 and as that relates to the set of outstanding  
22 concerns, I felt like almost all of them were

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1 off the table except this question there.

2 MEMBER MUNN: So, your concern is  
3 with the second part?

4 MEMBER RICHARDSON: No.

5 CHAIRMAN MELIUS: No, no.

6 MEMBER RICHARDSON: It is with the  
7 first part.

8 CHAIRMAN MELIUS: It is the first  
9 part. It is whether the upper bound is really  
10 bounding, and then there is a second issue,  
11 which is the one I think I emphasize more, so  
12 I don't disagree with David. But my issue was  
13 whether it was plausible for applying that to  
14 the entire work site for this entire time  
15 period, given how little documentation, how  
16 little we know.

17 Again, we have talked about this  
18 before. I don't want to belabor it, but it is  
19 how little we know about what went on during  
20 this time period. It just makes it difficult  
21 to reach conclusions on it. I think that is  
22 why, I think if we knew more, we would

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1 probably reach more of a consensus on this  
2 issue.

3 But we can have different reasons  
4 for supporting or not supporting a motion.

5 And I would just add, if a  
6 significant number of Board Members feel that  
7 additional information, or whatever, would be  
8 helpful, I think that is something that could  
9 be discussed also. I don't want to try to  
10 force a vote.

11 MEMBER LEMEN: We are still on the  
12 first part?

13 CHAIRMAN MELIUS: We are still on  
14 the first part, '54 to '69.

15 Yes?

16 MEMBER FIELD: Could I just ask,  
17 just for clarification, just to make sure that  
18 I understand this issue, ask if Jim would just  
19 mind just stating why NIOSH believes it is  
20 bounding? Given all the discussion that we  
21 have had --

22 CHAIRMAN MELIUS: Yes. Yes, he

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1 did before, and I think it is helpful to  
2 repeat it. So, go ahead.

3 DR. NETON: Yes, we looked at the  
4 various activities that occurred during the  
5 D&D period that had some pretty good  
6 air-sampling measurements associated with  
7 them. In fact, there were breathing zone air  
8 samples for a lot of these operations. I  
9 forget the number, but there were five or six  
10 different operations.

11 And we selected the pneumatic  
12 jackhammering measurement as the bounding  
13 value because it was the highest, outside of  
14 the sandblasting activity, which they had  
15 cleaned up already, it was the highest  
16 measured value that occurred. Well, after it  
17 had been cleaned up, they took a jackhammer  
18 and jackhammered previously-clean concrete  
19 that was still contaminated, was the residual,  
20 the residual contamination. That was the  
21 value that was measured.

22 So, that was the highest value

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1 that we thought could plausibly be there  
2 during the renovation period because there  
3 were indications during the renovation period  
4 that jackhammering had occurred. And that  
5 generated 2.3 MAC air, a MAC being 70 dpm per  
6 cubic meter. That puts it somewhere around  
7 180, or something like that, dpm per cubic  
8 meter. It seemed to be a plausible upper  
9 bound for a continuous exposure.

10 The other aspect of this is that  
11 it doesn't necessarily mean that all people  
12 were jackhammering. We know nothing about the  
13 movement of these people through the  
14 buildings. There could have been adjacent  
15 cubicles, or whatever, and people existing in  
16 this cloud at any given period of time.

17 The reason that we kept it at a  
18 constant level and not dropped it down like we  
19 do with normal TIB-70 is because these  
20 jackhammering activities could have occurred  
21 at various locations within the building over  
22 time and still have resuspended the same

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1 amount of material. There was no depletion.

2 So, that is the reason that we  
3 believe that it is a bounding estimate.

4 MEMBER RICHARDSON: And for my  
5 purposes, can you, have you or is it easy to  
6 express that, for example, as an estimate of a  
7 lung dose?

8 DR. NETON: That's a good  
9 question. We would always pick the most  
10 insoluble material, which would be slow  
11 solubility clearance. It is not a lot of  
12 activity. A hundred and seventy dpm is  
13 somewhere less than a milligram of activity  
14 per cubic meter. So, it is not this huge  
15 cloud that they are generating.

16 Chris, have we done dose  
17 reconstructions that you could give us a clue  
18 as to what the lung dose is or the dose is  
19 from this activity?

20 I suspect it is not small. It is  
21 going to be in the rems of range, but --

22 MR. CRAWFORD: Yes, I could take a

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1 look at the example DRs and see if we have  
2 anything on that.

3 DR. NETON: They are just example  
4 DRs. They are not --

5 CHAIRMAN MELIUS: Yes. Yes, I  
6 think the only problem, I think the method has  
7 changed since that. It goes back. Because I  
8 have looked at them, and you have made some  
9 modifications to that method also, I think. I  
10 don't know how significant they were, but  
11 there were some. Maybe you modified them, but  
12 --

13 DR. NETON: Anytime you are  
14 continuously inhaling about 170 dpm per cubic  
15 meter, it is going to get you into some  
16 significant -- the lung dose would be the  
17 highest, of course, if it was insoluble  
18 material. And I just couldn't hazard a guess  
19 right now, but it is not trivial.

20 I would suspect that you could get  
21 over 50 percent PoC at those levels if you  
22 breathed it for an extended period of time.

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1                   CHAIRMAN MELIUS:    Yes, you have  
2    got 16 years.

3                   DR. NETON:     Yes.     Yes.     So, I  
4    would suspect that there's compensable levels  
5    in there.

6                   CHAIRMAN MELIUS:   Yes.

7                   Okay.   Any other clarifications or  
8    --

9                   MEMBER GRIFFON:   Yes.   I'm sorry.  
10    I just would follow up with Jim on that.   I  
11    am looking at that, and I agree with, I think  
12    it was Chris on the phone who said to look  
13    back at this 1950 Heatherton, or whoever,  
14    report.

15                   There is a table in there on page  
16    26 of the sampling you were talking about.  
17    And that was a good clarification because you  
18    are telling me that you selected the  
19    jackhammering on previously-decontaminated  
20    floor, I mean, basically.

21                   DR. NETON:    Right.

22                   MEMBER GRIFFON:   Floors that had

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1       been at least grossly decontaminated, right?

2                   DR. NETON:       Right, and in our  
3       opinion, that is the way the facility was  
4       turned over to Linde, which was decontaminated  
5       through sandblasting and water cleaning, and  
6       stuff.

7                   MEMBER GRIFFON:       Right, right.  
8       And it is interesting to note in this that the  
9       sandblasting --

10                   DR. NETON:    It is much higher.

11                   MEMBER GRIFFON:       -- was like 160  
12       MAC --

13                   DR. NETON:    Yes, yes, sure.

14                   MEMBER GRIFFON:       -- as opposed to  
15       like 10 --

16                   DR. NETON:       That was before  
17       cleaning.

18                   MEMBER GRIFFON:       Right.

19                   DR. NETON:    And we don't know --

20                   MEMBER GRIFFON:       The question that  
21       comes up on the renovation issue, which is  
22       also my field experience in this, is that if

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1 they were actually moving, removing production  
2 processes, where we always found the most  
3 contamination was in the footprint of these  
4 processes.

5 DR. NETON: Yes. Well, if you  
6 read --

7 MEMBER GRIFFON: I don't know if  
8 that is true at Linde, but, you know --

9 DR. NETON: If you read, most of  
10 the process equipment was taken out of the  
11 building prior to cleaning.

12 MEMBER GRIFFON: Prior to  
13 renovations?

14 DR. NETON: Prior to cleaning,  
15 during D&D. There was some left, but --

16 MEMBER GRIFFON: I thought I heard  
17 something about removing equipment during  
18 renovations.

19 DR. NETON: No, no.

20 MEMBER GRIFFON: I don't know if  
21 it was processing --

22 DR. NETON: I think one piece of

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1 equipment was moved during D&D or renovation  
2 activities, but if you read that closely, it  
3 says prior to, during D&D they removed most of  
4 the process equipment or much of it. So, that  
5 was done.

6 And, then, also, where they could  
7 not clean to their standard specifications  
8 that they set up prior to the activity, they  
9 actually concreted over the walls up to like 8  
10 feet tall around the various areas. I forget  
11 what the preset criteria was for removable or  
12 fixed contamination remaining, but they  
13 actually put a concrete cover over the walls  
14 to a certain height.

15 And they actually ripped out  
16 certain parts that couldn't be decontaminated.

17 There was a railing and a balcony that they  
18 ripped out. So, there was some pretty  
19 extensive mechanisms for clean-up that were  
20 done.

21 MEMBER GRIFFON: Thanks.

22 CHAIRMAN MELIUS: Okay. Any

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1 additional questions?

2 (No response.)

3 Okay. So, we are voting on part  
4 one of the motion, which is to approve the SEC  
5 for 1954 through the end of 1969, the  
6 renovation period at Linde.

7 And go ahead, Ted.

8 MR. KATZ: Okay, I will reverse  
9 the order this time, just for parity or  
10 whatever.

11 And begin with Dr. Ziemer.

12 MEMBER ZIEMER: I vote no.

13 MR. KATZ: Mr. Schofield?

14 MEMBER SCHOFIELD: Yes.

15 MR. KATZ: Dr. Roessler?

16 MEMBER ROESSLER: No.

17 MR. KATZ: Dr. Richardson?

18 MEMBER RICHARDSON: Yes.

19 MR. KATZ: Mr. Presley?

20 MEMBER PRESLEY: No.

21 MR. KATZ: Dr. Poston?

22 MEMBER POSTON: No.

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1 MR. KATZ: Ms. Munn?  
2 MEMBER MUNN: No.  
3 MR. KATZ: Dr. Melius?  
4 CHAIRMAN MELIUS: Yes.  
5 MR. KATZ: Dr. Lockey?  
6 MEMBER LOCKEY: No.  
7 MR. KATZ: Dr. Lemen?  
8 MEMBER LEMEN: Yes.  
9 MR. KATZ: Mr. Griffon?  
10 MEMBER GRIFFON: Yes.  
11 MR. KATZ: Mr. Gibson?  
12 MEMBER GIBSON: Yes.  
13 MR. KATZ: Dr. Field?  
14 MEMBER FIELD: No.  
15 MR. KATZ: Mr. Clawson?  
16 MEMBER CLAWSON: Yes.  
17 MR. KATZ: Ms. Beach?  
18 MEMBER BEACH: Yes.  
19 MR. KATZ: Dr. Anderson?  
20 MEMBER ANDERSON: Yes.  
21 MR. KATZ: Nine yeses. That would  
22 make seven nos. And the motion passes.

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1                   CHAIRMAN MELIUS:    Now we need to  
2           consider part two of the motion, which is the  
3           time period from the end of the renovation, so  
4           beginning in 1970 through the end of the  
5           residual period.

6                   Do we have any further discussion  
7           or comments on that?   Yes, Dick?

8                   MEMBER LEMEN:    I will preface this  
9           by saying I am not completely stubborn --  
10          (laughter) -- but I am not clarified in my  
11          mind that the information on the tunnels after  
12          '69 is still not an issue.   And I am not sure  
13          and I am not convinced that all of the  
14          potential exposures in that area are being  
15          taken into consideration.

16                   I    don't    think    that    I    was  
17          adequately convinced by NIOSH that they were  
18          taking into consideration people that might  
19          walk through the tunnels or even that the  
20          samples taken in the tunnel are representative  
21          of the problems that might occur in the  
22          tunnels.

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1           So, that is my rationale. If I am  
2 wrong, I may change my vote back to agree with  
3 everyone else. But that is why I am still  
4 intending to vote no on this second part.

5           CHAIRMAN MELIUS: I think you were  
6 doing a justification for voting yes.

7           MEMBER LEMEN: Was I?

8           CHAIRMAN MELIUS: It is to approve  
9 the SEC.

10          MEMBER LEMEN: Okay.

11          CHAIRMAN MELIUS: Because you have  
12 doubts.

13          MEMBER LEMEN: I'm sorry.

14          CHAIRMAN MELIUS: I was going to  
15 clarify again before the vote. It is  
16 confusing.

17          MEMBER LEMEN: Yes, I would vote  
18 no then. Vote yes, I mean.

19                 (Laughter.)

20          We word these things so hard  
21 sometimes for us simple people.

22          CHAIRMAN MELIUS: No, we did it

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1 one way. Now we are doing it the other way.

2 MEMBER LEMEN: Because simple  
3 people don't understand sometimes.

4 CHAIRMAN MELIUS: Yes. No, that  
5 is fine. It is confusing.

6 Anybody else want to speak to the  
7 second part? And I guess, particularly if you  
8 are going to vote yes, it is helpful to have  
9 justification on the record, in addition to  
10 what Dr. Lemen has provided as a reason for  
11 that.

12 Yes, Paul?

13 MEMBER ZIEMER: This is more of a  
14 question. My understanding is that, if dose  
15 reconstruction is done rather than an SEC, all  
16 the individuals would still get assigned some  
17 tunnel component, is that correct, because we  
18 can't distinguish between those who walked  
19 through the tunnels and those who did not?  
20 So, doesn't everybody get a tunnel  
21 contribution?

22 DR. NETON: That is correct.

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1                   MEMBER LEMEN:    I would just say,  
2                   even with what Paul, Dr. Ziemer, just said, it  
3                   doesn't change my mind because I am not  
4                   convinced that the sampling done in the  
5                   tunnels is adequate.

6                   CHAIRMAN MELIUS:       Any other  
7                   comments?

8                   (No response.)

9                   If not, the vote would be on the  
10                  second part of the motion, which is to approve  
11                  an SEC, approve the petition, approve a new  
12                  Class, for the time period from 1970 to the  
13                  end of the residual period. And a vote yes is  
14                  for the approval; a vote no is to reject that  
15                  approval.

16                  And go ahead wherever you want to  
17                  start, Ted.

18                  MR. KATZ:        Yes, I will just  
19                  flip-flop again to keep things spicy.

20                  (Laughter.)

21                  Dr. Anderson?

22                  MEMBER ANDERSON:   No.

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1 MR. KATZ: Ms. Beach?  
2 MEMBER BEACH: No.  
3 MR. KATZ: Mr. Clawson?  
4 MEMBER CLAWSON: No.  
5 MR. KATZ: Dr. Field?  
6 MEMBER FIELD: Vote no.  
7 MR. KATZ: Mr. Gibson?  
8 MEMBER GIBSON: Yes.  
9 MR. KATZ: Mr. Griffon?  
10 MEMBER GRIFFON: No.  
11 MR. KATZ: Dr. Lemen?  
12 MEMBER LEMEN: Yes.  
13 MR. KATZ: Dr. Lockey?  
14 MEMBER LOCKEY: No.  
15 MR. KATZ: Dr. Melius?  
16 CHAIRMAN MELIUS: No.  
17 MR. KATZ: Ms. Munn?  
18 MEMBER MUNN: No.  
19 MR. KATZ: Dr. Poston?  
20 MEMBER POSTON: No.  
21 MR. KATZ: Mr. Presley?  
22 MEMBER PRESLEY: No.

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1 MR. KATZ: Dr. Richardson?

2 MEMBER RICHARDSON: No.

3 MR. KATZ: Dr. Roessler?

4 MEMBER ROESSLER: No.

5 MR. KATZ: Mr. Schofield?

6 MEMBER SCHOFIELD: No.

7 MR. KATZ: Dr. Ziemer?

8 MEMBER ZIEMER: No.

9 MR. KATZ: So, the nays have it.

10 It is 14 to 2. The motion fails.

11 CHAIRMAN MELIUS: Okay. Thank  
12 you.

13 I will prepare letters to that  
14 effect.

15 Yes, Paul?

16 MEMBER ZIEMER: Mr. Chairman, do  
17 we actually now perhaps need a motion that we  
18 would approve the NIOSH recommendation for  
19 that period?

20 CHAIRMAN MELIUS: That is a good  
21 point. Yes.

22 MEMBER ZIEMER: Because, in a

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1 sense, we rejected that before.

2 CHAIRMAN MELIUS: We rejected it,  
3 yes.

4 MEMBER ZIEMER: Because it was  
5 linked in with the other.

6 CHAIRMAN MELIUS: Yes, right. You  
7 are correct. That is correct.

8 So, we need --

9 MEMBER ZIEMER: So, it is a motion  
10 that we recommend that we accept the NIOSH  
11 approach for dose reconstruction during the  
12 residual period. Well, do I have the correct,  
13 1970 and whatever?

14 CHAIRMAN MELIUS: Until the end of  
15 the residual period.

16 MEMBER GRIFFON: Second.

17 CHAIRMAN MELIUS: A second to that  
18 from Mark.

19 Okay. Any further discussion?

20 (No response.)

21 If not, Ted, we're keeping you  
22 busy. Go ahead. No, go ahead.

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1 MR. KATZ: Okay. Dr. Ziemer?

2 MEMBER ZIEMER: Let's see now, a  
3 yes vote --

4 (Laughter.)

5 I made the motion. I think I'm  
6 going to vote yes.

7 (Laughter.)

8 MR. KATZ: The motion is to  
9 support the NIOSH finding --

10 MEMBER ZIEMER: I'm voting yes.

11 MR. KATZ: Mr. Schofield?

12 MEMBER SCHOFIELD: Yes.

13 MR. KATZ: Dr. Roessler?

14 MEMBER ROESSLER: Yes.

15 MR. KATZ: Dr. Richardson?

16 MEMBER RICHARDSON: Yes.

17 MR. KATZ: Mr. Presley?

18 MEMBER PRESLEY: Yes.

19 MR. KATZ: Dr. Poston?

20 MEMBER POSTON: Yes.

21 MR. KATZ: Ms. Munn?

22 MEMBER MUNN: Yes.

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1 MR. KATZ: Dr. Melius?

2 CHAIRMAN MELIUS: Yes.

3 MR. KATZ: Dr. Lockey?

4 MEMBER LOCKEY: Yes.

5 MR. KATZ: Dr. Lemen?

6 MEMBER LEMEN: No.

7 MR. KATZ: Mr. Griffon?

8 MEMBER GRIFFON: Yes.

9 MR. KATZ: Mr. Gibson?

10 MEMBER GIBSON: No.

11 MR. KATZ: Dr. Field?

12 MEMBER FIELD: Yes.

13 MR. KATZ: Mr. Clawson?

14 MEMBER CLAWSON: Yes.

15 MR. KATZ: Ms. Beach?

16 MEMBER BEACH: Yes.

17 MR. KATZ: Dr. Anderson?

18 MEMBER ANDERSON: Yes.

19 MR. KATZ: The yeas have it 14 to

20 2. The motion passes.

21 CHAIRMAN MELIUS: Yes, Josie and

22 then Stu.

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1           MEMBER BEACH: I just wanted just  
2 a clarification on SEC-00154. That is the  
3 Linde petition from November 1st, '47 through  
4 '53. Does that affect that in any way?

5           CHAIRMAN MELIUS: No.

6           MEMBER BEACH: No? Okay.

7           CHAIRMAN MELIUS: No. Stu?

8           MR. HINNEFELD: Yes, Stu Hinnefeld  
9 again.

10           In line with my earlier comment,  
11 the Class for up through 1969 has not been  
12 handled for, as near as I can tell from the  
13 discussion, from the particulate internal  
14 exposure potential during that period. And  
15 so, most of the discussion, the basis seems to  
16 me to have been internal exposure. And so,  
17 the method proposed for external exposures,  
18 then, we would retain for the  
19 non-presumptives, if I am correct.

