

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

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES  
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SAFETY AND HEALTH

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ADVISORY BOARD ON RADIATION AND  
WORKER HEALTH

+ + + + +

WORK GROUP ON LINDE

+ + + + +

TUESDAY  
DECEMBER 7, 2010

+ + + + +

The Work Group convened via teleconference at 2:00 p.m., Genevieve S. Roessler, Chair, presiding.

PRESENT:

GENEVIEVE S. ROESSLER, Chair  
JOSIE BEACH, Member  
R. WILLIAM FIELD, Member  
MICHAEL H. GIBSON, Member  
JAMES E. LOCKEY, Member

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ALSO PRESENT:

TED KATZ, Designated Federal Official  
ISAF AL-NABULSI, DOE  
DAVE ALLEN, DCAS  
BOB ANIGSTEIN, SC&A  
LYNN ANSPAUGH, SC&A  
ANTOINETTE BONSIGNORE, Linde Petitioner  
CHRIS CRAWFORD, DCAS  
JASON DAVIS, DCAS  
MONICA HARRISON-MAPLES, ORAU  
EMILY HOWELL, HHS  
JENNY LIN, HHS  
LINDA LUX, Linde Petitioner  
JOHN MAURO, SC&A  
JAMES NETON, SC&A  
STEVE OSTROW, SC&A  
MUTTY SHARFI, ORAU

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

2 (2:03 p.m.)

3 MR. KATZ: This is the Advisory  
4 Board on Radiation and Workers Health, the  
5 Linde Working Group. My name is Ted Katz.  
6 I'm the Designated Federal Official of the  
7 Advisory Board.

8 We begin with roll call, and  
9 please address conflict of interest for all of  
10 the governmental folks that are on the line  
11 when you go through roll call, so, beginning  
12 with Board Members, with the Chair.

13 CHAIR ROESSLER: Gen Roessler,  
14 Chair of the Linde Work Group. No conflict  
15 with Linde.

16 MEMBER BEACH: Josie Beach, Board  
17 Member, no conflicts with Linde.

18 MEMBER LOCKEY: Jim Lockey, no  
19 conflict with Linde.

20 MEMBER FIELD: Bill Field, no  
21 conflict with Linde.

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1                   MEMBER GIBSON: Mike Gibson, no  
2                   conflict with Linde.

3                   MR. KATZ: And NIOSH ORAU team?

4                   DR. NETON: Yes, this is Jim Neton,  
5                   no conflict with Linde.

6                   MR. CRAWFORD: Chris Crawford, no  
7                   conflict with Linde.

8                   MR. ALLEN: Dave Allen, no conflict  
9                   with Linde.

10                  MR. SHARFI: Mutty Sharfi, ORAU  
11                  team, no conflicts.

12                  MR. KATZ: SC&A?

13                  MS. HARRISON-MAPLES: Monica  
14                  Harrison-Maples, ORAU team, no conflict.

15                  MR. DAVIS: Jason Davis, ORAU team,  
16                  no conflict.

17                  MR. KATZ: Okay, thanks. I'm sorry  
18                  I almost cut you off, Monica. SC&A team?

19                  DR. MAURO: John Mauro, SC&A, no  
20                  conflict.

21                  DR. ANIGSTEIN: Bob Anigstein,

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1 SC&A, no conflict.

2 DR. OSTROW: Steve Ostrow, SC&A, no  
3 conflict.

4 MR. ANSPAUGH: Lynn Anspaugh, SC&A,  
5 no conflict.

6 MR. KATZ: Very good. Welcome all  
7 of you. Now HHS officials or contractors to  
8 the feds, HHS or other governmental agencies.