20           CHAIRMAN MELIUS: You are correct.  
21 The focus on the problems during the  
22 renovation period was on internal exposure.

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1                   MR. HINNEFELD:    Okay.    Thank you  
2                   very much.

3                   CHAIRMAN MELIUS:    I remember that  
4                   because we had -- remember, we had the  
5                   mistitled report last time that confused me.

6                   Okay.        We have a few minutes  
7                   before our scheduled break.  I guess I want to  
8                   at least start some discussion on Dow because  
9                   we are sort of running out of time to fit  
10                  things in, unfortunately, and we have got  
11                  another petition to go through as well as  
12                  that.  We can continue this over into the work  
13                  session.

14                  But I guess, at this point, are  
15                  there people that have any issues in terms of  
16                  clarification on Dow?  I can't remember if it  
17                  was Bill or Dick; somebody had asked for some  
18                  more time to look at some information.

19                  MEMBER RICHARDSON:  That was me.

20                  CHAIRMAN MELIUS:    Okay.  Have you  
21                  had an opportunity to do that?  Do you have  
22                  any additional questions based on that, David?

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1                   MEMBER RICHARDSON:     Yes, I have  
2     had a chance to look at it. I don't think I  
3     have questions right now, no.

4                   CHAIRMAN MELIUS:     Oh, okay. Does  
5     anybody else have any further questions?

6                   (No response.)

7                   Do people feel, are they ready to  
8     vote today? I'm not going to say the timing  
9     because I think everyone is a little tired. I  
10    hesitate --

11                  MEMBER GRIFFON:       Was there a  
12    motion on the table? Since I wasn't here, was  
13    there a motion offered or not yet?

14                  CHAIRMAN MELIUS:     I am trying to  
15    remember, actually.

16                  MEMBER LEMEN:        I don't think there  
17    was a motion.

18                  CHAIRMAN MELIUS:     No.     No.     I  
19    think David had asked for -- I think I asked  
20    the question, did someone need any additional  
21    time before we could take action, and David  
22    asked for further clarification and time to

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1 read one of the reports.

2 So, why don't we do it this way?  
3 Why don't we take our break now? We will come  
4 back at 3:15 to do Norton. Then, we have a  
5 Board work session that follows that. Then,  
6 we will try to resolve Dow during that time  
7 period.

8 (Whereupon, the above-entitled  
9 matter went off the record at 2:51 p.m. and  
10 resumed at 3:19 p.m.)

11 CHAIRMAN MELIUS: Okay. If  
12 everyone will get seated, we will get started.

13 And the first order of business  
14 now, we have a Norton Company SEC petition for  
15 the residual period. And LaVon will be  
16 presenting.

17 MR. RUTHERFORD: Thank you, Dr.  
18 Melius.

19 Chris Crawford was supposed to  
20 present this. However, Chris has been sick,  
21 as you might know. And so, I am going to  
22 present on his behalf. Hopefully, he is

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1 listening in case I need any technical help.

2 All right. This petition was  
3 received on May 17th, 2010. The petitioner  
4 proposed a Class of all employees of the  
5 Norton Company who worked in any building or  
6 area at the Norton Company location on New  
7 Bond Street in Worcester, Massachusetts, from  
8 1960 through 1972.

9 CHAIRMAN MELIUS: It's Worcester.

10 (Laughter.)

11 MR. RUTHERFORD: Worcester, okay.

12 CHAIRMAN MELIUS: Us Massachusetts  
13 natives take --

14 MR. RUTHERFORD: You know, this is  
15 a southern Ohio boy here. I'm sorry. You are  
16 just going to have to live with it.

17 (Laughter.)

18 CHAIRMAN MELIUS: Now, if you are  
19 in England, I can tell you a funny story about  
20 being asked for directions in the Worcester  
21 tube station once.

22 (Laughter.)

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1                   MR. RUTHERFORD: All right. The  
2 petition qualified for evaluation on July 1st,  
3 2010. Basis was radiation monitoring records  
4 are insufficient, or the basis provided by the  
5 petitioner was radiation monitoring records  
6 were insufficient to adequately estimate doses  
7 for workers at the site.

8                   Since this is a residual period  
9 and we typically discuss that there is usually  
10 very little monitoring data during the  
11 residual period, we qualified the petition, as  
12 well as, we were aware of some D&D activities  
13 that occurred early on in the residual period.

14                   The covered period for Norton  
15 Company was January 1, 1945 through December  
16 31st of 1957. The residual period extended  
17 past that.

18                   Those of you who were on the Board  
19 for a while may remember that we added a Class  
20 for Norton for that operational period some  
21 time ago. That included all AWE employees at  
22 the Massachusetts site from January 1, 1945 to

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1 December 31st, 1957.

2 The Class evaluated by NIOSH was  
3 all AWE employees who worked in any building  
4 or area at the facility owned by Norton  
5 Company during the residual period from  
6 January 1, 1958 through October 31st of 2009.

7 A little background: Norton  
8 Company, as we have just discussed, is located  
9 in -- say it again, Dr. Melius.

10 CHAIRMAN MELIUS: Worcester.

11 MR. RUTHERFORD: Worcester,  
12 Massachusetts.

13 CHAIRMAN MELIUS: Isn't there a  
14 Wooster, Ohio?

15 MR. RUTHERFORD: Worcester. Got  
16 it. Okay. Hey, how come it's not spelled  
17 W-O-O-S-T-E-R?

18 CHAIRMAN MELIUS: Because they're  
19 educated.

20 (Laughter.)

21 MR. RUTHERFORD: All right. The  
22 company performed MED and AEC contract work

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1 with uranium and thorium metal oxides from  
2 January 1, 1945 through December 31st of 1957.

3 At that time and past that, Norton also  
4 performed commercial work with thorium during  
5 the residual period in a separate area with  
6 separate equipment.

7 In 1962, AEC equipment, including  
8 kilns, furnaces, furniture, and flooring, was  
9 dismantled, scrubbed, and placed in barrels.  
10 Surface areas of the building were cleaned,  
11 and the residue was placed in barrels.

12 So, our covered period ended in  
13 1957. This activity actually -- and I will  
14 discuss this a little further -- this main  
15 activity occurred in 1962 of dismantling and  
16 D&Ding equipment. Prior to that, there was  
17 some additional work. Again, I will discuss  
18 that.

19 Norton plant and process  
20 descriptions during the residual radiation  
21 period:

22 Operations after 1957 shifted to a

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1 tear-down and removal of the AWE materials and  
2 clean-up of contamination that was completed  
3 by October 10th of 1962.

4 Twenty tons of material were  
5 transported to a portion of the landfill  
6 located on the Norton Company Site and buried  
7 at a 30-foot depth on October 8th through 10th  
8 of 1962.

9 The source-term of the buried  
10 materials was estimated to be 15 pounds of  
11 thorium-232 and 25 pounds of uranium-238.

12 Now those of you who read the  
13 Evaluation Report know that, again, there were  
14 20 tons of material. It was just that the  
15 estimated actual source content was those low  
16 volumes.

17 Sources of available information:  
18 again, we looked through Site Profiles,  
19 Technical Information Bulletins. We did have  
20 interviews with three former workers. The  
21 petitioner who worked right after the covered  
22 period provided some good information on the

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1 actual D&D activities that occurred right  
2 after the covered period. In fact, the  
3 discussion from the petitioner actually helped  
4 us look for different information on that D&D  
5 work.

6 We looked at existing claimant  
7 files, documentation provided by the  
8 petitioner, the Site Research Database data  
9 captures, and the State of Massachusetts  
10 Department of Health.

11 Some of the data capture efforts:  
12 let's see. The U.S. Atomic Energy  
13 Commission. We also looked at FUSRAP data  
14 during the residual period; Oak Ridge National  
15 Lab records, DOE OpenNet, the CEDR database,  
16 NARA, and we did data captures at various DOE  
17 locations.

18 Previous dose reconstructions, and  
19 this includes all the dose reconstructions for  
20 Norton or all the claims for Norton. There  
21 were 64 claims. Claims that meet the Class  
22 definition or were an evaluated Class were 56.

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1 For the recommendation that we are going to  
2 make today, there is roughly 15 claims that  
3 would be included in that with presumptive  
4 cancers.

5 Dose reconstructions were  
6 completed for claims that meet the Class  
7 definition, 18. We have no internal or  
8 external monitoring data for those.

9 Internal monitoring data  
10 pre-October 1962, so this is for the period  
11 1957 -- or 1958 through 1962. We have no  
12 reliable bioassay data. We have limited air  
13 sample data. We have air sample data in 1958  
14 for some operations during that period.

15 We have external monitoring data  
16 pre-October 1962, no film badge data or area  
17 radiation surveys. We do have some smear  
18 samples and contact readings.

19 Air monitoring data, again, there  
20 were 28 air monitoring sample results  
21 reported for 14 samples collected in July  
22 11th, 1957. Fourteen sample results were

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1 associated with the thorium processing area.  
2 When they say there were 14 samples taken and  
3 28 results, they also looked at thoron  
4 measurements as well. Thoron levels were  
5 derived from this.

6 We have 42 air monitoring results  
7 reported for 21 samples collected on May 13th  
8 of 1958. Sixteen results were associated with  
9 the thorium processing area and six with the  
10 uranium processing area. Thoron levels were  
11 derived from these surveys as well.

12 Two air monitoring samples were  
13 collected on September 9th, 1958 by Liberty  
14 Mutual. One sample was taken in the thorium  
15 processing area, and the other was taken in  
16 the uranium processing area.

17 Five air monitoring results were  
18 collected in 1962, 1963, and 1964. All five  
19 could be identified as being taken in a  
20 thorium area. Liberty Mutual Insurance  
21 Company collected those, and there's dates for  
22 those samples.

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1                   Various    other    air    monitoring  
2   contamination surveys were done between 1958  
3   and 1965 and considered in the feasibility  
4   analysis. I think those are laid out fairly  
5   well in the Evaluation Report, each of the air  
6   monitoring results.

7                   Potential    radiation    exposures  
8   during the Class period: we have internal  
9   sources of exposure were associated with  
10  uranium, thorium and their progeny, may have  
11  been inhaled or ingested by workers at Norton.

12                   These        residual        airborne  
13  radioactive contaminants may have been present  
14  at low levels during the residual period and  
15  at raised levels during the decontamination  
16  and decommissioning operations in 1962 or any  
17  previous clean-up attempts. So, there were  
18  some clean-up attempts that occurred prior to  
19  1962, roughly, from the '58 to '62 period.

20                   External sources of exposure: we  
21  had photon and beta exposures from the uranium  
22  and thorium source material, as well as

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1 surface contamination that was present during  
2 the residual period.

3 Neutrons were not a significant  
4 source of external exposure at the site.

5 Additional information on internal  
6 monitoring data post-October 1962: the  
7 information I discussed earlier was pre-1962.

8 This is post-1962.

9 We have no bioassay data for the  
10 Class period. This is what I would call a  
11 more classic residual period after the D&D  
12 operations.

13 We have limited air sample data  
14 that are available during the production and  
15 residual periods.

16 External monitoring data  
17 post-October 1962, again, we have no film  
18 badge data or no radiation surveys.

19 As you have seen a number of  
20 times, the evaluation process is a two-pronged  
21 test. Is it feasible to estimate the level of  
22 radiation dose of individual members of the

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1 Class with sufficient accuracy? And, then, if  
2 that answer is no, then is there a reasonable  
3 likelihood that such radiation dose may have  
4 endangered the health of members of the Class?

5 We found that the available  
6 monitoring records, process descriptions, and  
7 source-term data are adequate to complete dose  
8 reconstruction with sufficient accuracy for  
9 the evaluated Class employees after, but not  
10 before, October 10th, 1962. So, from the  
11 period 1958 up through October 10th, 1962, we  
12 felt that dose reconstruction was not  
13 feasible.

14 Our reason behind this was mainly  
15 the clean-up and D&D activities that occurred  
16 during that period. We did not have air  
17 monitoring data for those activities, and the  
18 removal of the process equipment we felt could  
19 have generated higher airborne concentrations  
20 than we could bound based on the information  
21 available.

22 This residual period after October

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1 10th, 1962: little bioassay data for the  
2 residual period. Intakes for uranium and  
3 thorium were derived from the long-lived alpha  
4 emitters measured in the 1958 survey and  
5 depleted according to TIB-70.

6 So, basically, we took the air  
7 concentrations in 1958, which would have  
8 included, actually, operations and  
9 resuspension from any residual material. We  
10 used that as our starting point. And, then,  
11 we used the depletion rate based on the  
12 source-term from TIB-70 to derive our intakes  
13 through the years.

14 Again, the intake rates for the  
15 post-October 10th, 1962 residual period were  
16 adjusted for source-term depletion for future  
17 years based on TIB-70. The first year rate  
18 applied to 1962 and '63. The third year rate  
19 was applied to '64.

20 And you can see the tables here.  
21 You see the adjustment factors based on  
22 TIB-70, the source-term depletion. On the

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1 side we have inhalation rates for 1962 and  
2 1963 and ingestion as well, and those break  
3 down, again, based on that depletion constant.

4 Since only uranium metal and  
5 oxides were handled at Norton Company, radon  
6 was not a significant hazard. We do have  
7 monitoring data for thoron that exists for  
8 1957 and 1958. The latter values were used to  
9 bound thoron exposures because the AEC  
10 source-term only decreased after December 31,  
11 1957. So, basically, what we used was we used  
12 the same source-term depletion constant for  
13 the thoron as well, recognizing that thoron  
14 would have only been generated from that  
15 residual contaminants of thorium.

16 Again, here is our table with  
17 TIB-70 with the inhalation values and the  
18 distribution for given years.

19 There was no external monitoring  
20 data for the residual period. We used  
21 deposition methods that were employed for the  
22 internal contamination based on the 1957

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1 survey. A contamination level of 1.83 times  
2 10 to the minus 6 dpm per meter squared was  
3 calculated. Basically, what they used was  
4 they deposited the airborne concentrations on  
5 to develop a surface contamination level.

6 The external doses from  
7 penetrating photons with energies were derived  
8 from that. Exposure rates were adjusted for  
9 source-term depletion using the same  
10 source-term depletion values for future years  
11 for TIB-70.

12 We get the table on that as well.

13 So, if you look at the first year, roughly,  
14 26 millirem per year and you see it depletes  
15 based on that depletion constant.

16 So, in summary, our feasibility  
17 for the period of January 1, 1958 through  
18 October 10th of 1962, we felt dose  
19 reconstruction is not feasible, internal or  
20 external, just based on the amount of  
21 knowledge that we have from the source-term.  
22 The limited knowledge we have on the

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1 source-term, the activities that were  
2 conducted during the D&D and the clean-up  
3 period from '58 to '62, we felt that we could  
4 not estimate dose from that.

5 And for the second period of  
6 October 11th, 1962 through December 31st of  
7 2009, we found dose reconstruction is feasible  
8 using a TIB-70 approach, using existing air  
9 concentrations from the end of operations.

10 So, again, dose reconstruction for  
11 the period from January 1, '58 through October  
12 10th of '62, we found that dose estimates  
13 cannot be adequately reconstructed for that  
14 period.

15 And that's it.

16 CHAIRMAN MELIUS: Okay.

17 MR. RUTHERFORD: Questions?

18 CHAIRMAN MELIUS: Thank you,  
19 LaVon.

20 Any questions for LaVon?

21 (No response.)

22 If not, I have a couple of

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1 questions for clarification. On page 14 of  
2 the report, which looks like new information,  
3 we have previously approved an earlier SEC  
4 here. And this looks like new information.

5 You report that, it says, for  
6 1957, about 25 Norton Company employees worked  
7 on the AWE program, and they all worked in one  
8 building.

9 MR. RUTHERFORD: That was based on  
10 the personal communications from the  
11 petitioner. Yes, that is relatively -- that's  
12 new information. We did not have the  
13 information of 25 workers, and, again, that is  
14 based on an interview from a worker from that  
15 period who indicated that it was roughly 25  
16 people. And he also indicated it was Building  
17 112 that the operations occurred.

18 When we did add the previous  
19 Class, we did not have the information about  
20 the specific building number or the estimate  
21 of employees involved. I don't think it would  
22 have changed our recommendation because of the

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1 material, if you remember back at that time  
2 period, we had actually identified that some  
3 material may have been stored onsite at other  
4 locations when the materials were received for  
5 processing. And plus, we could not establish  
6 any access controls or information during that  
7 time.

8 CHAIRMAN MELIUS: And what about  
9 personnel records that would indicate where  
10 people worked in the building for the current  
11 time period?

12 MR. RUTHERFORD: For the current  
13 time period?

14 CHAIRMAN MELIUS: Yes.

15 MR. RUTHERFORD: We have nothing  
16 right now that would indicate that.

17 CHAIRMAN MELIUS: Okay. Because,  
18 I mean, this is a large facility.

19 MR. RUTHERFORD: Right. Right, it  
20 is.

21 CHAIRMAN MELIUS: As in hundreds  
22 of workers. So, I am trying to get that on

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1 the record.

2 Anybody else have questions about  
3 it?

4 (No response.)

5 I have one more which, if I can  
6 find quickly, I will ask, but if I can't -- I  
7 don't think it was that. I think that was it.  
8 Okay.

9 If there are no further questions,  
10 I will entertain a motion for further -- we  
11 may have a petitioner. Yes.

12 Is there a petitioner on the line  
13 for the Norton Company?

14 MS. RASZEWSKI: Yes, sir.

15 CHAIRMAN MELIUS: Okay. Would you  
16 like to make comments?

17 MS. RASZEWSKI: Hello.

18 CHAIRMAN MELIUS: Okay.

19 MS. RASZEWSKI: Would you like me  
20 to speak?

21 CHAIRMAN MELIUS: Yes, if you  
22 would like to. You are not required to. It

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1 is voluntary. But it is up to you. If you  
2 would like to, you are welcome to at this  
3 point.

4 MS. RASZEWSKI: Okay. Thank you  
5 very much.

6 Good afternoon, ladies and  
7 gentlemen.

8 My name is Denise Raszewski. I am  
9 speaking today on behalf of my husband, Joe  
10 Raszewski, who died of pancreatic cancer on  
11 December 27th, 2000.

12 My husband worked at the Norton  
13 Company from 1960 to 1972. I filed my  
14 petition for the EEOICPA on October 13th,  
15 2001. It is now February 2011. Ten years  
16 have passed without a final resolution.

17 My husband's job as a licensed  
18 electrician required that he travel throughout  
19 all the buildings associated with Norton  
20 operations because it required further  
21 maintenance such as changing the fluorescent  
22 light fixtures and doing machine wiring.

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1           It is my full belief that his  
2 cancer was a direct result of exposure to  
3 residual contamination of a hazardous  
4 substance such as thorium dust.

5           My husband served his country in  
6 the U.S. military and also as a Cold War  
7 veteran.

8           I respectfully request that you  
9 consider my husband for addition to the Norton  
10 SEC Class, as well as anyone else who may have  
11 become ill or who may have died from one of  
12 the listed cancers.