9 MS. HOWELL: Emily Howell, HHS.

10 MS. LIN: Jenny Lin, HHS.

11 MS. AL-NABULSI: Isaf Al-Nabulsi,  
12 DOE.

13 MR. KATZ: Welcome to all of you.  
14 Members of the public, including petitioners.

15 MS. BONSIGNORE: Antoinette  
16 Bonsignore, Linde petitioner.

17 MS. LUX: Linda Lux, Linde  
18 petitioner.

19 MR. KATZ: Very good. Okay, so  
20 welcome to everyone. Just a couple notes to  
21 make before we get started. One, please

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1 everybody, everybody who is not speaking to  
2 the group, mute your phones. If you don't  
3 have a mute button, use \*6, and then to take  
4 it off mute you just hit \* and then 6 again,  
5 and that'll improve the audio quality for  
6 everybody.

7 Let's see what else I have to just  
8 say. Please don't hang up, but dial back in  
9 if you need to leave the call at any point,  
10 and I think that's it. The agenda is yours,  
11 Gen.

12 CHAIR ROESSLER: Okay. Thank you,  
13 Ted. How much time do we have?

14 MR. KATZ: You have as much time as  
15 you need.

16 CHAIR ROESSLER: And does anyone on  
17 the phone on the Work Group or with SC&A or  
18 NIOSH have a time restriction today?

19 DR. OSTROW: Gen, this is Steve  
20 Ostrow. I'd like to leave by around 4:30 or  
21 so, but John said he'll cover for me.

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1 CHAIR ROESSLER: Okay. That helps.

2 Since I sent the agenda, some other things  
3 came up in email that we might have to add to  
4 the agenda, so I just wanted to check on the  
5 time available.

6 And I hope I don't lose my voice.

7 I got called to a Society for Risk Analysis  
8 meeting in Salt Lake City this week that I  
9 hadn't expected to be at, and I've been  
10 extremely busy, so I will carry on, but I  
11 thought the first thing under background on  
12 the agenda that I should do, just to bring  
13 everybody up to the same place is just very  
14 briefly review where we were at the Board  
15 Meeting in Santa Fe when I made my  
16 presentation on November 17th.

17 As people recall, we're discussing  
18 SEC-00107, the Linde petition that covers the  
19 dates January 1, 1954, through July 31, 2006.

20 The Work Group has dealt with a number of  
21 issues, and just to review we talked about --

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1 went over thoroughly exposures in the Linde  
2 buildings with regard to radon exposures.  
3 SC&A has concurred that NIOSH can reconstruct  
4 doses for the entire period we're discussing.

5 We also discussed the air  
6 particulate contamination and the exposures  
7 there. SC&A agreed with the NIOSH approach to  
8 bounding doses.

9 We then spent quite a bit of time  
10 talking about exposures in the Linde utility  
11 tunnels with regard to what I'll call the  
12 NMMSS radon exposures. SC&A found that the  
13 NIOSH bounding estimates were acceptable. We  
14 then went to the radon exposures in the  
15 utility tunnels, and as of our meeting in  
16 Santa Fe there still were some questions about  
17 that.

18 I reviewed all of this in my  
19 presentation, and then because two of our Work  
20 Group Members still had some concerns, I asked  
21 Josie and Mike, who were the members with

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1 concerns, if they would like to make a  
2 presentation, which they did.

3 Their presentation included  
4 concerns not only with the issue we still had  
5 on the table, the radon in the tunnels, but  
6 the whole dose reconstruction approach for  
7 this Linde period, which, by the way, I think  
8 some of their concerns are rather overarching,  
9 and we'll get to that in a minute.

10 During my presentation, after  
11 Josie finished her presentation with hers and  
12 Mike's concerns, I commented that the other  
13 two Work Group Members, Jim Lockey and myself,  
14 felt that dose reconstruction could be done.  
15 So at that point, we presented all of this  
16 information to the Board for a decision.

17 The Board, I think legitimately,  
18 said they needed more time to study this. We  
19 have some new members. There wasn't time  
20 during that meeting to go over everything, so  
21 I sent documents to all the Board Members so

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1 they would have time to look at everything in  
2 more detail.

3 Then, also, we felt that at the  
4 meeting there was more information coming up  
5 on how the doses due to radon in the tunnels  
6 could be bounded, and we wanted to bring all  
7 that together, and also we wanted to invite  
8 participation by Board Member Bill Field, who  
9 is our radon expert. So, because of that, we  
10 delayed any vote at the Board Meeting, and  
11 we're having this teleconference today.