13           These employees served their  
14 country without question and deserve to be  
15 acknowledged.

16           Thank you, ladies and gentlemen,  
17 for your time and generous consideration.

18           CHAIRMAN MELIUS: Thank you.

19           Any other Board Members have  
20 further -- yes, Paul?

21           MEMBER ZIEMER: We obviously can't  
22 deal with individual cases, but she did put on

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1 the record the dates at which your husband  
2 worked there. Could you repeat those?

3 MS. RASZEWSKI: My husband worked  
4 there from 1960 to 1972.

5 MEMBER ZIEMER: Thank you.

6 CHAIRMAN MELIUS: Okay. Any other  
7 questions, comments?

8 (No response.)

9 If not, I would entertain a  
10 motion.

11 MEMBER MUNN: Since my  
12 recommendation and my motion is going to be to  
13 follow the NIOSH recommendation, how do you  
14 want to do this? Do you want to split it into  
15 two, the SEC period being from '58 through  
16 October 10, '62, and the non-SEC period being  
17 all dates thereafter? Or can I incorporate  
18 this in one motion?

19 CHAIRMAN MELIUS: I think it is  
20 preferable to have two motions. It avoids  
21 confusion. I am not sure it would be  
22 necessary in this case, but I think it would

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1 probably be a better way to go. So, why don't  
2 you do the one first and then we will deal  
3 with that and then go on?

4 MEMBER MUNN: I move that for the  
5 Norton facility in Worcester, Massachusetts,  
6 an SEC be allowed for the period January 1,  
7 1958 through October 10, 1962.

8 MEMBER POSTON: Second.

9 CHAIRMAN MELIUS: Second from John  
10 Poston.

11 Any further discussion on that?

12 (No response.)

13 Okay, Ted, go ahead.

14 MR. KATZ: Dr. Anderson?

15 MEMBER ANDERSON: Yes.

16 MR. KATZ: Ms. Beach?

17 MEMBER BEACH: Yes.

18 MR. KATZ: Mr. Clawson?

19 MEMBER CLAWSON: Yes.

20 MR. KATZ: Dr. Field?

21 MEMBER FIELD: Yes.

22 MR. KATZ: Mr. Gibson?

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1 MEMBER GIBSON: Yes.

2 MR. KATZ: Mr. Griffon?

3 MEMBER GRIFFON: I'm actually  
4 going to recuse myself. It is not clear in my  
5 conflict letter, but I am going to recuse  
6 myself from this. I did some work there, not  
7 necessarily dose reconstruction work.

8 MR. KATZ: That's fine.

9 CHAIRMAN MELIUS: Abstain I think  
10 is --

11 MEMBER GRIFFON: Abstain.

12 MEMBER MUNN: No, recuse.

13 MR. KATZ: Recuse from action.

14 Dr. Lemen?

15 MEMBER LEMEN: Yes.

16 MR. KATZ: Dr. Lockey is absent,  
17 but we will collect his vote after.

18 Dr. Melius?

19 CHAIRMAN MELIUS: Yes.

20 MR. KATZ: Ms. Munn?

21 MEMBER MUNN: Yes.

22 MR. KATZ: Dr. Poston?

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1 MEMBER POSTON: Yes.

2 MR. KATZ: Mr. Presley?

3 MEMBER PRESLEY: Yes.

4 MR. KATZ: Dr. Richardson?

5 MEMBER RICHARDSON: Yes.

6 MR. KATZ: Dr. Roessler?

7 MEMBER ROESSLER: Yes.

8 MR. KATZ: Mr. Schofield?

9 MEMBER SCHOFIELD: Yes.

10 MR. KATZ: Dr. Ziemer?

11 MEMBER ZIEMER: Yes.

12 MR. KATZ: So, the motion passes  
13 with 14 in favor, one recusal, and one vote to  
14 collect. That's motion one.

15 CHAIRMAN MELIUS: Yes, but we may  
16 have another motion.

17 Mark, you should stay out for the  
18 entire -- yes.

19 Wanda, do you have --

20 MEMBER MUNN: Dr. Melius, I move

21 --

22 CHAIRMAN MELIUS: Excuse me one

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1 second.

2 Go ahead, Wanda.

3 MEMBER MUNN: I move that for the  
4 period October 11, 1962 through December 31,  
5 2009, for the Norton facility located in  
6 Worcester, Massachusetts, the petition for SEC  
7 be denied.

8 CHAIRMAN MELIUS: Okay. Do I have  
9 a second to that?

10 MEMBER PRESLEY: I will second  
11 that.

12 CHAIRMAN MELIUS: Okay, from Bob.  
13 Any further discussion? Josie and  
14 then John.

15 MEMBER BEACH: I was just  
16 wondering if our contractor, SC&A, had had a  
17 chance to look at this. No?

18 CHAIRMAN MELIUS: I don't believe  
19 they have ever looked at this site.

20 MEMBER RICHARDSON: Could I ask  
21 for one more clarification?

22 CHAIRMAN MELIUS: Sure.

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1                   MEMBER RICHARDSON:    I don't know  
2           that a claimant has petitioned for an SEC  
3           running through to 2009.    There has been a  
4           petition through '72.    So, how do we --

5                   CHAIRMAN MELIUS:     But NIOSH is  
6           allowed to modify the Class definition for the  
7           petition in terms of what they consider.    So,  
8           we are allowed, therefore, to review -- we are  
9           reviewing the NIOSH report.    So, we are  
10          allowed to review the entire time period.

11                  MR. RUTHERFORD:    If it helps, Dr.  
12          Richardson, the reason why we would extend  
13          that, if we find that the basis for qualifying  
14          a petition for evaluation -- the petitioner  
15          only petitioned for a certain period, but if  
16          that basis is supported beyond that, we would  
17          evaluate beyond that until that basis is no  
18          longer applicable.    So, that is why we  
19          extended it all the way through.

20                  MEMBER RICHARDSON:        I was  
21          wondering about the language, I guess.

22                  CHAIRMAN MELIUS:    You know, it is

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1 Wanda's motion that may be a little unclear  
2 because I believe it referred to the petition,  
3 not the date in the Evaluation Reports. I  
4 mean, she actually mentioned the dates, but I  
5 think it is a little confusing. So, if we can  
6 get a friendly amendment, yes.

7 MEMBER ZIEMER: The ones in the  
8 chart.

9 CHAIRMAN MELIUS: Yes.

10 MEMBER MUNN: The amendment is  
11 certainly accepted by the mover.

12 CHAIRMAN MELIUS: So, we would be  
13 voting on the period from October 11th, 1962  
14 through October 31st, 2009, to accept NIOSH's  
15 recommendation in their Evaluation Report that  
16 that time period not be part of the SEC.

17 MEMBER ZIEMER: The slide said  
18 December 31st, 2009, which is what --

19 MEMBER LEMEN: But the petition  
20 says October 31st, 2009.

21 MEMBER ZIEMER: Is there a  
22 difference between the presentation and the --

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1 the Evaluation Report, I think, had a  
2 different date, was the thing. We just need  
3 to clarify which is the correct month.

4 MEMBER LEMEN: The report says  
5 October.

6 MEMBER ANDERSON: Yes, October  
7 10th.

8 MR. RUTHERFORD: I think the  
9 report says October. Apparently, my slides  
10 were wrong on that.

11 MEMBER RICHARDSON: No, I think  
12 the issue here is the Class evaluated by NIOSH  
13 I am assuming is January 1, 1958 through  
14 December 31, 2009, and the second period that  
15 we are discussing commences October 11th and  
16 runs through December 31st, 2009.

17 CHAIRMAN MELIUS: No.

18 MEMBER LEMEN: It runs through  
19 October 31st, 2009.

20 CHAIRMAN MELIUS: Yes, October.  
21 If you read their report -- the slides are  
22 wrong -- if you read their report, and I think

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1 LaVon indicated that is correct --

2 MEMBER LEMEN: It is on page --

3 CHAIRMAN MELIUS: -- it is October  
4 31st, 2009, is the time period they evaluated  
5 to.

6 MEMBER LEMEN: It's on page 33 of  
7 the report.

8 CHAIRMAN MELIUS: It is also on  
9 the cover page. I hope they match.

10 MEMBER ANDERSON: The table is  
11 October 10th.

12 CHAIRMAN MELIUS: Yes. Well,  
13 October 10th is for the approved --

14 MEMBER ANDERSON: Right, and,  
15 then, October 11, '62 --

16 CHAIRMAN MELIUS: To October 31st  
17 --

18 MEMBER RICHARDSON: Well, what is  
19 the basis for October 2009?

20 MR. RUTHERFORD: The October 31st,  
21 2009 is from the Residual Contamination  
22 Report. It was defined as the end of the

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1 residual period at that time.

2 CHAIRMAN MELIUS: So, NIOSH is  
3 saying that, from October 11th, 1962 through  
4 the end of the residual period, October 31st,  
5 they are able to reconstruct doses.

6 MEMBER MUNN: And my motion is so  
7 corrected, please.

8 CHAIRMAN MELIUS: Yes.

9 So, are we ready to -- Mike, I'm  
10 sorry. Mike and John.

11 MEMBER GIBSON: Just for my own  
12 clarification, NIOSH's recommendation  
13 post-1962 is based on no employee internal or  
14 external monitoring data, but simply on  
15 limited air samples and some smear samples to  
16 do the dose reconstructions?

17 MR. RUTHERFORD: That is correct.

18 That is consistent with what we see with a  
19 lot of residual periods. Remember, this is a  
20 residual period that included from the '58 to  
21 '62 period was a clean-up period and a D&D  
22 period. Effectively, after, post-D&D, if we

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1 would have had a post-D&D clean-up survey,  
2 there may not have been anything there. We  
3 are not sure.

4 But what we provided is an  
5 estimate of air concentrations that would  
6 start at the beginning of that post-1962  
7 period and deplete off based on TIB-70. That  
8 will give some internal exposure to those  
9 workers.

10 CHAIRMAN MELIUS: Now, John, I  
11 apologize, I skipped over --

12 MEMBER POSTON: That's okay.

13 Mike raised a question that I  
14 wanted to raise also. I am very uncomfortable  
15 with this. I am all for science and  
16 extrapolation, and so forth. But when you  
17 read slides that say no bioassay data and  
18 limited air sample data, no film badge data,  
19 no area surveys, and then you say, "But we can  
20 reconstruct dose", something is wrong here, at  
21 least for me.

22 I just can't vote in favor of

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1 denying an SEC on such, what I would believe  
2 is flimsy evidence.

3 CHAIRMAN MELIUS: Would you be  
4 suggesting further evaluation or review of the  
5 report?

6 MEMBER POSTON: Well, I think I  
7 would steal Josie's -- she can put her sign  
8 down.

9 (Laughter.)

10 Since SC&A hasn't looked at this,  
11 I also feel very uncomfortable about voting on  
12 this at this time. We have no feedback from  
13 our --

14 CHAIRMAN MELIUS: Okay. No, that's  
15 what I was -- Mike?

16 MEMBER GIBSON: This case seems a  
17 little different to me in that NIOSH is not  
18 saying they haven't found any bioassay data.  
19 It says none exists, period. So, I don't know  
20 that having SC&A looking at this any further  
21 would do any good.

22 Personally, I don't think I could

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1 support NIOSH's recommendation.

2 CHAIRMAN MELIUS: Yes, I think, if  
3 I understand this correctly, and maybe LaVon  
4 can clarify, but this is based on an OTIB-70  
5 approach, which is under review. I think  
6 there are issues related to how that is  
7 applied at a site. I certainly think  
8 something might be gained from having a more  
9 detailed review of what they are doing.

10 You may be right, Mike or John,  
11 and that may be where we will end up, but at  
12 least have further information at least for a  
13 method that is in use and may be in use in the  
14 future would be helpful.

15 So, Paul and then LaVon.

16 MEMBER ZIEMER: Well, this is a  
17 question for LaVon.

18 CHAIRMAN MELIUS: Yes.

19 MEMBER ZIEMER: My understanding  
20 would be that this is a cleaned-up area. It  
21 is released for general use in the plant. It  
22 is not a radiological area at that point. So,

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1 there would be no reason to require either  
2 external monitoring or bioassay. Am I correct  
3 in understanding that?

4 MR. RUTHERFORD: That would be  
5 correct for this specific area, yes. There  
6 were activities going on on the site off and  
7 on --

8 MEMBER ZIEMER: That's right.

9 MR. RUTHERFORD: -- with thorium  
10 elsewhere, but in this specific area, that is  
11 correct.

12 MEMBER ZIEMER: Right. And they  
13 have had other areas, residual areas, in other  
14 facilities where this is the case. You are  
15 not going to have any monitoring. So, the  
16 issue then is, is there residual activity of  
17 significance? And you are assuming there is  
18 some, based on the endpoint.

19 MEMBER LEMEN: Yes.

20 MEMBER ZIEMER: And, then, the  
21 TIB-70 approach of saying, okay, let's assume  
22 there is some, even after the clean-up. And,

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1 then, you deplete that over time according to  
2 TIB-70.

3 MEMBER LEMEN: Right. If you  
4 can't accept this approach here, I mean, this  
5 is a global issue. I mean, a site issue.  
6 This is similar to what Dr. Roessler  
7 mentioned. This is a straight TIB-70 approach  
8 for doing something. And recognizing the fact  
9 that residual contamination periods, as Dr.  
10 Roessler mentioned earlier, by definition, are  
11 not going to have much data. So, I just want  
12 to point that out.

13 CHAIRMAN MELIUS: Okay. Dr.  
14 Poston, you had further -- or you changed your  
15 mind?

16 MEMBER POSTON: Well, I was going  
17 to ask the question because I seem to recall  
18 that, when LaVon stood up last time, he said  
19 they have no confirmation that the site was  
20 cleaned up.

21 You have no data after the site  
22 was cleaned up?

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1                   MR. RUTHERFORD: We do not have a  
2 post-contamination survey, that is what I  
3 meant, yes. We do not have a  
4 post-contamination, and if we had a  
5 post-contamination survey, that would have  
6 been -- one, we could have said, what would  
7 have happened if there was a  
8 post-contamination survey that said everything  
9 was cleaned up? The residual contamination  
10 would indicate that, and there would be no  
11 residual period for that activity, that  
12 covered activity.

13                   However, in this case, we don't  
14 have that information. Therefore, we could  
15 not identify when the residual contamination  
16 would have ended.

17                   CHAIRMAN MELIUS: Okay. Yes,  
18 Henry?

19                   MEMBER ANDERSON: I didn't maybe  
20 go through it carefully enough. But, I mean,  
21 how confident are we on what clean-up was done  
22 and what might have remained as far as

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1 subsequent removal type of activity?

2 I mean, it is kind of like in the  
3 last one, equipment might have been there and  
4 the kind of floors, you know, and, I mean,  
5 1962 is different than 1958.

6 MR. RUTHERFORD: Sure. In fact,  
7 '58-59 we only had small indications, '58,  
8 '59, '60, '61, of clean-up activities. It was  
9 the '62 period where the major clean-up  
10 occurred. That is when the actual equipment  
11 was removed, all of the material. They even  
12 put together estimates on how much material  
13 that was removed out of the area. They  
14 identified the number of drums that were sent  
15 out of the area, where it was buried. We just  
16 do not have a post-contamination survey to  
17 support saying there was no activity there.

18 MEMBER ANDERSON: Any idea why  
19 there wasn't? I mean, typically, there would  
20 have been. Is it possible one was done and it  
21 has now been lost, or what?

22 MR. RUTHERFORD: We have been

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1 unable to find that at this time. We  
2 interviewed the actual radiation safety  
3 officer who actually was part of that  
4 activity. He indicated that there was film  
5 badge measurements taken; there was air  
6 sampling taken during the D&D activities, and  
7 there were post-surveys. We have been unable  
8 to find any of that information.

9 CHAIRMAN MELIUS: And there is an  
10 ownership issue --

11 MR. RUTHERFORD: Yes, there is.

12 CHAIRMAN MELIUS: -- change of  
13 ownership at Norton, which complicates this  
14 even further.

15 Is the sense of the Board, then,  
16 that you would like to refer this to SC&A for  
17 further review?

18 I would just add that, on the  
19 residual period time, we have not focused on  
20 this in terms of doing reviews before. One  
21 reason I wanted it asked for the presentation  
22 today, because we have several sites where

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1 this was coming up; they are all different.

2 And so, I don't think we have ever  
3 really sort of accepted these. We just have  
4 not taken an action one way or the other on  
5 most of the residual period cycles as a Board.

6 It may have come up in some of the Work  
7 Groups, but, again, we have not had lots of  
8 discussions. And so, some review by SC&A, I  
9 think, would be worthwhile for that.

10 Dr. Lemen?

11 MEMBER LEMEN: I just question why  
12 we would refer to SC&A if there's no data. I  
13 am not convinced anyone has told me there is  
14 any data. I am with Dr. Poston and I am with  
15 Mark on that. I mean, what can SC&A do? If  
16 there is no data, there is no data.

17 CHAIRMAN MELIUS: There is a small  
18 amount of data and there is a method to deal  
19 with small amounts of data.

20 DR. NETON: Well, in the TIB-70  
21 approach, we have air sample data that was  
22 taken during the operational period, and that

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1 is used to bound what could have been there  
2 during the residual period, because during the  
3 residual period the material had already been  
4 taken away. So, that is our starting point.

5 We believe it can be no higher  
6 than the air samples that were taken during  
7 operations. And that is the starting point  
8 for the depletion that we used in TIB-70, and  
9 that is what we have done for many, many  
10 sites.

11 So, you are almost by definition  
12 never going to have bioassay data for AEC  
13 operations after the AEC contract is over,  
14 because they are gone. So, that is the common  
15 feature in AWEs.

16 CHAIRMAN MELIUS: And, most  
17 likely, most of the contamination is gone, and  
18 there may be some residual, but it is usually  
19 expected to be small and should be small.

20 So, to have this as an SEC is  
21 really --

22 MEMBER LEMEN: So, basically, you

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1 are saying, with what Jim just said and what  
2 you just said, if you do a dose  
3 reconstruction, nobody in that period is going  
4 to qualify anyhow?

5 MEMBER ZIEMER: You don't know  
6 that.

7 CHAIRMAN MELIUS: You don't know  
8 that.

9 MEMBER LEMEN: Well, basically,  
10 you would be pretty sure --

11 CHAIRMAN MELIUS: Well, I wouldn't  
12 --

13 MEMBER ZIEMER: They may overlap.

14 CHAIRMAN MELIUS: Yes.

15 MEMBER ZIEMER: Could I comment,  
16 too? I know the person's work period may  
17 overlap the active period plus this. This  
18 adds to --

19 MEMBER LEMEN: Well, I understand  
20 that, but if they overlap, they would still be  
21 back in the SEC, right?

22 CHAIRMAN MELIUS: Well, they might

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1 have a non-SEC cancer.

2 MEMBER ZIEMER: They may have a  
3 non-SEC cancer. They may have less than 250  
4 days in the other -- in any event, it adds  
5 additional dose.

6 MR. RUTHERFORD: Right, and  
7 individuals that are in those first few years  
8 where we say they are going to get the higher  
9 intake values and possible respiratory tract  
10 cancers could be compensated from this.

11 MEMBER RICHARDSON: Could I ask,  
12 just for a piece of information, you have said  
13 there is, and I don't know if it true by  
14 definition, but let's say that, typically, in  
15 residual periods there is not individual  
16 monitoring. But you described that there was  
17 some air monitoring data and some samples  
18 taken by Liberty Mutual, maybe, and by another  
19 group?

20 MR. RUTHERFORD: Yes.

21 MEMBER RICHARDSON: And what would  
22 that show? I mean if the report doesn't say,

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1 actually, what the results are. It just says  
2 that these samples were --

3 MR. RUTHERFORD: Well, again,  
4 remember, some commercial activities continued  
5 on after that. The Liberty Mutual samples  
6 that were taken in 1965 were actually from a  
7 thorium processing area that was commercial  
8 activity in another area. So, they would  
9 provide no help whatsoever.

10 MEMBER LEMEN: They would not  
11 provide help?

12 MR. RUTHERFORD: No.

13 And I wanted to remind, the  
14 thought process, too, on the 58 operational  
15 samples that we took, if you think about this,  
16 if you are taking general area air samples,  
17 and the general area air samples are going to  
18 have a contribution from operation, but they  
19 are also going to have a contribution from  
20 resuspension of materials, which is the same  
21 concept for the residual period, is the  
22 resuspension of materials. So, it is a clear

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1 bounding intake to start with from that time  
2 period.

3 CHAIRMAN MELIUS: Brad?

4 MEMBER CLAWSON: You know, I  
5 understand what LaVon is saying there, but  
6 have we ever, in implementing OTIB-70, have we  
7 ever had SC&A look at the implementation of it  
8 and how it --

9 MEMBER MUNN: Oh my, yes.

10 MR. RUTHERFORD: Actually, Dow  
11 Chemical, SC&A looked at a TIB-70 approach.

12 CHAIRMAN MELIUS: Right. Well,  
13 with Linde recently, and so forth. And the  
14 Procedures Committee is still somewhat in  
15 process. If I recall their recommendations,  
16 at least some of the areas of concern that we  
17 went over on day one of this meeting yesterday  
18 related to how this was applied, at least  
19 OTIB-70 was being applied, at sites.

20 There was site-specific data,  
21 information that was sort of critical to some  
22 of the assumptions that were being used for

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1 the methodology for OTIB-70. So, I think sort  
2 of further review of it, I think for the most  
3 part, as I recall, really of OTIB-70, it  
4 really needed to be on a site-by-site basis.

5 MEMBER MUNN: Correct, and we have  
6 only two of the -- I can't remember whether it  
7 was 15 or 17 original findings -- we have only  
8 two of them left open, but they are still  
9 under discussion. They definitely are site  
10 --any information that is applied for TIB-70  
11 will be site-specific information. It is not  
12 an overarching kind of activity.

13 MEMBER CLAWSON: And I understand  
14 that. My question was, we have been  
15 discussing about having SC&A look at this.  
16 The only thing that SC&A can do, because there  
17 is no data there, is just look at the  
18 implementation of OTIB-70 to this site,  
19 because it is site-specific and this is what I  
20 was questioning.

21 CHAIRMAN MELIUS: Correct.

22 MEMBER CLAWSON: Maybe this is what

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1 -- you know, Dr. Lemen is right, there is no  
2 information. I was just wondering if that is  
3 what we needed to do, is possibly just have  
4 them look at this to see the implementation of  
5 this.

6 CHAIRMAN MELIUS: Yes.

7 MEMBER CLAWSON: Like you said, it  
8 is site-specific.

9 CHAIRMAN MELIUS: Yes. No, I am  
10 smiling because I believe that is what Josie  
11 had suggested. To me, personally, it makes  
12 sense to do that.

13 MEMBER CLAWSON: You know,  
14 periodically, we are going to have to see how  
15 this is implemented --

16 CHAIRMAN MELIUS: Yes.

17 MEMBER CLAWSON: -- because, as  
18 Ms. Munn has said, all this is based on  
19 site-specific things. But, for me,  
20 personally, to be able to say, yes, we can  
21 look at that, I guess occasionally I would  
22 like to be able to have the contractor look at

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1 this to make sure it was implemented right.

2 CHAIRMAN MELIUS: Yes.

3 So, if that is the sense of the  
4 Board, then I think we need either a motion to  
5 table Wanda's motion or, alternatively, since  
6 we are not going to get back to this  
7 immediately because it is going to take SC&A  
8 some time, we need to task them, and figure  
9 out does a Work Group need to be involved or  
10 how we want to approach that.

11 But we need a motion to postpone  
12 consideration of Wanda's motion until we have  
13 completed that task. So, either approach is  
14 fine. If someone wants to make a motion to do  
15 that? We do have to deal with Wanda's motion.

16 MEMBER CLAWSON: I make a motion  
17 that we table the first motion. Do we want to  
18 go onto the next one?

19 CHAIRMAN MELIUS: Well, no, no.

20 MEMBER BEACH: I will second it.

21 CHAIRMAN MELIUS: We have a  
22 second. It is not debatable.

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1 All in favor say aye.

2 (Chorus of ayes.)

3 Opposed?

4 Abstain?

5 (No response.)

6 Okay, it passes. Okay.

7 Paul?

8 MEMBER ZIEMER: I have a comment  
9 on the follow-up. In this particular case, I  
10 believe the only issue will be determining  
11 whether the right starting point was used in  
12 terms of the values that start. I mean we  
13 have already pretty well agreed, I think, in  
14 the Procedures Group that for a cleaned-up  
15 facility we can use the TIB-70 method. But if  
16 it is site-specific, it is that starting  
17 value.

18 And it seems to me that the  
19 Procedures Group could look at that pretty  
20 quickly within the framework of the OTIB-70  
21 reviews anyway. I am kind of looking to John  
22 Mauro, if he would agree that, in other words,

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1 we could take a look at that.

2 I don't want to volunteer for the  
3 chore of that Committee, but I am on it  
4 myself. But it seems to me that, since we are  
5 working pretty closely on OTIB-70, it might be  
6 efficient just to say, okay, how does this  
7 apply to that particular site, and is that how  
8 it should be used?

9 DR. MAURO: I agree. But the only  
10 thing is I think it was very important in the  
11 Linde that there was certain activities that  
12 took place during the residual period that  
13 sort of disturbed the residual material in a  
14 way that made it difficult for you folks to be  
15 comfortable with the way in which it was  
16 applied, even though it was flat, you know,  
17 3.2 MAC flat.

18 I would think the other question  
19 -- so, I would say there were two things that  
20 we would probably look at, and probably pretty  
21 quickly, is the starting point, whether or not  
22 the air sampling during operations seems to

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1 capture the sense as a good point to start for  
2 the residual period.

3 And, second, was there anything  
4 going on at the site after, during the  
5 residual period, where maybe there was a lot  
6 of disturbance, similar to the problems we had  
7 with Linde?

8 I think those would be the two  
9 tests that we would look at, and that could be  
10 done pretty quickly, I presume.

11 CHAIRMAN MELIUS: And I would just  
12 add one clarification to what Paul said.  
13 While the Procedures Work Group has looked at  
14 the procedure, the full Board has not. And  
15 so, I think when we come back from this  
16 activity, if it is agreeable to everybody, I  
17 think we also need for a presentation and  
18 further discussion of the Board on OTIB-70,  
19 particularly if we have developed more  
20 concerns, or at least, also, to address some  
21 of the concerns that were raised here.  
22 Because I think at some point we have to be

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1 satisfied with the basic procedure, if it is  
2 going to be applied to many sites, and I  
3 believe it will be. So, it will be worth some  
4 time to have some further discussion on that  
5 procedure at that time. That's all.

6 So, I think we would just, why  
7 don't we have a motion to refer the site to  
8 the Procedures Subcommittee for evaluation and  
9 to report back to the Board?

10 MEMBER CLAWSON: I will second  
11 that.

12 CHAIRMAN MELIUS: Okay. Any  
13 further discussion?

14 (No response.)

15 All in favor say aye.

16 (Chorus of ayes.)

17 Opposed?

18 I think the ayes have it, a large  
19 margin. Okay.

20 MEMBER LEMEN: I just have a quick  
21 question.

22 CHAIRMAN MELIUS: Yes.

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1                   MEMBER LEMEN: Did we vote on the  
2 first part, on what NIOSH recommended? That  
3 passed, right?

4                   CHAIRMAN MELIUS: That passed.  
5 That passed. So, they have been added to the  
6 SEC Class. It is the second residual period  
7 that --

8                   MEMBER LEMEN: That's fine.

9                   CHAIRMAN MELIUS: We had the  
10 motion. We tabled that. We have referred it  
11 to the Procedures Work Group. They will come  
12 forward to us. Good.

13                   And we now have Dow.

14                   Ted may have been a little  
15 confused at the end there, but there is a  
16 motion that was tabled which was to accept the  
17 NIOSH Evaluation Report on Dow, which will be  
18 to turn down the petition for the residual  
19 period. That was tabled. So, Board Members  
20 had further time to review.

21                   So, to reconsider that, we would  
22 need to have a motion to take it off the

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1 table.

2 MEMBER RICHARDSON: I will make a  
3 motion.

4 CHAIRMAN MELIUS: Okay. Thank  
5 you, David.

6 A second to that?

7 MEMBER LEMEN: I will second it.

8 CHAIRMAN MELIUS: From Dick Lemen.

9 MR. KATZ: We need to get Mark.

10 CHAIRMAN MELIUS: Get Mark, yes.

11 Here he comes. Here he comes.

12 So, Mark, we have a motion and a  
13 second, and we are about to vote on removing  
14 the Dow motion from the table.

15 So, all in favor of removing from  
16 the table?

17 (Chorus of ayes.)

18 Opposed?

19 (No response.)

20 Okay. It carries. So, now we  
21 have before us a motion to accept the NIOSH  
22 Evaluation Report on Dow Chemical for the

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1 Madison Site for the residual period.

2 Does anybody have any further  
3 questions, concerns?

4 The NIOSH recommendation was to  
5 deny the Class for that time period.

6 And if there is no further --

7 MR. KATZ: Do you want to wait on  
8 Brad?

9 CHAIRMAN MELIUS: Where is he --  
10 okay. Let's be fair to him. We have to go  
11 collect his vote anyway, so that's it's not --  
12 let's wait a couple of minutes.

13 (Off-the-record comments.)

14 So, Brad, we are about, I believe,  
15 to do a vote on the Dow Chemical to accept the  
16 NIOSH recommendation of the Evaluation Report.

17 It is off the table. We are ready to vote.

18 I checked and nobody had further  
19 issues or discussion. We wanted to give you  
20 the opportunity. If not, we will call the  
21 vote.

22 MEMBER CLAWSON: Okay.

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1 CHAIRMAN MELIUS: So, go ahead,  
2 Ted.

3 MR. KATZ: Okay. Dr. Ziemer?

4 MEMBER ZIEMER: The actual motion  
5 is whether or not to accept the NIOSH report?

6 MR. KATZ: The motion is to accept  
7 the NIOSH report.

8 MEMBER ZIEMER: Which is to deny  
9 --

10 MR. KATZ: Which is to say that  
11 dose reconstruction --

12 MEMBER ZIEMER: Couldn't be done  
13 during the residual period. And I vote yes.

14 MR. KATZ: Mr. Schofield?

15 MEMBER SCHOFIELD: Yes.

16 MR. KATZ: Dr. Roessler?

17 MEMBER ROESSLER: Yes.

18 MR. KATZ: Dr. Richardson?

19 MEMBER RICHARDSON: Yes.

20 MR. KATZ: Mr. Presley?

21 MEMBER PRESLEY: Yes.

22 MR. KATZ: Dr. Poston?

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1 MEMBER POSTON: Yes.

2 MR. KATZ: Ms. Munn?

3 MEMBER MUNN: Yes.

4 MR. KATZ: Dr. Melius?

5 CHAIRMAN MELIUS: Yes.

6 MR. KATZ: Dr. Lockey's vote I  
7 will collect.

8 Dr. Lemen?

9 MEMBER LEMEN: No.

10 MR. KATZ: Mr. Griffon?

11 MEMBER GRIFFON: Yes.

12 MR. KATZ: Mr. Gibson?

13 MEMBER GIBSON: Yes.

14 MR. KATZ: Dr. Field?

15 MEMBER FIELD: Yes.

16 MR. KATZ: Mr. Clawson?

17 MEMBER CLAWSON: Yes.

18 MR. KATZ: Ms. Beach?

19 MEMBER BEACH: Yes.

20 MR. KATZ: Dr. Anderson?

21 MEMBER ANDERSON: Yes.

22 MR. KATZ: So, the motion passes

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1 with 14 in favor, 1 no, and 1 vote to collect.

2 CHAIRMAN MELIUS: I don't believe  
3 that we have any further Work Group issues. I  
4 haven't had time to check my calendar yet.  
5 So, I will have to try to do that by tomorrow  
6 morning.

7 Are you ready? Okay, go ahead.

8 MEMBER GRIFFON: Dose  
9 Reconstruction Subcommittee update: we have  
10 been continuing along with the reviews on the  
11 dose reconstructions. SC&A at this point is  
12 working on the 14th set of cases. The  
13 Committee is reviewing. We have closed out  
14 the sixth set, the seventh, I believe, we have  
15 also closed out, and the eighth and ninth are  
16 sort of we have gone through them, all the  
17 issues, at least one time. We are still  
18 coming to resolution with the eighth and ninth  
19 set of cases. And that is sort of where we  
20 are at with the case reviews.

21 The first 100-case report remains  
22 sort of -- there are some outstanding actions

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1 that were established in our November, I  
2 believe November Subcommittee meeting. That  
3 was for NIOSH to give us an overview at the  
4 next -- so, they should be -- we have an  
5 upcoming meeting March 14th on the schedule,  
6 and NIOSH is going to give us an overview of  
7 their QA program, their internal QA program  
8 for reviewing cases. There might be another  
9 action associated with that.

10 But we are sort of waiting on this  
11 quality assurance review. If you recall, in  
12 the first 100 cases, one thing that the full  
13 Board asked the Subcommittee to go back and  
14 look at a little further was some of these  
15 overarching findings and what implications  
16 they had on future dose reconstruction work.  
17 So, we are kind of examining these a little  
18 further.

19 One, in particular, that we are  
20 trying to drill down into is the quality  
21 assurance errors because there were several  
22 that fell into that category within the first

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1 100 cases. So, we are trying to get a sense  
2 of, you know, what does that mean overall to  
3 the dose reconstruction approaches. There is  
4 something broken in their QA system.

5 To explore that a little further,  
6 we sort of need to know exactly how they -- we  
7 had a sense of how NIOSH does it, but we  
8 wanted a more detailed presentation on how  
9 they do that internally.

10 And so, that is kind of where we  
11 are at on those items. So, we are continuing  
12 on the regular reviews. I am really hoping  
13 that soon, maybe in the next couple of  
14 meetings, we can close out this first 100  
15 cases report and bring it back to the Board  
16 for some conclusion on that.

17 And I think that is all for the  
18 update on the Subcommittee.

19 CHAIRMAN MELIUS: Okay. Any  
20 questions for Mark?

21 (No response.)

22 We had another Congressional

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1 office that wanted to make comments.

2 Michelle Ortiz, are you on the  
3 line?

4 MS. JACQUEZ-ORTIZ: Yes, I am.

5 CHAIRMAN MELIUS: Okay. I  
6 apologize. We got tied up dealing with some  
7 motions there. We remembered, and so you are  
8 welcome to make comments now.

9 MS. JACQUEZ-ORTIZ: Thank you so  
10 much.

11 Chairman Melius and Members of the  
12 Advisory Board, thank you on behalf of Senator  
13 Udall for allowing time on the agenda to share  
14 a statement.

15 First, I just want to apologize  
16 for the failed attempt to connect this  
17 morning. There were clearly some technical  
18 problems coupled with miscommunication, and I  
19 think it illustrates the challenges that are  
20 associated with participating in these  
21 meetings via teleconference. I know the  
22 Senator is especially sympathetic to

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1 petitioners who have no choice but to present  
2 their SEC petitions over the telephone.

3           And using that as a segue, I want  
4 to first touch on a logistical issue. It is,  
5 frankly, the question, which is, is it  
6 possible to share with affected petitioners  
7 both the Advisory Board meeting agendas and  
8 NIOSH Evaluation Reports with more advanced  
9 notice?

10           I throw it out there because this  
11 is a common refrain that the Congressional  
12 offices hear from the petitioners. It is  
13 important to get on the record that there may  
14 be an opportunity for improvement in terms of  
15 allowing petitioners more time to review,  
16 digest, and respond to the final Evaluation  
17 Reports issued by NIOSH.

18           In addition, Senator Udall's  
19 office is aware that there is a strong  
20 interest by New Mexico petitioners in  
21 attending the Advisory Board meeting in which  
22 the LANL and Sandia SEC petitions will be

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1 considered. The Senator would like to request  
2 that the New Mexico petitioners be notified as  
3 soon as possible when a time, date, and  
4 location have been identified for the Board to  
5 consider the LANL and Sandia SEC petitions.

6 Moreover, it is entirely  
7 appropriate that the responsible agencies  
8 provide the congressional delegation with  
9 advance notice of these meetings as well. So,  
10 we put that out there for agency consideration  
11 and response.

12 I know that no one needs a  
13 reminder, but I am going to share it anyway.  
14 These petitioners don't qualify for the  
15 government rate, and Uncle Sam does not pay  
16 for their travel to these meetings. So, they  
17 deserve to be given more advance notice if  
18 their petition is on the agenda for Board  
19 consideration, so that they can make the  
20 necessary travel arrangements to present their  
21 case to you in person, if they so choose.

22 So, those are a couple of

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1 housekeeping items shared in the spirit of  
2 process improvement and in the ultimate hope  
3 of leveling the playing field for the SEC  
4 petitioners.

5 On the policy side, several  
6 individuals have expressed to the Advisory  
7 Board a concern related to workers' statements  
8 and affidavits, and to what extent NIOSH  
9 appears to be incorporating that input into  
10 its report that is shared with the Advisory  
11 Board. This is not a new concern, and one  
12 that Senator Udall believes deserves closer  
13 attention and scrutiny.

14 On a separate issue, this morning  
15 you heard a statement from Senators Schumer  
16 and Gillibrand expressing concern about the  
17 180-day rule. And of course, you heard from  
18 petitioners for Linde and Fernald about how  
19 this problem has directly affected those  
20 petitioners.

21 The LANL post-1975 SEC petition  
22 has also been affected by the delay. So, it

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1 suggests a systemic problem.

2 In a nutshell, there does appear  
3 to be a tendency by NIOSH to routinely ignore  
4 the 180-day deadline mandated and required by  
5 law. As you may recall, Senator Udall shared  
6 a statement of concern about the 180-day issue  
7 as well as the issue of timeliness during the  
8 November Advisory Board meeting in  
9 Albuquerque.

10 Since that time, we have learned  
11 that the February 2011 Work Group meeting for  
12 the LANL post-1975 SEC, that that meeting was  
13 cancelled by NIOSH because the agency was not  
14 ready.