12 So, what I'd like to do -- we have  
13 had a number of things come through on email,  
14 and myself, I just got one a few minutes ago,  
15 because I'm away here at this meeting and  
16 don't have my government computer, but I did  
17 get it, and that was the last one that came  
18 through from SC&A.

19 But what I'm proposing we do is  
20 address this meeting, really, in three  
21 sections. Number one, I would like to have

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1 the comments that were brought up by the two  
2 Work Group Members at our Board Meeting  
3 addressed by NIOSH.

4 Chris has sent out a paper  
5 addressing that, and I would like him to go  
6 over that first. And that, like I said, is  
7 pretty overarching, maybe not only with regard  
8 to Linde, but there are some other things that  
9 might apply to other sites.

10 Second, then, we need to discuss  
11 radon in the tunnels so that we have some  
12 conclusion we can present to the Board at the  
13 teleconference coming up, and we do have some  
14 new information there. Antoinette has sent  
15 some things in, and so we probably will have  
16 to spend a bit of time on that.

17 Also, SC&A has done what I had  
18 asked them to do, and my thought was that,  
19 with regard to this issue, we use as much  
20 information as we have to make a decision on  
21 the radon in tunnels, so we're going to bring

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1 up everything that relates to that.

2 Then, third, and this probably  
3 won't take very much time, but this Work Group  
4 has been assigned the SEC Petition 00154 for  
5 Linde, and before we end the call, Ted, please  
6 remind me of this. We need to develop a plan  
7 for how we're going to do that.

8 So, if that approach is acceptable  
9 to Work Group Members and to everybody, then  
10 I'd like to go directly into DCAS's review of  
11 the two Work Group Member concerns, and they  
12 actually were presented in my presentation,  
13 slides 17 through 20. Everybody should have a  
14 paper NIOSH has prepared in response.

15 So I'm out of breath now. Chris,  
16 are you ready to go on next?

17 MR. CRAWFORD: Yes, Gen. In  
18 proceeding, I wanted to get a little guidance  
19 from you. I responded with a three-page  
20 document. I assume it would be kind of  
21 redundant to read the thing. I could ask if

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1       there are any specific sections that perhaps  
2       Josie and Mike have comments or questions  
3       about, or I could try to summarize in some  
4       way. What do you think makes sense?

5                       MEMBER GIBSON: I'd be happy to  
6       comment. This is Mike.

7                       CHAIR ROESSLER: That sounds good.  
8       I think we should try and keep this fairly  
9       short, because what we're going to do  
10      ultimately is bring this to the Board.

11                      MEMBER GIBSON: Yes, and it won't  
12      take me long. You know, I looked over this  
13      three-page document, and to me it's just more  
14      of the same. You know, may have been  
15      contaminated. Source term characterization  
16      might be available. Reasonable upper bound.  
17      May have been this or that. It's an ongoing  
18      process.

19                      You know, I just -- I'm of the  
20      position that this has taken long enough.  
21      It's still a fishing expedition, and I believe

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1 the claimants deserve timeliness, and I think  
2 it's been well beyond that. So, you know,  
3 that's just my thoughts in a nutshell.

4 CHAIR ROESSLER: Okay, and I guess,  
5 Mike, my -- this is Gen. I don't know if the  
6 court recorder can tell every time I jump in  
7 here, but my reaction to your comments and  
8 Josie's were that they were not just specific  
9 to Linde but had a lot of implications for the  
10 process that has already -- we've set a  
11 precedent on many of these things, and it  
12 seemed like maybe you were kind of going back  
13 on some decisions that have already been made.

14 MEMBER GIBSON: Well, that's --  
15 Gen, this is Mike, and that is true of some  
16 decisions that have been made, but, you know,  
17 again, with this process here at Linde, I just  
18 feel that, you know, it's time that I just  
19 step up and give my opinion, and I just -- I  
20 don't believe that with Linde in particular or  
21 some of the other decisions, I don't believe

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1 it's been correct.

2 CHAIR ROESSLER: I guess another  
3 concern I had about your concerns is that some  
4 of the things you brought up -- for example,  
5 there was no film badge dosimetry -- and  
6 related it to radon exposure, it seemed like  
7 your comment was really not appropriate for  
8 the particular situation.

9 I think Chris in his response  
10 responded to part of that but maybe not  
11 specifically on some of those issues. I'm not  
12 sure that we can -- oh, go ahead, Josie.

13 MEMBER BEACH: Okay. Yes, I just  
14 wanted to jump in for just a second. You  
15 know, we have a very little amount of time to  
16 get the message to the Board for voting  
17 purposes, so, yes, some of these seem  
18 overarching, but they're still real concerns  
19 that I have.

20 The other one is on the conveyor  
21 tunnel. NIOSH's comment was they are still

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1 standing by the sample taken in the radon or  
2 the conveyor tunnel when, in fact, we  
3 discussed that at length during the Board  
4 Meeting, and it was, I thought, covered fairly  
5 well that that wasn't something that was a  
6 viable option. So I guess I was surprised by  
7 that comment, and I did agree with Mike's  
8 comments.

9 CHAIR ROESSLER: As far as your  
10 last comment about the tunnels, we are going  
11 to go into a discussion shortly specifically  
12 on tunnels. At least, that's what I have  
13 planned on the agenda, so I think we can deal  
14 with that there.

15 What my plan was is to take all of  
16 the information that we have that relates to  
17 how we can estimate radon in the tunnels and  
18 see if we can pull together something that  
19 would be a method of bounding.

20 With regard to the other comments,  
21 I'm not sure what we could do -- other than,

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1 I'll try to take your comments from your  
2 slides, I'll try to take NIOSH's comments and  
3 put it together so that the Board can look at  
4 it, and ultimately we're going to come to the  
5 Board for a decision on this, anyway.

6 MR. KATZ: This is Ted. Can you  
7 hear me?

8 CHAIR ROESSLER: Yes.

9 MR. KATZ: This is Ted. By the  
10 way, I meant to remind everyone please  
11 announce yourself before each time you speak,  
12 because the court reporter surely won't  
13 recognize our voices for most of us or all of  
14 us, even.

15 Let me just explain. I think -- I  
16 think I understand, you know, sort of what  
17 you're trying to do, Gen, in terms of  
18 discussing this with Josie and Mike, and let  
19 me just say for Josie and Mike's benefit, you  
20 know, when the Board makes a decision about  
21 this petition, they're going to need to use

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1 substantive bases to support their position,  
2 and the very general sort of terms you guys  
3 have just spoken on won't suffice as a  
4 substantial basis for a decision on the  
5 petition.

6 So I'm just -- I'm just trying to  
7 indicate, I mean, I gather what Gen's trying  
8 to do is to get sort of to the nitty-gritty a  
9 bit with you both in terms of your opposition  
10 so that that kind of basis can be on the  
11 record where it can be used by the Board.  
12 That's all I wanted to add to what Gen just  
13 said.

14 MEMBER GIBSON: Ted, this is Mike.  
15 You know, when it comes to substantive  
16 issues, I guess that is my concern. You know,  
17 this whole three-page document is probably,  
18 should have, we believe -- there is nothing  
19 substantive about that. To me it's just, it's  
20 just a fishing expedition. I don't know how  
21 much specific I can get.

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1                   CHAIR ROESSLER: Well, Mike, I  
2                   guess my thing I don't understand is, do you  
3                   see this particular evaluation as being  
4                   different from some other petitions that we've  
5                   talked about before? I think your being  
6                   concerned just about the general process  
7                   really applies to so many others. I don't  
8                   know how much more specific we can get on  
9                   this.

10                  MEMBER GIBSON: Well, Gen, this is  
11                  Mike, and as I commented a few minutes ago, I  
12                  do have overarching concerns, but I think this  
13                  petition demonstrates more clearly that the  
14                  data is not there and that it's been, what,  
15                  close to two years now, and we're still just  
16                  trying to pull together things to put a  
17                  plausible upper bound on things, and I just --  
18                  I think this petition just more clearly  
19                  demonstrates that fact. To me it's just not  
20                  right.