15 There is a reason that Congress  
16 issued the 180-day deadline. It was to  
17 prevent this very tendency for the federal  
18 government to string along the petition and to  
19 do that indefinitely.

20 NIOSH issues its Evaluation  
21 Report, but then it keeps redrafting and  
22 customizing the report to address any new

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1 issues that are raised by the Advisory Board  
2 Work Groups. The process is a moving target,  
3 and the result is an indefinite delay for the  
4 petitioner. That is certainly not what  
5 Congress directed when it passed the law.

6 The Senator would like to ask for  
7 the Advisory Board's assistance us in closely  
8 examining and ideally resolving this lingering  
9 problem.

10 Thank you for your thoughtful  
11 consideration of the issues that have been  
12 raised and for the hard work and countless  
13 hours that each of you devotes to your service  
14 as Members of this important Board.

15 And that concludes my statement on  
16 behalf of the Senator, Tom Udall.

17 CHAIRMAN MELIUS: Okay. Thank  
18 you, Michelle. We appreciate the input to  
19 that.

20 MS. JACQUEZ-ORTIZ: Thank you, Dr.  
21 Melius.

22 CHAIRMAN MELIUS: Thank you.

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1 I do have one question for Ted  
2 because I can't remember the exact timing.  
3 When does the Board agenda get finalized and  
4 made public?

5 MR. KATZ: As soon as we settle  
6 what petitions are going to be addressed, we  
7 make it public.

8 CHAIRMAN MELIUS: So, it is at  
9 least 30 days, isn't it?

10 MR. KATZ: Yes. Well, let me  
11 think about that. I can't say that for a  
12 fact, that it is always 30 days because  
13 sometimes we have a moving target. I am not  
14 sure that it is always 30 days in advance.

15 So, I think we could probably do  
16 better on that.

17 CHAIRMAN MELIUS: Yes.

18 MR. KATZ: So, I have heard that  
19 concern.

20 I would also note, Michelle, if  
21 you are still there, in terms of the SEC  
22 petitions being provided to petitioners, those

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1 are provided immediately when they are  
2 completed, actually. They are not provided  
3 sooner to the Board, except that perhaps, I  
4 mean, by a day or two, whatever it might be in  
5 terms of some sort of PA clearances. But,  
6 essentially, they are provided directly to the  
7 petitioners.

8 MR. RUTHERFORD: Yes. This is  
9 LaVon Rutherford.

10 If we have an email address for  
11 the petitioners, we have even emailed them at  
12 the same time we email the Advisory Board the  
13 Petition Evaluation Report.

14 I also want to add that our goal  
15 is to get the Petition Evaluation Reports out  
16 30 days before the Board meeting. However, I  
17 said, "our goal". Our latest that we will go  
18 is two weeks prior to the Board meeting, and  
19 we have always listened to the petitioners  
20 when they have said that they need more time  
21 to review the Evaluation Report and taken that  
22 into consideration, whether we present the

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1 report or not.

2 MS. JACQUEZ-ORTIZ: This is  
3 Michelle again.

4 Certainly, in comparing Harriet  
5 Ruiz's pre-1975 Los Alamos SEC, the Final  
6 Evaluation Report, comparing that to what we  
7 are hearing now, I think I would agree that  
8 there has been an improvement. We have,  
9 however, heard reports of receipt of these  
10 Final Evaluation Reports, that the petitioners  
11 are getting them with less than 30 days'  
12 notice.

13 So, at the very least, honestly, I  
14 don't know what the goal is. I don't know  
15 what the specified sort of target for you all  
16 is. But anything less than 30 days makes it  
17 extremely difficult for the petitioner.

18 CHAIRMAN MELIUS: Yes, I think  
19 that is recognized.

20 MS. JACQUEZ-ORTIZ: Thank you for  
21 hearing the concern.

22 CHAIRMAN MELIUS: No, no, it is a

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1 concern. It also, I think, comes up probably  
2 more often, then, with the full Evaluation  
3 Reports with supplements and issues they are  
4 trying to get resolved in time for a meeting.

5 I think the communication -- NIOSH  
6 just appointed a new SEC sort of outreach  
7 person, Josh Kinman, who is at the meeting  
8 here with us. And so, I think that will help.

9 There was a period of time when  
10 there was sort of interim people there. I  
11 think that could have caused some delays in  
12 communication. And it will be followed up on.

13 But we appreciate your comments  
14 and efforts.

15 MS. JACQUEZ-ORTIZ: Thank you very  
16 much.

17 MEMBER ROESSLER: As a question,  
18 we have sort of SECs that are on the horizon,  
19 right? I mean, even before something is  
20 firmly set to one meeting or another,  
21 scheduled, perhaps they are moving through a  
22 process of getting closer to being on the

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1 horizon. Would that sort of information be  
2 useful to share?

3 CHAIRMAN MELIUS: It may be. It  
4 is difficult to schedule. The agenda, even  
5 for a meeting, Ted and I exchange a  
6 preliminary agenda, and you would be amazed at  
7 how many changes occur in that. It is why we  
8 have some very crowded agendas and some empty  
9 time periods.

10 And it is even more difficult to  
11 look out a year ahead to schedule a meeting in  
12 a city at the right time.

13 MEMBER RICHARDSON: I didn't mean  
14 to schedule it. I meant, would sharing that  
15 information be useful as people would have a  
16 sense of what is on the horizon for the next  
17 -- I mean, not that it is going to appear at a  
18 specific meeting, but where things are moving  
19 along.

20 CHAIRMAN MELIUS: Yes. No, no, I  
21 mean, LaVon does the update. Then, I think  
22 Josh can certainly do further outreach beyond

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1 the updates to let people know that this may  
2 be coming, and so forth.

3 So, I think it is something that  
4 needs to be worked on, to be addressed. It is  
5 certainly important, and so forth.

6 MS. JACQUEZ-ORTIZ: And thank you.

7 Just to note, we are obviously interested,  
8 Senator Udall is interested in the LANL  
9 petition, but we understand that the Sandia  
10 report may be coming out soon. So, just any  
11 report and/or date --

12 CHAIRMAN MELIUS: Yes.

13 MS. JACQUEZ-ORTIZ: -- you know,  
14 as to when it is going to be considered, as  
15 much advance notice as possible would be  
16 greatly, greatly appreciated. So, thank you.

17 CHAIRMAN MELIUS: Well, we will do  
18 our best. Thank you.

19 We are scheduled now to discuss  
20 the Savannah River Site activities. The way  
21 the agenda, at least my agenda -- Phil is  
22 looking at me. You've got me worried. We

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1 would have an update from NIOSH, an update  
2 from the Work Group. We will take a short  
3 break, and then we will go into a public  
4 comment period that will start around 5:30.  
5 So, we will do that.

6 So, this is sort of Board time,  
7 but it is an update from Tim and then from  
8 Mark, and then some Board discussion. Then,  
9 we will take a short break and do the public  
10 comment period.

11 Tim, go.

12 DR. TAULBEE: Thank you, Dr.  
13 Ziemer and Members of the Board.

14 (Laughter.)

15 The goal of my presentation here  
16 is to give an update on NIOSH's activities at  
17 the Savannah River Site. So, I wanted to  
18 start with a little bit of discussion on dose  
19 reconstructions for a couple of slides.

20 And the main reason for this is  
21 that this is one of the most common questions  
22 that I get whenever I do go onto the site or

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1 during the Work Group. We have actually had  
2 some petitioners and public members ask some  
3 of these questions about our claims and where  
4 we are at with dose reconstruction. So, just  
5 a few minutes on this.

6 As of February 1st, we have had  
7 3,978 claims submitted to NIOSH for dose  
8 reconstruction. We have completed 3,653, and  
9 we have 229 active claims. So, right now, we  
10 have completed about 95 percent of the dose  
11 reconstructions. So, we are really at a  
12 steady state. Those 229 is new claims coming  
13 in as well as going out to the Department of  
14 Labor. And, then, we have got 96 that were  
15 returned to the Department of Labor without  
16 dose reconstruction for various reasons.

17 So, like I said, we are pretty  
18 much at steady state with regard to dose  
19 reconstructions. We are completing them  
20 within a year of receiving them, actually,  
21 much faster than that at this time. And so,  
22 that is where we are at.

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1           Now the second part of the  
2 question that comes to me, especially from  
3 members of the public or people out there on  
4 the site, is compensation information. What  
5 is the percentage of people being compensated  
6 there at the site?

7           And so, in order to present this  
8 information, I really needed to break it into  
9 two components. One was single cancer claims  
10 that are filed, and the second is multi-cancer  
11 claims, when people have more than one primary  
12 cancer.

13           Now this information here is based  
14 on the Department of Labor's final decisions.

15           And so you will notice that these numbers are  
16 slightly different than what you saw on the  
17 previous slide, and that is because the  
18 Department of Labor has the final say in the  
19 Adjudication Process.

20           So, this is where we have gotten  
21 feedback from the Department of Labor about  
22 these claims. And to date, the Department of

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1 Labor has sent us back information on 3,214 of  
2 these claims, and the percent compensated was  
3 36.2 percent, which is about the national  
4 average.

5 If you look at just the single  
6 cancer claims, the 2,222 claims, that percent  
7 compensation rate is 30.2 percent. That was a  
8 comment that was made yesterday during the  
9 public comment period, that Savannah River was  
10 below the national average. I don't know what  
11 the actual single cancer rate is for the  
12 national average, but that is probably where  
13 that 30 percent came from. But when you  
14 combine it in total, it is 36.2, which is  
15 right at the national average.

16 What I want to focus on next is  
17 that 2,222 claims and give a little bit of a  
18 breakdown of the compensation rate by cancer  
19 type, because, again, this is one of the  
20 questions that I am asked quite often.

21 And so, I took that 2,222 and  
22 ranked them based upon frequency of cancer

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1 that we have observed at the Savannah River  
2 Site of people filing claims. The most common  
3 is lung cancer, as it is for many sites. And  
4 the percent compensated from Savannah River  
5 for those who filed a single cancer claim of  
6 lung cancer is 62 percent.

7 The second most common claim that  
8 has been filed for which we have information  
9 back from the Department of Labor on is all  
10 male genitalia, which includes prostate  
11 cancer. And in this case, you can see the  
12 compensation rate is drastically different,  
13 down at 6 percent, and this is primarily  
14 through the use of the IREP model.

15 And, then, going on down the list  
16 there, when specifically asked about  
17 leukemias, for this particular slide I  
18 combined all the leukemias together. There is  
19 actually four different types that we break  
20 out separately. But there have been 69 claims  
21 that have been adjudicated, and the  
22 compensation rate is 58 percent. So, again,

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1 for the primary cancers, that is where the 30  
2 percent number came from.

3 On the back table here we do have  
4 a breakout for all of the different cancer  
5 types for the Savannah River Site for members  
6 of the public and Board Members to review.  
7 And in that particular case, what you will see  
8 is the leukemias are all broken out. So, they  
9 are smaller numbers than the 69 here that I  
10 have got listed.

11 One word of caution in using that  
12 particular table is to please be careful when  
13 the total number of claims are less than, say,  
14 50, especially when you are down around four  
15 claims or something. To date, a single change  
16 from one person being compensated to the other  
17 can make a 20 percent change in your percent  
18 compensated. So, don't try and draw too many  
19 conclusions when you are dealing with small  
20 numbers of claims for some of those cancers.

21 So, I just wanted to present that  
22 information briefly here at the beginning

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1 before I jumped into our update on the Special  
2 Exposure Cohort and some of the activities.

3 For the new Board Members who  
4 weren't here when I presented in December of  
5 2008, let me give you a couple of slides here  
6 of background on this particular petition. We  
7 received the petition for the Savannah River  
8 Site in November of 2007, and the  
9 petitioner-proposed Class was construction  
10 workers and all other workers in all locations  
11 at the Savannah River Site in South Carolina  
12 from January 1st, 1950 to present.

13 In March of 2008, the petition  
14 qualified for evaluation, but the  
15 qualification was for construction and  
16 building trades workers only, and this was  
17 primarily due to the evidence that was  
18 presented in the petition was a report  
19 compiled and developed by the Center for the  
20 Protection of Worker Rights. Their analysis  
21 was comparing construction trades workers to  
22 all other workers, and their indication that

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1 they presented to us was that the construction  
2 trade workers were underrepresented in the  
3 HPAREH database that we use for coworker  
4 models. And so, that was the basis for  
5 qualification.

6 We sent out a Federal Register  
7 notice in March of 2008 about this  
8 qualification. There were three petitioners,  
9 and only one of the petitioners was a  
10 construction trades worker. The other two  
11 requested an administrative review in April of  
12 2008.

13 In June of 2008, the NIOSH  
14 administrative review findings were that the  
15 petitioners did not provide sufficient  
16 information to extend the Class definition  
17 beyond SRS employees classified as  
18 construction trades workers.

19 So, the Class that was evaluated  
20 by NIOSH was all construction trades workers  
21 who worked in any area at the Savannah River  
22 Site from the period of January 1, 1950

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1 through December 31st, 2007.

2 In November of 2008, we issued our  
3 Evaluation Report. And, then, in December of  
4 2008, we presented it here to the Advisory  
5 Board on Radiation and Worker Health. And at  
6 that time, we reserved thorium exposures.

7 And the reason that we reserved  
8 the thorium exposures was due to some  
9 additional research that we needed to do. We  
10 had identified these as a potential issue, and  
11 we just didn't have enough information on it  
12 at that time.

13 So, since my presentation to you  
14 on December of 2008, we interviewed several  
15 former workers regarding thorium exposures.  
16 And, then, in January of 2009, we did a data  
17 capture down here at Savannah River for  
18 neutron exposures in the 200 area. That was  
19 one of the other issues that we had committed  
20 that we would follow up on, was early neutron  
21 exposures.

22 February of 2009 is when we really

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1 got more into our thorium research. We had  
2 evidence of whole body count information for  
3 thorium at the Savannah River Site. And so,  
4 we were trying to find it. We were not able  
5 to locate those records.

6 So, back in March of 2009, we  
7 conducted a separate records search to  
8 identify radiological survey records. This  
9 involved a database search to identify boxes  
10 of radiation records and determine where they  
11 are from. And, literally, out at the site we  
12 are looking at around 1,000 boxes of radiation  
13 survey records and air sample records.

14 We identified some of these boxes.

15 In April of 2009, we conducted a data capture  
16 for thorium monitoring information. We  
17 collected air sample data, survey data, and  
18 thorium production records. We completed the  
19 data capture in May 2009.

20 In July of 2009, we had also  
21 identified some neutron monitoring records  
22 through this effort, and we captured that

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1 information.

2 September of 2009 is when the  
3 Advisory Board conducted a tour of the SRS  
4 facilities, which included the tank farms, the  
5 tritium facilities, the Canyon, the B-line,  
6 and the C reactor.

7 And, then, in December of 2009, we  
8 had an onsite meeting to discuss tritium  
9 exposures with a few worker members.

10 In January of 2010 was the first  
11 SRS Work Group meeting regarding the Special  
12 Exposure Cohort. And, then, in April of 2010,  
13 we issued our Evaluation Report Addendum  
14 regarding thorium exposures. And, then, in  
15 May 2010, we presented our findings from this  
16 Evaluation Report to the Savannah River Site  
17 Work Group.

18 And our determination was that  
19 dose reconstruction for thorium canning  
20 operations was feasible using uranium bioassay  
21 as a surrogate.

22 I want to emphasize here that we

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1 focused on canning operations almost  
2 exclusively. We knew about some other  
3 operations based upon our interviews, but at  
4 that time we were focusing on the tons of  
5 thorium that were handled in the 300 area.  
6 And so, that was what we limited and we felt  
7 would be bounding at that time. And I will  
8 elaborate more on that here shortly.

9 In June of 2010, our focus shifted  
10 a little bit to metal hydride exposures or  
11 tritides. And, then, in September of 2010, we  
12 conducted some more onsite interviews with  
13 multiple workers regarding metal hydride  
14 exposures at the Savannah River Site, or  
15 tritides.

16 Then, November 10th we had a  
17 teleconference for the Savannah River Site  
18 Work Group.

19 In December of 2010, we issued a  
20 Tritium Coworker Report. This report compared  
21 coworker models developed using only  
22 construction trades workers to a coworker

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1 model developed using all monitored workers.

2 And what we found from this  
3 evaluation was that there was no significant  
4 difference that was observed between those two  
5 models that were developed using the two  
6 different datasets.

7 In January 2011, we received the  
8 Advisory Board on Radiation and Worker Health  
9 comments, SC&A's comments on the Evaluation  
10 Report regarding thorium. And one of the most  
11 significant findings there within that report  
12 regarded thorium exposures from other areas.  
13 As I mentioned, we focused on the 300 area,  
14 feeling that that was bounding. SC&A  
15 presented some evidence that indicates that we  
16 might not have been actually covering all of  
17 the thorium exposures.

18 Some of the other areas, the 700  
19 area, for example, did a lot of research.  
20 While the quantities that they worked with  
21 with thorium were much smaller, the potential  
22 for exposure could be higher. So, this is

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1 something that we are currently evaluating.

2 February 2011 was the fourth  
3 Savannah River Site Work Group meeting, and we  
4 are currently working to resolve those  
5 particular SEC comments and issues.

6 Last week we were down here onsite  
7 to do a data search review for the thorium  
8 operations in the other areas, the 700 and 200  
9 areas. And we have identified some records,  
10 and we do plan on capturing those within the  
11 next couple of weeks down here at the site.

12 With that, I will turn it over to  
13 Mark, unless there are other questions here.

14 CHAIRMAN MELIUS: Do people have  
15 specific questions for Tim? Yes, Paul?

16 MEMBER ZIEMER: Thank you, Tim,  
17 for that presentation.

18 I noticed in the update sheets  
19 that we got on deliverables, and so on,  
20 probably about a dozen issues that are being  
21 dealt with. It wasn't clear to me whether  
22 these are SEC issues or are they Site Profile

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1 issues, or both?

2 DR. TAULBEE: They are both,  
3 actually. Most of them probably deal with SEC  
4 issues. I believe there's 24 issues that are  
5 still on the table for the Savannah River  
6 Site. And at this last Work Group meeting,  
7 they were kind of prioritized to elevate the  
8 ones that might have the most impact from that  
9 standpoint. And I think Mark is going to talk  
10 a little bit more about that.

11 MEMBER GRIFFON: Yes, I am going  
12 to go into that.

13 MEMBER ZIEMER: Thanks.

14 CHAIRMAN MELIUS: Okay. Anybody  
15 else have questions for Tim?

16 MEMBER RICHARDSON: Just a quick  
17 question about the coworker models for  
18 tritium.

19 DR. TAULBEE: Yes, sir.

20 MEMBER RICHARDSON: You have  
21 granted an SEC for the construction workers,  
22 is that right?

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1 DR. TAULBEE: No. No, that is  
2 what we are evaluating.

3 MEMBER RICHARDSON: Oh.

4 DR. TAULBEE: That hasn't been,  
5 no.

6 MEMBER RICHARDSON: Okay.

7 DR. TAULBEE: And the purpose of  
8 that evaluation was there was concern about  
9 construction trades workers' exposures being  
10 higher than other tritium workers. And when  
11 you think about some of the construction  
12 trades work, it is more of an upset type of  
13 condition, you are breaking into things.

14 But there's kind of two offsetting  
15 factors. So, while the intensity of the  
16 exposure might be higher, the duration of the  
17 exposure is likely to be shorter than a  
18 regular operations worker.

19 So, we weren't sure. You know,  
20 are construction trades workers over the long  
21 run, is their exposure experience different  
22 that would result in a higher dose than the

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1 regular operations work? So, that is why we  
2 did that particular comparison.

3 Please keep in mind that this  
4 comparison was just for tritium, and we are  
5 currently working on an evaluation for  
6 americium, curium, and californium. And,  
7 then, depending upon the direction of the Work  
8 Group, we plan on doing this same comparison  
9 for uranium and plutonium work as well.

10 MEMBER RICHARDSON: And this is a  
11 comparison for a given year of things like the  
12 mean, median, and upper percentiles of the  
13 recorded tritium dose for all SRS operations  
14 workers compared to the mean, median, and  
15 upper percentiles of all construction workers,  
16 is that right?

17 DR. TAULBEE: Correct, sort of.  
18 And let me tell you the two things that we  
19 compared was geometric mean and geometric  
20 standard deviation. So, they are melded  
21 together.

22 And if you look at our Evaluation

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1 Report, there is a Monte Carlo method of  
2 evaluating both of those two parameters, a  
3 Monte Carlo permutation test that was  
4 conducted comparing them simultaneously. So,  
5 we are actually comparing the median as well  
6 as the distribution and variance.

7 MEMBER RICHARDSON: Which, yes,  
8 for tritium at SRS in most years is  
9 essentially zero. I mean, there are --

10 DR. TAULBEE: I wouldn't say zero.

11 MEMBER RICHARDSON: I mean it is  
12 an extremely skewed distribution there.

13 What would the operation workers'  
14 tritium doses be? I mean, what would the  
15 basis for those records be between 1950 and  
16 1979, given that they are not computerized  
17 until, except for people who have continued  
18 working into 1979 and they enter into the  
19 HPAREH system?

20 DR. TAULBEE: Actually, what we  
21 did was we took all of the NOCTS claims, using  
22 the OTIB-75 methodology. And so, we coded all

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1 of that data from 1950 for all of the  
2 claimants that we have in our files. So, we  
3 do have that electronically.

4 MEMBER RICHARDSON: For a subset  
5 of people who are claimants within the  
6 program?

7 DR. TAULBEE: That is correct.

8 MEMBER RICHARDSON: So, now you  
9 have got 3,000 people, some of them terminated  
10 before 1979?

11 DR. TAULBEE: Yes.

12 MEMBER RICHARDSON: A partition of  
13 them are construction workers, and another  
14 partition of them are operations workers.

15 DR. TAULBEE: That is correct.

16 MEMBER RICHARDSON: And, then, you  
17 just compare it for a given year?

18 DR. TAULBEE: That is correct.

19 MEMBER RICHARDSON: The median and

20 --

21 DR. TAULBEE: Yes.

22 MEMBER RICHARDSON: I mean, I

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1 would be not surprised that it is not  
2 statistically different.

3 DR. TAULBEE: We have quite a bit  
4 of data when you actually look at the total  
5 number of people. And I would encourage you  
6 to look at our report. I believe it is Report  
7 48.

8 I mean, we believe that we have  
9 ended up coding somewhere on the order of  
10 400,000 bioassays, something like that.

11 MEMBER RICHARDSON: Yes, but, I  
12 mean, we know what the number is. You have  
13 got a few thousand workers over a few years,  
14 and you are comparing annual values. So, it  
15 is a product of the number of workers times  
16 the number of years, and you want to do an  
17 annual comparison. So, now you are down to  
18 the number of workers within a year.

19 DR. TAULBEE: That is correct.

20 MEMBER RICHARDSON: It is not  
21 hundreds of thousands. It is hundreds.

22 DR. TAULBEE: No. No, it is

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1 hundreds on a per-year basis, yes.

2 MEMBER RICHARDSON: And it is a  
3 highly-skewed distribution where lots of them  
4 are near zero.

5 DR. TAULBEE: Yes.

6 MEMBER RICHARDSON: Okay. Thank  
7 you. I don't want to go any further than  
8 that.

9 DR. TAULBEE: Okay.

10 CHAIRMAN MELIUS: Thanks.

11 Yes, Bill?

12 MEMBER FIELD: I greatly  
13 appreciated your discussion.

14 DR. TAULBEE: Oh, thank you.

15 MEMBER FIELD: It was helpful to  
16 get some background.

17 I was just curious, back in the  
18 '50s and '60s and '70s, how easy is to  
19 classify people that were construction versus  
20 other trades within that early period?

21 DR. TAULBEE: Well, there are  
22 several different methods that we have

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1 available to us. The method that we chose was  
2 really self-report within NOCTS because that  
3 was the easiest that we could get.

4 So, when people reported through  
5 the Department of Labor what their occupation  
6 was, or during the CATI interview, that was  
7 the data that we took. And if they ever  
8 mentioned construction trades workers, we  
9 included them as a construction trades  
10 workers.

11 MEMBER FIELD: So, it was all  
12 self-reported information?

13 DR. TAULBEE: That is correct.

14 MEMBER FIELD: What do you do with  
15 people that change? Do you have people that  
16 are construction for a while and then move  
17 over? And how do you deal with that?

18 DR. TAULBEE: That has occurred,  
19 but we did not go into that level of detail  
20 for this analysis.

21 MEMBER FIELD: Okay. And there is  
22 still a minimum time period for the

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1 construction?

2 DR. TAULBEE: I'm sorry?

3 MEMBER FIELD: Is there a minimum  
4 time period that they have to work in  
5 construction?

6 DR. TAULBEE: No. We just  
7 basically looked at the dataset.

8 CHAIRMAN MELIUS: Okay. Why don't  
9 we move on to Mark's presentation?

10 While Mark is getting ready, for  
11 people that just came in, we just had an  
12 update from NIOSH on their review on the SEC  
13 petition for Savannah River. Mark is a Board  
14 Member, Griffon, and Chair of the Work Group  
15 for the Board on Savannah River. He is going  
16 to present an update on the Board's review of  
17 that.

18 Then, we are going to take a short  
19 break. Then, we will start the public  
20 comment period.

21 If the technology cooperates.

22 MEMBER GRIFFON: I am trying to

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1 figure out how to get into slideshow mode. I  
2 guess up at the top, yes. F5? All right.  
3 Thank you.

4 Okay. I will try to brief because  
5 some of this overlaps a little bit with what  
6 Tim had introduced, but just to give a  
7 background of the process from our standpoint  
8 from the Work Group and the Board:

9 November 2007, the petition was  
10 submitted, qualified in March 2009. And as  
11 Tim mentioned, the petition focuses on  
12 construction trades only.

13 In September 2008, SC&A started a  
14 preliminary review, and that was really, we  
15 were sort of in Site Profile review mode, not  
16 the petition necessarily. They did that a  
17 little later on, as NIOSH's Evaluation Report  
18 came out.

19 So, December 2008, NIOSH provided  
20 their Evaluation Report, and they did leave a  
21 gap for this thorium question, 1953 through  
22 1960.

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1                   In January 2009, SC&A started to  
2 review the Evaluation Report itself, our  
3 contractor, SC&A.

4                   In April 2010, NIOSH issued this  
5 Addendum that addresses the thorium question  
6 from 1953 through 1965, actually, instead of  
7 1960, as was stated before.

8                   Some of the Work Group meetings we  
9 have had, from January 2010, May 2010,  
10 November 2010, we had a teleconference, and  
11 just recently we had a February 3rd meeting in  
12 this year.

13                   The status of this issue: so, it  
14 was mentioned that there were 24 issues that  
15 remain. Actually, I think we counted 25. A  
16 few of them have been merged because they were  
17 very similar issues in our Matrix that we keep  
18 track of these things with.

19                   And we have 29, and two of those  
20 were actually closed. So, that gives 19  
21 remaining issues that are open that are still  
22 under discussion between NIOSH and SC&A and

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1 the Work Group.

2 Just to give you a sense of where  
3 they fall out, 14 of them are really focused  
4 on internal dose reconstruction issues, two on  
5 neutron issues, and completeness of data are  
6 the main focus of the other three remaining  
7 issues.

8 The petitioners have also provided  
9 some issues of concern. Some of them we  
10 catalogued and are in the process of  
11 incorporating them in the Matrix. A lot of  
12 them fall into other categories that already  
13 existed in the Matrix. So, they may not  
14 result in new items necessarily, but they will  
15 be certainly considered as we go through the  
16 process.

17 So, the main issues, just to go  
18 through what sort of remains on the table:

19 Thorium doses from 1953 through  
20 1971, and SC&A recently reviewed the NIOSH  
21 report on this and has concerns about how  
22 NIOSH is proposing to model, to bound the

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1 doses for thorium exposures in the 300-M area  
2 through 1965.

3 As Tim mentioned, SC&A also in the  
4 report identified many, a list of several  
5 different areas where thorium work took place  
6 in Savannah River other than the 300-M area.  
7 And currently, the NIOSH model only focuses on  
8 the 300-M area.

9 Some of that was discussed at our  
10 last Work Group meeting. NIOSH indicated they  
11 had to do more research on this area before  
12 they could respond to a lot of the concerns.

13 SC&A is also in the process of  
14 reviewing the '65 to '71. So, the overall  
15 timeframe is from '53 to '71. It is sort of  
16 broken up for various reasons. It is split  
17 from '53 to '65, '65 to '71. And SC&A is  
18 still reviewing that part of the NIOSH report.

19 One important thing here is that  
20 SC&A feels that this issue, at least this  
21 issue, the thorium issue, applies to both the  
22 construction workers and non-construction

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1 workers. So, even though the petition is  
2 focusing on construction worker concerns, we  
3 have agreed on the Work Group that, as it  
4 comes up and as it is important, since a lot  
5 of the modeling is based on non-construction  
6 worker data, if we feel it applies also to  
7 non-construction workers or production  
8 workers, we will make that point. And SC&A  
9 feels that it definitely applies in this  
10 circumstance.

11 This issue was established as a  
12 priority action for NIOSH. At the end of my  
13 short presentation, I will mention where we  
14 are prioritizing now.

15 And I guess I just said that SC&A  
16 is completing the review of the 1965 to 1971  
17 model.

18 Other issues that are still on the  
19 table, and I am probably not covering all of  
20 them, but I want to hit the main ones that we  
21 are still dealing with:

22 NIOSH completed a report on

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1 plutonium-210 and other fairly exotic  
2 radionuclides. And SC&A is currently  
3 reviewing this. So, again, it is another  
4 approach to reconstruct dose using a coworker  
5 model for this particular radionuclide. SC&A  
6 has not yet reviewed NIOSH's approach.

7 Recycled uranium issues, and we  
8 certainly have addressed those on the Board at  
9 several other sites, that is also in review by  
10 SC&A.

11 And then there are several other  
12 coworker models. So, basically, the reason  
13 for these coworker models is that there isn't  
14 necessarily -- all people weren't necessarily  
15 monitored. There is not enough individual  
16 data to reconstruct doses for all these  
17 nuclides. So, they are looking at it as a  
18 coworker model collectively. Do we have  
19 enough data to be able to bound doses for  
20 workers at the site?

21 And several of probably the most  
22 important ones are listed here underlined in

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1 my bottom bullet: neptunium, americium,  
2 curium, californium, cobalt-60. Some of these  
3 overlap.

4 There's a category we have been  
5 calling "exotic", which are other than listed,  
6 I guess. There are several other nuclides  
7 that come up at this site that are pretty rare  
8 nuclides, but they were at this site used in  
9 some capacity. We don't know NIOSH's approach  
10 for some of those yet -- or for any of those  
11 yet.

12 And, then, fission products,  
13 activation products, and tritides. So, the  
14 point here is that we were waiting for a lot  
15 of information as far as coworker models go, a  
16 lot outstanding.

17 Another issue that is on our  
18 Matrix relates to incidents. At several of  
19 our other sites we have dealt with,  
20 oftentimes, we have determined that some of  
21 the chronic coworker models that we  
22 established actually end up bounding a lot of

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1 the incidents. However, we feel that we have  
2 to at least look at those and make sure that  
3 it is true in the case of Savannah River.

4 The incident database has been an  
5 issue for a while in terms of questions on the  
6 completeness of it. Are we looking at  
7 everything that we think should be in there?

8 And if we find all this incident  
9 data, then we want to compare and make sure  
10 that the coworker models would actually bound,  
11 even in the cases of these incidents where you  
12 have higher potential exposures or intakes.

13 One of the -- I guess this doesn't  
14 really fall into an incident, but there was a  
15 question on a practice that took place called  
16 open pan burning, and there is a question on  
17 how NIOSH intends to assign dose based on this  
18 particular activity.

19 Another broad item is completeness  
20 of bioassay records. We have looked at this  
21 to some extent. I actually believe it has  
22 mainly been focused on uranium, but, you know,

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1 there were some discrepancies that have been  
2 found and identified. But, at this point, I  
3 am not convinced this is a showstopper. I  
4 think we have found reasonable comparisons  
5 between logbook entries and database data that  
6 NIOSH is using.

7 I don't know that we have actually  
8 closed that item, but I think we are getting  
9 close to closing that item. So, I don't think  
10 completeness is going to be a showstopper or  
11 an SEC issue in this case. I am not 100  
12 percent sure, but I think we are probably 90  
13 percent there.

14 MEMBER RICHARDSON: Would you go  
15 back for a second? What does that mean?

16 MEMBER GRIFFON: Which one?

17 MEMBER RICHARDSON: Seven percent  
18 of bioassay records in logbooks were not in  
19 the workers' records?

20 MEMBER GRIFFON: Yes. I think,  
21 yes, maybe Arjun can clarify that. I think we  
22 were comparing logbooks versus the actual

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1 record of the individual, probably had HPAREH  
2 printouts or something like that.

3 DR. MAKHIJANI: There were two  
4 things we were looking for. NIOSH did some  
5 verification of comparing data in the  
6 logbooks, bioassay data in the logbooks to  
7 what was in the worker's individual records.  
8 So, there are two things to compare. Were the  
9 data in the logbooks when there was a  
10 corresponding entry in the worker's individual  
11 record, was it the same number? And the other  
12 one, was all the data in the logbooks found in  
13 the worker's records, or vice versa?

14 And we found that, in terms of  
15 accuracy of transfer, it was very good. I  
16 mean, there was some discrepancy but very few,  
17 less than 1 percent generally.

18 Six percent of the cases, there  
19 were bioassay data in the logbooks that were  
20 not in the individual worker dose records.  
21 Many of these were less than MDA, but, of  
22 course, that matters in dose reconstruction

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1 because you use MD over 2 in the dose  
2 reconstruction.

3 And it was biased by a lot of --  
4 there are four workers for which none of their  
5 bioassay that were in the logbooks were in the  
6 individual records. That doesn't mean  
7 individual records were empty. And we did a  
8 limited check, you know, four logbooks. So,  
9 two from the early '60s and two from the early  
10 '70s.

11 MEMBER GRIFFON: A few people  
12 accounted for a lot of the contribution to  
13 that 6 percent. That is what you are --

14 DR. MAKHIJANI: Yes. There was  
15 one person who actually contributed a lot, and  
16 one construction worker. So, it is kind of a  
17 strange --

18 MEMBER RICHARDSON: Yes, we found  
19 before in the creation of the HPAREH file that  
20 there was one magnetic tape that wasn't  
21 transferred into HPAREH.

22 MEMBER GRIFFON: Yes.

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1                   MEMBER RICHARDSON:    And it could  
2                   be identified by a number of workers with  
3                   higher in-term dates over a specific period,  
4                   and it was a big gap in the electronic file.

5                   I had assumed that NIOSH used  
6                   logbook data, not HPAREH, in doing dose  
7                   reconstructions, but maybe I am wrong.  Maybe  
8                   that was a faulty assumption.

9                   MEMBER GRIFFON:    Tim maybe can  
10                  address that.

11                  DR. TAULBEE:    What we primarily  
12                  use for dose reconstruction is the bioassay  
13                  cards that we get for a particular individual  
14                  from the Radiological Records Group there at  
15                  Savannah River.

16                  We actually don't use HPAREH that  
17                  much.  Or, in fact, I don't think we actually  
18                  use it at all for our dose reconstructions.  
19                  We go back to the original hard-copy cards.

20                  One other possibility here, and I  
21                  don't know if you checked into this, Arjun,  
22                  for this particular discrepancy, would be a

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1 resample where somebody had a result and they  
2 did a resample. And so, they might have only  
3 reported whatever their final result or final  
4 determination was.

5 MEMBER RICHARDSON: So, it doesn't  
6 sound like this was the case then.

7 DR. MAKHIJANI: No, I don't think  
8 that was the case. You know, I didn't do the  
9 raw. I only reviewed the report that Bob  
10 compiled. So, I didn't get into the raw data  
11 myself.

12 But I don't think that the  
13 resampling issue was the case, but I will  
14 double-check and get back to you about that.

15 MEMBER GRIFFON: I mean, I think  
16 one thing we did look at was I don't think it  
17 was in any way skewed. I don't think we were  
18 finding that high values were eliminated  
19 intentionally or anything like that. I don't  
20 think your --

21 DR. MAKHIJANI: That is correct.  
22 There are two findings in that regard. In the

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1 individuals concerned, it could affect their  
2 dose reconstruction because you are missing  
3 some numbers from the cards. But we found  
4 that, in terms of use of non-construction  
5 worker data for construction worker, that the  
6 omitted data didn't bias the field. So, it  
7 was not a biased omission of the data when you  
8 compare what was left.

9           When you compare the data omitted,  
10 because we know the numbers that were omitted,  
11 so when you put it all together, it doesn't  
12 bias the results in terms of coworker models.

13           MEMBER RICHARDSON: It matters.  
14 If there is a gap, I don't know, if there was  
15 systematically a problem of there being a gap  
16 in a period of years, and they are going to  
17 use a coworker model for an estimate of a dose  
18 in a year, it really could cause a sample  
19 problem.

20           MEMBER GRIFFON: Yes. Yes. No, I  
21 don't disagree with that. Okay.

22           So, other items that we looked at:

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1 neutron dose coworker model is still on the  
2 table.

3 And, then, I think I already  
4 mentioned that the petitioner issues that have  
5 been raised throughout the process are being  
6 catalogued and incorporated into our Matrix.  
7 A lot of them cover questions on external  
8 dose, on data completeness, on assertions that  
9 people were asked to work in areas without  
10 wearing their badge, issues like that. And we  
11 are addressing those. A lot of them are being  
12 incorporated into other parts of the Matrix.

13 And, finally, the construction  
14 worker/non-construction worker issue, I think  
15 it comes up for all these coworker models that  
16 we are looking at. So far, we have got  
17 thorium and, as you can see on the bottom, we  
18 have looked at tritium a little bit. I think  
19 there is certainly at this point a  
20 disagreement with SC&A and NIOSH on the  
21 question of whether these are appropriate for  
22 construction workers.

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1           And part of it is looking at this  
2           job-type question. I think the current models  
3           look at construction workers versus all  
4           workers. First of all, the comparison  
5           includes construction workers. All workers,  
6           construction workers are part of that. So, we  
7           are sorting this out on the Work Group level.

8           Actually, in the case of the  
9           tritium model, SC&A provided a report  
10          simultaneously with NIOSH's report. So, we  
11          have sort of two separate reviews done  
12          different ways, which is difficult to compare.

13          But we are sort of working through that.

14          But one question that comes up,  
15          for instance, is that, is it important to  
16          parse out different job types? Pipe-fitters  
17          fall into construction workers, but they seem  
18          to have a very different exposure history than  
19          a lot of the other construction trades.

20          So, that is one sort of reason I  
21          put job type up there, that we are at least  
22          looking at that, examining that.

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1                   And, then, just two slides on the  
2 path forward.     As Tim mentioned, we are  
3 talking about priorities now.   And the reason  
4 we want to look at these is, if we can look at  
5 certain issues and decide right now that, you  
6 know, for instance, thorium is an SEC issue,  
7 we can't reconstruct dose, and it covers a  
8 certain time period, we may be able to focus  
9 in our efforts on other time periods and not  
10 spend so much time on, for instance, the early  
11 period if we know something is going to fall  
12 into an SEC.

13                   We are targeting these high-dose  
14 nuclides.   A lot of them fall into the exotic  
15 category, as I mentioned before, but thorium,  
16 neptunium, americium, curium, californium, and  
17 the fission products and activation products.

18                   Now my last slide, this is a  
19 personal point.   The Work Group hasn't come to  
20 this conclusion, but my feeling, based on our  
21 discussion at the last Work Group meeting, is  
22 that, particularly on the thorium issue, I

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1 believe that we should consider, the Work  
2 Group should consider establishing a motion  
3 for all workers,  
4 construction/non-construction, who could have  
5 been exposed to the thorium '53 to '65.

6 And it is not only based on the  
7 model that NIOSH offered at the last meeting  
8 for the 300 area, but it is also based on a  
9 list of, I believe, 10 other areas where SC&A  
10 had brought up concerns about other thorium  
11 exposures. And it is quite clear to me that  
12 NIOSH has not yet considered these, and we are  
13 going back to the data collection phase on  
14 these things.

15 So, I think, basically, it is time  
16 for NIOSH to come forward with a model on  
17 thorium, and I am considering bringing this up  
18 to the Work Group at our next Work Group  
19 meeting, probably in early May, to let's,  
20 based on the weight of the evidence, make a  
21 decision here on thorium. That is my personal  
22 opinion, not a Work Group opinion at this

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1 point, but I just wanted to close with that.

2 And that is my update.

3 CHAIRMAN MELIUS: Okay. Do Board  
4 Members have any questions for Mark? Brad?

5 MEMBER CLAWSON: Mark, did you  
6 know about this February data capture?

7 MEMBER GRIFFON: I just heard  
8 about it today.

9 CHAIRMAN MELIUS: Any other  
10 questions?

11 MEMBER BEACH: I have just a quick  
12 one.

13 CHAIRMAN MELIUS: Yes, Josie.

14 MEMBER BEACH: Can we get a copy  
15 of your presentation, Mark?

16 MEMBER GRIFFON: It is in pretty  
17 rough form. But, yes, I will forward it to  
18 Ted.

19 CHAIRMAN MELIUS: Ted, yes, will  
20 email it around. Good.

21 MEMBER GRIFFON: Yes.

22 CHAIRMAN MELIUS: Okay.

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1                   MEMBER GRIFFON:       And there's  
2       different fonts on every slide, I believe,  
3       because I was editing it today.

4                   (Laughter.)

5                   CHAIRMAN MELIUS:   And we will look  
6       forward to further discussion at our May  
7       meeting.

8                   MEMBER GRIFFON:   Yes.

9                   CHAIRMAN MELIUS:   All in the same  
10      font, though, by that time.

11                  MEMBER GRIFFON:   Right, right.

12                  CHAIRMAN MELIUS:   Good.   Okay.

13                  Okay, we are at a point now, what  
14      we will do is take a short break, about 10 or  
15      15 minutes.   So, at least by 5:25, plan on  
16      being back and we will start the public  
17      comment period.

18                  For people that wish to make  
19      public comments, there is a sign-in sheet out  
20      at the desk.   If you haven't signed in  
21      already, please do so.  It is just helpful for  
22      us to manage the time, and so forth, for

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1 people to do so. If you change your mind  
2 after you have signed in, that is okay also,  
3 but it is up to you if you wish to do so.

4 So, we will see you back here in  
5 about 10 or 15 minutes.

6 (Whereupon, the above-entitled  
7 matter went off the record at 5:11 p.m. and  
8 resumed at 5:25 p.m.)

9 CHAIRMAN MELIUS: If everyone will  
10 get seated, we will get started now.

11 MR. KATZ: Good evening, everybody  
12 who has come and everybody who might be on the  
13 line.

14 At the head of this public comment  
15 session, let me just explain the ground rules  
16 about the transcripts. Because, as you may  
17 not all know, there is a verbatim transcript  
18 made of all the Board meetings, including the  
19 public comment sessions.

20 So, the comments you might give  
21 tonight will be also transcribed verbatim and  
22 available to the public. Everything you say

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1 about yourself, however private, will be  
2 available to the public. So, just keep that  
3 in mind.

4           However, whatever you might say  
5 about another party, a third party, that  
6 information may be redacted to protect their  
7 privacy. So, be aware of that as well. It  
8 doesn't keep you from saying things about a  
9 third party, but we will limit the information  
10 about a third party that is included in the  
11 transcript to protect their privacy.

12           And the full policy, if you want  
13 to read it in its fine details, should be  
14 available on the back table, and it is also  
15 available on the NIOSH website under the  
16 Board's section of the NIOSH website that  
17 deals with this program.

18           And I think that covers what I  
19 need to say.

20           The only other thing is just to  
21 remind folks on the phone, please keep your  
22 phones muted until it is time for you to speak

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1 and, then, you will have to take your phone  
2 off of mute. Take it off with \*6, if you  
3 don't have a mute button, when you are  
4 prepared to give your remarks.

5 CHAIRMAN MELIUS: Okay, and we are  
6 going to try to start with focusing on the  
7 Savannah River Site because that is why we are  
8 holding the meeting here. We will come back  
9 to other people, so I may skip over people a  
10 little bit. We also may have people on the  
11 phone who will be speaking later.

12 So, I would remind you that there  
13 is at the most a ten-minute limit for your  
14 remarks. If you want to submit additional  
15 information afterwards, that is fine. You are  
16 not required to speak for ten minutes, either.

17 So, whatever you want to say.

18 And the first person I have listed  
19 here I believe is from the Savannah River Site  
20 is a Perkins Farmer, as best I can tell. It  
21 is the second person to sign up, and I may be  
22 mispronouncing because we are having trouble

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1 reading the name. Okay?

2 Then, the next person down, I  
3 don't know where you are from. Tim Lerew, are  
4 you from the site?

5 And I would add that you are  
6 welcome to speak from there. You are welcome  
7 to speak from there. People are also welcome  
8 to speak from the microphone here. Either one  
9 will be picked up.

10 So, go ahead, Tim.

11 MR. LEREW: Very good. Thank you.

12 My name is Tim Lerew. I am with  
13 an association called Cold War Patriots. We  
14 are a national association of volunteer  
15 members, about 6,000 former nuclear complex  
16 workers and uranium miners, pretty much from  
17 every state in the Union. It has been about  
18 three years since the group was incepted.

19 Speaking of the situation here at  
20 Savannah River Site's Special Exposure Cohort  
21 Petition, I have had the privilege to attend a  
22 few of the other Board meetings around the

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1 country. And I believe the Board has probably  
2 reviewed and approved close to 50 SECs in  
3 different locations throughout the United  
4 States.

5 As I heard Mark's and Tim's  
6 presentations, and made a few notes prior to  
7 those presentations, it almost seems that in  
8 the Savannah River Site's case, the premise  
9 that we started with in 2007 with the  
10 construction workers was a little bit of a  
11 flawed premise when it came to trying to come  
12 about with a fair SEC decision.

13 The Working Group, to Mark's  
14 credit, seems to have addressed some of that  
15 to include the non-construction workers,  
16 which, of course, is in the interest of  
17 everyone who is here, all of the workers that  
18 were affected by exposure at Savannah River  
19 Site.

20 I think in this particular case,  
21 this particular SEC petition, we really need  
22 to look to you, the Board Members, for some of

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1 the leadership that sometimes the individual  
2 petitioners have brought from other locations  
3 around the country.

4 A little bit conspicuous by their  
5 absence with this particular petition are  
6 those individuals with a lot of experience,  
7 depth, and technical expertise that they have  
8 acquired over several years that they can  
9 bring to the petition itself.

10 And in the absence of that, in  
11 order to arrive at a fair conclusion, just as  
12 NIOSH uses dose reconstruction from an  
13 individual job category to try to establish  
14 what my dose or another individual's was, it  
15 almost suggests itself to me that other sites  
16 that you have had the opportunity to work on  
17 comparable materials might suggest the need  
18 for at least a specific SEC finding at  
19 Savannah River Site.

20 And the site that comes to my mind  
21 that the Board recently acted upon would be  
22 the Hanford Reservation, comparable type of

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1 work, comparable type of exposures. And, of  
2 course, I understand that the Board, to arrive  
3 at a decision, usually needs actionable  
4 information, gaps in data that are identified  
5 from some of the work from SC&A and NIOSH. A  
6 little bit of that seems to be absent in the  
7 case of the Savannah River Site petition.

8 I don't think it is absent because  
9 it is not there. I think it is absent because  
10 we haven't had the level of detail and passion  
11 and expertise from the petitioner side to  
12 establish those gaps that are likely to exist.

13 I have an opportunity to put  
14 together individual claimants and  
15 beneficiaries with benefits that they might be  
16 entitled to at Savannah River Site as well as  
17 around the country. And common sense tells me  
18 that we are missing opportunities to serve  
19 individuals that did have the exposures back  
20 in the '50s and '60s that are likely to  
21 require an SEC finding.

22 You have heard a little bit of it

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1 from Mark, kind of an advanced view of the  
2 Working Group's finding that in his view from  
3 1953 to 1965, due to thorium exposure, an SEC  
4 finding is probably something that he would  
5 actually support. That is a little unusual,  
6 in my view, to sometimes have the folks at  
7 SC&A and NIOSH come to some of those  
8 conclusions without being pushed by the  
9 petitioner itself.

10 So, I think there is something  
11 there when it comes to Savannah River Site. I  
12 think these employees and former employees and  
13 their families, especially in the period of  
14 the '50s and '60s and maybe extending into the  
15 '70s, depending on findings of fact, are  
16 entitled to an SEC finding. So that those  
17 poor individuals that do have these cancers  
18 don't have the very, very frustrating  
19 experience of waiting on benefits that will  
20 never come, relief that won't be provided for  
21 their families or their heirs.

22 I would like to thank the Board

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1 for its thoughtful consideration, and I would  
2 like to challenge the individual members to  
3 look for opportunities in this particular  
4 petition where you can lead to an appropriate  
5 conclusion and finding of fact.

6 Thank you.

7 CHAIRMAN MELIUS: Thank you.

8 The next person I have signed up  
9 is a Peggy Widener. Yes?

10 MS. WIDENER: I can actually say  
11 what I want to say from back here.

12 CHAIRMAN MELIUS: No. Because it  
13 is recorded, I am sorry, it is better to do it  
14 by the microphone. Actually, she can use  
15 either one, whatever your preference is.

16 MS. WIDENER: Well, I am going to  
17 be short and sweet.

18 CHAIRMAN MELIUS: That's fine.

19 MS. WIDENER: But I am asking you  
20 Board Members to please approve the SEC  
21 petition for the Savannah River Plant, or  
22 Site. It has changed now to a site.

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1 Thank you.

2 CHAIRMAN MELIUS: Okay. Thank  
3 you, ma'am.

4 Okay. The next person I have  
5 listed is a Selma Uldrick.

6 MR. HINNEFELD: Ms. Uldrick spoke  
7 to me earlier and said that she was removing  
8 her name from the list and would not be  
9 speaking.

10 CHAIRMAN MELIUS: Okay. Thank  
11 you.

12 Tom Boland. Welcome, Mr. Boland.

13 MR. BOLAND: Thank you.

14 I am here on behalf -- my father  
15 worked at Savannah River Plant, and I think a  
16 good example. He started in 1950 as a  
17 construction worker. Then, he moved on and  
18 became in operations. And, then, he became a  
19 supervisor. So, he spent many years out  
20 there, not just doing construction, but other  
21 jobs, also being exposed.

22 But when they did the NIOSH

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1 reconstruction, they had him listed as a  
2 supervisor because that is what was on his  
3 record. So, I don't think you should narrow  
4 this so easily and so quickly that you leave  
5 off people because we have some others here  
6 who also worked through construction for that  
7 whole system. So, I am asking you to consider  
8 expanding this to all workers.

9 One thing that interested me was  
10 when the guy got up and said that he had just  
11 found a thousand boxes of records. That shows  
12 that the NIOSH's dose reconstruction should be  
13 reconsidered.

14 (Laughter.)

15 And, then, somebody else said they  
16 found some more records. There is a flaw that  
17 started way back that needs to be corrected.  
18 And one way to do it is to do the SEC petition  
19 so it covers everybody out there.

20 Then, they narrowed it to the 300  
21 area. Then, the other guy gets up and says,  
22 well, it was in other areas, too.

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1           Now they had my father listed as  
2           in the 100 area, but we also have information  
3           in there where he worked in the 200 to 700.  
4           He was all over that place, and some of these  
5           other workers.

6           We have Ms. Sims back here who  
7           asked me to speak for her because she has had  
8           her leg removed because of cancer. She wasn't  
9           a construction worker, but she had to go and  
10          check on what construction they did, to count  
11          the guys' hours. She was right there where  
12          the construction workers were and making sure  
13          that they were doing what they were supposed  
14          to be doing.

15          So, I think that is another reason  
16          that you should expand this. And you have got  
17          50 other sites. How many others of those have  
18          been narrowed just completely to the  
19          construction worker?

20          We are not asking for special  
21          consideration, but we would like to be treated  
22          like everybody else that worked out there.

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1           Then, there was some mention about  
2           there was 6 percent who got left out. Well,  
3           if you are in that 6 percent, that is 100  
4           percent negative to you. So, we are asking  
5           don't just throw these 6 percent or the 1  
6           percent out the door. Let's give everybody a  
7           fair shot at this with the SEC petition.

8           I do have an affidavit that was  
9           from [identifying information redacted]. Of  
10          course, he is very old now and can't be here.

11          But this is regarding my father who was out  
12          there. He was a supervisor, but they had  
13          major spills. And as a supervisor, he was  
14          required to go in and clean up. He didn't  
15          have the choice. Now [identifying information  
16          redacted] said, "hey," they said, "do you go  
17          in there?" "No, I'm not a supervisor. I'm  
18          not going in." But my father had no choice.  
19          And a lot of these workers had no choices when  
20          there were things that went on there.

21                 And there is no information that  
22          we could find about this spill, but I know it

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1 occurred. This is another way that the SEC  
2 can overcome a lot of lost records, and  
3 there's a thousand boxes sitting around  
4 somewhere for the last seven or eight years,  
5 because this dose reconstruction stuff started  
6 back in the early 2000s.

7 So, I will present this, and I  
8 wrote my name on it.

9 CHAIRMAN MELIUS: Okay.

10 MR. BOLAND: And there are several  
11 other older ladies and gentlemen here from the  
12 Savannah River Plant. If you could raise your  
13 hand? And some of them didn't want to get up  
14 here, but they asked me to speak for them, and  
15 that is what we are asking. Just give us a  
16 fair shot at it.

17 CHAIRMAN MELIUS: Okay.

18 MR. BOLAND: Thank you.

19 CHAIRMAN MELIUS: Thank you, and  
20 thank you for speaking on behalf of the others  
21 also.

22 I just would indicate, because

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1 this is a complicated program, and even though  
2 the SEC petition that is currently under  
3 consideration only qualified for construction  
4 workers, our purview is the entire site. So,  
5 we are going to be looking at that, and there  
6 are various ways that those concerns can be  
7 addressed.

8 So, the misperception shouldn't be  
9 that we only are focusing on construction  
10 workers. We are sort of limited in terms of  
11 the SEC petition at this time, but we are  
12 looking at those other issues and we will  
13 continue to look at those other issues as we  
14 go forward.

15 And we also recognize what you  
16 pointed out, that people had lots of different  
17 jobs and different duties there. It doesn't  
18 always match up with what the name was or the  
19 name was at the time they left the site, and  
20 so forth.

21 So, again, I thank you for your  
22 input.

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1                   The next person I have listed is a  
2                   Bob Esposito. Is Bob here?

3                   (No response.)

4                   Okay.

5                   MR. BOLAND: He was one that asked  
6                   me to speak for him.

7                   CHAIRMAN MELIUS: Okay, fine.  
8                   Thank you. Okay. Then, I have a Wayne Knox.

9                   MR. KNOX: Yes. Thank you. I am  
10                  back again.

11                  CHAIRMAN MELIUS: Yes.

12                  MR. KNOX: I am one of the  
13                  dirty-hands operational health physicists, the  
14                  kind of guy that has to make it work no matter  
15                  what. Make it work in spite of all of the  
16                  problems we have in terms of equipment  
17                  resources, personnel resources, money, you  
18                  name it, we have to make it work. And we made  
19                  it work by minimizing the exposure to workers  
20                  as much as possible.

21                  I am here to talk about some of  
22                  the specific problems that I have as an

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1 advocate trying to help people obtain fair  
2 medical treatment and compensation for their  
3 exposures. So, I am just going to talk about  
4 some specifics, but I could say the same thing  
5 for a number of sites throughout the country.

6 As I said, I am an exposed worker.

7 At one of the previous Board meetings, I  
8 provided videotapes, actual analysis, actual  
9 data that show where 40 people down here at  
10 Savannah River were exposed to unmonitored  
11 plutonium and tritium. I gave this to the  
12 previous Board. It was passed along to NIOSH  
13 and it went into a dead file. Nothing  
14 happened.

15 I would recommend that we look at  
16 that again where you can see what really  
17 happens. The video shows what happens to  
18 people in a working environment.

19 As I go about the country looking  
20 at various sites and reading various Site  
21 Profiles, I see one major problem is that they  
22 all needed to be updated. They need to

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1 reflect the reality.

2 Most of the reality is going to  
3 come from those workers that are there. And I  
4 have held a number of meetings with workers  
5 and derived a lot of excellent information  
6 from them. So, to paint the picture, I would  
7 strongly encourage the Board to go to the  
8 workers and get the information from them.

9 And I will give you one quick case  
10 of the Kansas City plant. The Kansas City  
11 plant is supposed to be a non-nuclear plant,  
12 but it has 10,000-pound lots, they process  
13 10,000-pound lots of depleted uranium.

14 It had hundreds of  
15 X-ray-generating machines. It had PuBe  
16 sources, plutonium-beryllium sources, that  
17 produced neutron exposures.

18 But in talking to the workers, the  
19 facility was not designed for radiological  
20 work or even chemical work. You look at the  
21 stacks. You have very short stacks. Workers  
22 say the walls come in, but only go up so far.

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1       And you have a huge facility there that on  
2       one side you will find the non-nuclear work;  
3       on the other side, you will have GSA people  
4       and the clean side. But you have a common  
5       ventilation system. You have short stacks.

6                So, the contaminated air goes out  
7       of the short stacks on the roof, goes right  
8       back into the ventilation system.

9                I have listed a number of problems  
10       associated with this facility, including  
11       having a contamination event that lasted for  
12       15 years and went undetected. It went  
13       undetected because they had no health  
14       physicists assigned to the staff. They didn't  
15       have the instrumentation. They didn't tell  
16       the people what they were working with because  
17       of secrecy, and it was a, quote/unquote,  
18       "non-nuclear site".

19               They had one cesium source there  
20       that was 280 curies. How did they handle all  
21       of that? Not too well.

22               Again, you take a look at the

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1 problems. And all of this, again, is derived  
2 from Evaluation Reports. DOE came in and  
3 evaluated them and identified this. So, this  
4 is what Wayne Knox is saying.

5 And I would suggest that a lot of  
6 information concerning the sites can be  
7 derived from the Evaluation Reports. But if  
8 you look at the reports, contamination had  
9 gotten into people's homes. It was in the  
10 ventilation system. They had cases of  
11 reported bioassay, that is, uptakes of  
12 radioactive material within the population,  
13 within the workers. However, they found that  
14 later on they were all false positive events.

15 I have another case here of a  
16 fireman, one of our heroes, who has a whole  
17 list of zeroes on his dosimetry records. He  
18 has six separate cancers. How many people do  
19 you know with six separate cancers?

20 But he waded in contaminated  
21 water, getting people out of cars. He  
22 backburned the contaminated brush on the wall,

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1 on the waste sites. He went into all of the  
2 reactor facilities, into high radiation zones.

3 He even reported seeing the blue light on the  
4 reactor when they went there to retrieve the  
5 dead animals that had been killed by the  
6 radiation, the blue light, Cherenkov  
7 radiation, very high levels of radiation.

8 But yet he still -- if you look at  
9 what they assigned him, they assigned him a  
10 radiation dose that was less than -- less than  
11 a person standing on the outside of the  
12 facility in a very narrow band of full-time  
13 energy, no neutron. And keep in mind, they  
14 had to fight a forest fire with the airplane  
15 reactor suspended in the air. I don't know if  
16 you know what the airplane reactor was. They  
17 fought the fire, but we understand no neutron  
18 exposure, no internal deposition.

19 So, you have a fireman that went  
20 into all of these facilities maintaining these  
21 reactors and all of the radiological  
22 facilities, and, yet, he has zeroes. And each

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1 time one of the cancers appeared, the dose  
2 reconstruction would be done again and still  
3 found that everything would be reduced where  
4 he would be below the Probability of  
5 Causation.

6 Another quick one here is one of  
7 our clients who was a cloud chaser. This  
8 gentleman was responsible for taking a  
9 handheld radiation instrument and measuring  
10 the clouds from atomic bomb explosions. Most  
11 Japanese only experienced one. This  
12 individual experienced over 800 nuclear bomb  
13 explosions, and he gets all zeroes.

14 He gets all zeroes because, when  
15 he gets a chance to go out and do a mission,  
16 they take his badge and they give him another  
17 badge. When he comes back, they will take the  
18 badge that they gave him and give him his  
19 routine badge back, and they read that. So,  
20 he has all zeroes.

21 But he tells me the problems, that  
22 in all of this dust and fallout, it covered

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1       them. He has beta burns on his body from the  
2       fallout. He has lung conditions. He has two  
3       separate cancers. But he is only being given  
4       credit for one.

5                   We tried, because I'm an HP, I  
6       even taught nuclear weapons effects. So, I  
7       know what they can do. I thought that you  
8       could easily push 800-bomb explosion  
9       experience by this guy through NIOSH, but we  
10      couldn't get it through.

11                   So, we said, well, what we are  
12      going to do is wrap around and do silicosis.  
13      Forget about radiation. Part B, you put a  
14      bomb in a pile of sand. You get a lot of  
15      dust. You have got silicosis. So, we tried  
16      silicosis.

17                   That didn't work out well, either,  
18      because the doctor diagnosed silicosis.  
19      However, the CE, the claims examiner, didn't  
20      like that because he put simple silicosis,  
21      chronic simple, and the claims examiner went  
22      back to the doctor and questioned him in terms

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1 of his ability to diagnose silicosis. The  
2 medical doctor got upset with him and said he  
3 would never do any more of these again.

4 Another quick one --

5 CHAIRMAN MELIUS: Could you,  
6 please -- you are at 10 minutes. So, we would  
7 like you to wrap up, please.

8 MR. KNOX: Okay. Okay. Another  
9 quick one is a research scientist, a  
10 radiochemist, a chemist here. He has  
11 pancreatic cancer, prostate cancer, and a host  
12 of other medical conditions.

13 He also worked at Mound. His  
14 medical records clearly establish that he was  
15 given, he was exposed to tritium and it had  
16 his tritium exposure data. And trying to  
17 process this through, NIOSH had generated a  
18 list of all of the workers that were qualified  
19 for the Mound SEC.

20 They would not, DOL would not  
21 allow this worker, even though he had  
22 pancreatic cancer, even though he had a record

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1 that demonstrated that he had tritium  
2 exposure, they would not allow him to be a  
3 part of the SEC, simply because his name and  
4 Social Security Number was not on the NIOSH  
5 list.

6 But in looking at this thing even  
7 further, the list is incomplete. A gentleman  
8 just talked about incomplete records.

9 CHAIRMAN MELIUS: Yes, can we  
10 please wrap up?

11 MR. KNOX: Yes. Okay.

12 CHAIRMAN MELIUS: You are well  
13 over.

14 MR. KNOX: Well, the bottom line  
15 is that the Mound SEC qualifications should  
16 not be simply based upon the NIOSH list. It  
17 is incomplete. The records have been lost.  
18 It should simply be based on the official  
19 dosimetry records.

20 Thank you.

21 CHAIRMAN MELIUS: Thank you, Mr.  
22 Knox.

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1                   Is there anybody else here from  
2 Savannah River that would like to make  
3 comments? Yes?

4                   MS. SIMS: I wanted to thank you  
5 for --

6                   CHAIRMAN MELIUS: Could you just --

7                   MS. SIMS: -- emphasizing how you  
8 came up in the ranks at SRP --

9                   CHAIRMAN MELIUS: Can you please  
10 give us your name first?

11                  MS. SIMS: Joan Sims.

12                  CHAIRMAN MELIUS: Okay. Thank  
13 you, Ms. Sims.

14                  MS. SIMS: I got all my records  
15 from different places to send in. And every  
16 time I would get one back, it would emphasize  
17 that for three weeks I worked in the clerical  
18 department and, then, also, in the service  
19 department, which at that time that is the  
20 only way you could get a job at Savannah  
21 River.

22                  CHAIRMAN MELIUS: Yes.

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1 MS. SIMS: What was I going to  
2 say?

3 Like I said, three weeks, but also  
4 for the last 10 years, I worked as an HP  
5 inspector in just about every area out there  
6 and covered all kinds of jobs.

7 So, a couple of years ago, I had  
8 three cancerous spots and my lymph nodes  
9 removed, and now I have got it on my arms.  
10 And I am due for surgery March the 8th.

11 And all they ever thought to look  
12 at was, well, she just worked in clerical or  
13 she just worked as a janitor. Those were just  
14 short days compared to 10 years. I even  
15 worked in tritium in there, the 200 area.

16 CHAIRMAN MELIUS: No, we recognize  
17 that people had many different duties at the  
18 site, and it is not always reflected in the  
19 title. And there are occasional problems with  
20 the work records, and so forth, to that.

21 That is helpful. We appreciate  
22 it, and we wish you luck with your surgery.

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1 MS. SIMS: Thank you.

2 MS. STALEY: Hi. My name is  
3 Carrie Staley. My dad worked at the Savannah  
4 River Site from 1951, I think, until 19 -- he  
5 passed away in 1980. He was 55 years old. He  
6 was a construction worker. He was a  
7 carpenter.

8 And we went through the NIOSH  
9 process, and we went all the way through the  
10 appeal process. The person that met with us  
11 for our appeal hearing came from Jacksonville,  
12 Florida, forgot our daddy's record.

13 He mentioned that it was written  
14 on the top of my dad's record in big letters,  
15 "Why?" Why was it turned down?

16 The first time we had dose  
17 reconstruction it was a higher number, pretty  
18 close to 51 percent. When they did a second  
19 dose reconstruction, the numbers went down.  
20 And that is what he said, wrote on our record,  
21 my dad's record, "Why?" But he failed to  
22 bring those records with him to the hearing.

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1           My sisters and brothers, it's 12  
2 of us. My dad sent all of us to college, and  
3 my baby brother was 13 years old when my daddy  
4 died at age 55, and he left money for my baby  
5 brother to go to college.

6           He has never gotten, my baby  
7 brother has never gotten his monies from my  
8 daddy's work out at the site. My mother  
9 passed away before a claim was done, and we  
10 have been working with this over -- I think it  
11 came out in like 2001, and never got any  
12 results, any compensation.

13           He had colon cancer, and I know  
14 that at age 55 with the work conditions that  
15 he worked at, there was no way to record  
16 whatever radiation uptake they were taking in  
17 the early years, in the early 1950s and '60s.

18           So, they asked us, when we did our  
19 hearing, to give them information from people  
20 who worked with my father, people that he rode  
21 to work with. They, too, had cancer. And I  
22 was just thinking they are waiting for

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1 everybody to die before they could finish  
2 reevaluating our case. The people that wrote  
3 the letters, they were already passed away.

4 And I don't understand, you know,  
5 if they gave them information from the word of  
6 mouth of a person that worked with him, why  
7 can't NIOSH receive that information? And  
8 what kind of data are you using? Because if  
9 they didn't have any records, then where are  
10 you getting your information from?

11 And I would hope that you all  
12 would reconsider that because it has been over  
13 a number of years, and my baby brother had to  
14 go -- I mean, he was 13 years old when my  
15 daddy passed away and never received any  
16 portion of any of the amount of monies that  
17 was supposed to be sent to him at that time.  
18 So, please reconsider.

19 CHAIRMAN MELIUS: Okay. Yes,  
20 thank you.

21 And we are not allowed to discuss  
22 individual cases, but there are people from

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1 NIOSH here. Right to your left is Stu  
2 Hinnefeld, and maybe if you --

3 MS. STALEY: Where?

4 CHAIRMAN MELIUS: Right behind  
5 you. And maybe he can talk to you, and at  
6 least get the information and follow up with  
7 you.

8 Yes, sir?

9 MR. MILLS: My name is Roy Mills,  
10 and I live in Aiken, and have been in Aiken  
11 almost all my life.

12 My request is, for the passage of  
13 this, is on behalf of my two children who are  
14 42 and 37 currently. My wife at the time  
15 worked at Savannah River Plant in the late  
16 '60s. She died of malignant melanoma when she  
17 was 31 years old, and I had a 5-year-old and a  
18 2-year-old when she passed away.

19 My thing is that the NIOSH, if a  
20 person, if you are at 45 and I am 50, you  
21 know, if you are a little bit pregnant, you  
22 are all the way pregnant kind of a thing, but

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1 in any event, I would like to see this passed,  
2 so that the benefit for my children could come  
3 forward.

4 My daughter, who is one of the  
5 survivors, had a little 2-year-old son, my  
6 grandson, who was diagnosed with leukemia when  
7 he was 2 years old. And I am happy to report  
8 that he is, as of this point, 100 percent. He  
9 just turned 9. So, he is doing great.

10 But, in any event, whether that is  
11 any relevance or not, I would like to see this  
12 passed forward and more consideration.

13 In one instance, the plant records  
14 that were, the Savannah River Site records  
15 that were forwarded didn't have that she  
16 worked in a certain area that I have now  
17 established that it was, she did work in that  
18 area. So, there is some, could have been  
19 exposure.

20 I started this at the very start,  
21 when it came out in 2001. Here it is 2011.  
22 But just about the time I get ready to give

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1 up, something new comes up, so I continue to  
2 fight.

3 CHAIRMAN MELIUS: Okay.

4 MR. MILLS: Thank you for your  
5 consideration.

6 CHAIRMAN MELIUS: Well, I think if  
7 you have new information, you might want to  
8 talk to Mr. Hinnefeld or somebody here from  
9 NIOSH just to talk about the procedure for  
10 dealing with that.

11 MR. MILLS: Thank you.

12 CHAIRMAN MELIUS: And thank you  
13 for your information and do that.

14 Okay. Anybody else from Savannah  
15 River that would like to speak?

16 (No response.)

17 Okay. If not, we have one other  
18 person here who has been patient for us, and  
19 then we will go to the phone. But, first,  
20 Donna Hand.

21 MS. HAND: Donna Hand. I am a  
22 worker advocate and, also, an authorized

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1 representative for a survivor claimant at  
2 Savannah River. And that is the one I am  
3 talking to you about tonight, the problem  
4 there.

5 In a closeout interview with the  
6 OCAS-1, whenever you disagree with the  
7 radiation dose because you point out to them  
8 certain things that they did not capture, they  
9 inform us there is nothing they can do about  
10 it; you have to discuss that over when you get  
11 to FAB at Department of Labor.

12 So, then, when we go to the  
13 Department of Labor, and we have the FAB  
14 hearing, we say, "We want to discuss the  
15 application of the method and how come certain  
16 radiation doses were not considered,  
17 specifically incidents?"

18 They, in turn, say, "No, you're  
19 talking about the method, which is binding.  
20 So, therefore, we can't talk to you about it."  
21 And it doesn't go anywhere.

22 The federal regulations in 42 CFR

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1 82 and 81 also require in that stipulation  
2 that we can ask a review. A review is done by  
3 an independent party at NIOSH. It is not done  
4 by the Department of Labor's health physicist.

5 A rework is done by them, and they can send  
6 it back over. However, a review is separate.

7 But yet they are using the term  
8 "review" to mean that the Department of Labor  
9 gets to review it. So, therefore, that  
10 entitlement that these claimants are entitled  
11 to is a review of the radiation dose by an  
12 independent party, is being denied.

13 When we get the application and  
14 the independent review and the methods that  
15 are done by the federal regulations and  
16 statute, these methods are in the law and you  
17 are supposed to establish the guidelines.  
18 However, when they do the dose reconstruction  
19 for one year, and then, all of a sudden, it  
20 comes back the next time and the only thing  
21 that was changed was maybe employment or  
22 another cancer, they say, oh, we're going to

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1 do the 50th percentile now. So, they reduce  
2 everything back to 50 percent, where before  
3 you were at the 95th percentile.

4 And they said, "This is the  
5 current method." No, this is the application  
6 of a method. This is not a method.

7 The guidelines have not been  
8 changed. The regulations have not been  
9 changed, and the statute has not been changed.  
10 However, they, on their own, will go ahead and  
11 do this.

12 For a particular case, this is a  
13 laborer. He worked in the reactor areas, 200  
14 area, and 773A building. He had multiple  
15 myeloma. He worked from '52 to '78.

16 His dose, external dose, went from  
17 57 rems to 12 rems. His ambient dose, onsite  
18 ambient dose, went from 2.5 rems to 1.1. His  
19 medical X-ray went from .890 rems to .240.  
20 These are medical. Why would that have  
21 changed? Why was it cut in half? It didn't  
22 change anything in 2004, but in 2009 it

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1 changed.

2 Internal dose, it did go up. So,  
3 we appreciate that, 5.7 up to 16. But, still,  
4 the overall dose was cut in half.

5 In the report, on the first report  
6 that this went to NIOSH with, this gentleman  
7 had in the file where he was hurt in the  
8 manhole where there was bluish fumes. We  
9 presume that that must have been the reactor  
10 area, bluish fumes. But because there were  
11 bluish fumes and there were vapors, they would  
12 not do a dose reconstruction for that  
13 incident.

14 Upon obtaining the copy of the  
15 file that NIOSH had on this worker, he was  
16 also exposed, and in his file, to uranium to  
17 the face and plutonium to the face. Just  
18 received that newest report. They ignored  
19 those incidents as well, even though it is  
20 actually in the file.

21 So, you have a report that has,  
22 you know, you are supposed to include all

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1 incidents. It is documented. Yet, they still  
2 deny it.

3 If you are going to have -- and  
4 you won't deal with anything unless the  
5 Department of Labor sends it over to NIOSH,  
6 and this is what they are telling me, but then  
7 NIOSH refuses to send over cancers or  
8 employment and employment duties, how can that  
9 NIOSH do a dose reconstruction that is  
10 accurate?

11 And if you are going to do a  
12 Special Exposure Cohort petition and you  
13 define it after your Work Group Committee has  
14 met, your Advisory Committee has met, SC&A has  
15 done an audit, the Department of Labor was  
16 involved as far as implementing that, then  
17 once it is put in the Federal Register, please  
18 do not renegotiate that definition because you  
19 have established by law that that's a Special  
20 Exposure Cohort petition, defined it, and  
21 these workers meet that criteria as it is  
22 established in the Federal Register. To

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1       redefine it is really doing backdoor  
2       legislation.

3               The other thing is that these  
4       people deserve the Special Exposure Cohort  
5       petition because you do not have the data for  
6       them at this time. 83.14, and the preamble it  
7       says, if you do not have the current data, you  
8       are to issue a Special Exposure Cohort. If  
9       later on you find the data, the Secretary has  
10      the right, then, to withdraw that petition.  
11      But, until then, that is what you are supposed  
12      to be doing, according to the regulations. I  
13      have never seen it implemented.

14              Thank you.

15              CHAIRMAN MELIUS: Thank you.

16              Okay. Is there anybody on the  
17      telephone who would like to make public  
18      comments?

19              MS. BONSIGNORE: Yes, Dr. Melius,  
20      this is Antoinette Bonsignore.

21              CHAIRMAN MELIUS: Okay, go ahead.

22              MS. BONSIGNORE: I would just like

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1 to take a moment to thank the Advisory Board  
2 on behalf of the Linde workers and their  
3 families. They are very happy tonight that  
4 this petition has finally been approved for  
5 the time period that it was today. And I am  
6 glad that the Board, after much considered  
7 deliberation over the past few months, has  
8 finally provided these workers with the  
9 justice they have waited so long for. So,  
10 thank you.

11 CHAIRMAN MELIUS: Thank you,  
12 Antoinette.

13 Anybody else on the phone who  
14 would like to make public comments?

15 (No response.)

16 Okay. Hearing nobody, anybody  
17 else in the audience?

18 (No response.)

19 Okay. We appreciate your coming  
20 today. There are people from NIOSH that are  
21 here. If you have specific questions, they  
22 can help you. If not, thanks.

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1                   And, Board Members, we will see  
2                   you all tomorrow morning, 8:15, bright and  
3                   early, and we should have an agenda. We plan  
4                   to finish up on time by 10:30.

5                   (Whereupon, at 6:07 p.m., the  
6                   proceedings in the above-entitled matter were  
7                   adjourned for the day, to reconvene the  
8                   following day, Friday, February 25, 2011, at  
9                   8:15 a.m.)

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