21                  DR. MAURO: Gen, this is John

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1 Mauro.

2 CHAIR ROESSLER: Yes.

3 DR. MAURO: Just for my own  
4 clarification and also Mike, Josie, is your  
5 main concern that what we're referring to as  
6 the OTIB-70 approach for the above-grade  
7 facilities where you pick concentrations for  
8 airborne particulates that were associated  
9 with the D&D period, which sort of ended in  
10 '54, and then, assuming that as your starting  
11 point for the residual period, or, I guess,  
12 the restoration period, is your concern that  
13 that number that was assigned to the start and  
14 then using that as a flat concentration right  
15 up to, I guess, the end of the restoration  
16 activities, that that's not sufficiently  
17 bounding?

18 I think we agreed that there are  
19 no air sampling data in that time period from  
20 '54 to '61, and I know, Josie, during the full  
21 Board Meeting you had -- one of your ideas was

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1 you felt that because of that an SEC should be  
2 granted up to, I believe it was around 1961.

3 MEMBER BEACH: 1976.

4 DR. MAURO: Okay, okay, so I  
5 remember it was up to the restoration period.

6 I wasn't sure when that ended, in other  
7 words, the actual physical restoration  
8 activities that were taking place in the  
9 facility, and the SC&A's position and I  
10 believe NIOSH's is we agree. I mean, I guess  
11 I'm trying to get down to the specifics, and I  
12 think from a technical perspective the  
13 concerns you have are that the OTIB-70  
14 approach is not really adequate.

15 You're looking for real  
16 measurements to be made during that 1954 to  
17 1978 time period of airborne concentrations,  
18 and if you don't have those measurements, the  
19 OTIB-70 approach really doesn't do the trick  
20 as applied to this case, and I believe your  
21 concern was that there were some restoration

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1 activities going on during that time period,  
2 '54 to whatever the date is, that could have  
3 been kicking up some activity.

4 I think it's -- I think it was  
5 both NIOSH and SC&A looked at that from the  
6 point of view, well, is there a level of  
7 confidence that the number that was picked to  
8 start the process off in the 1950s, you know,  
9 during the D&D period where there were a  
10 substantial number of measurements which were  
11 relatively high values, because they're  
12 actually cleaning things up.

13 So we felt that using that number  
14 as a start would certainly bound the  
15 beginning of the restoration period, because  
16 by and large most of the activity was removed  
17 during the D&D period, and anything that might  
18 have been remaining, and certainly there could  
19 have been something remaining, in our opinion  
20 would certainly not generate airborne levels  
21 that approached the levels that were observed

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1 during the D&D period.

2 So we sort of took what I call the  
3 common sense approach. That is, even though  
4 we didn't have any measurements in '54, '55,  
5 '56 of the airborne dust loading, that  
6 strategy, and I referred to that as the OTIB-  
7 70 strategy, is the fundamental strategy that  
8 is being used here and is being used in a  
9 number of locations.

10 I think, in essence, it goes to  
11 the heart of our philosophy. You know, is it  
12 possible that plausible upper bounds can be  
13 built in a situation like this, assigned, and  
14 I certainly respect the idea that, no, you  
15 don't like that approach. You would only feel  
16 more confident if you actually had real  
17 measurements.

18 I think that goes to the heart of  
19 what's at play here, whether the OTIB-70  
20 approach as applied to this problem is a  
21 reasonable way to bound the problem, and I

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1 guess we really agree to disagree, at least  
2 SC&A's position.

3 My understanding of the issues as  
4 it applies to the above-grade facilities has  
5 been, you know, fairly characterized. I  
6 characterized it in a fair way. I think  
7 that's really what it comes down to, you know,  
8 differences in judgment on whether the OTIB-70  
9 approach is a reasonable way to bound a  
10 situation when you don't have data, and if you  
11 don't have data, you really can't do it.

12 MEMBER GIBSON: Well, John, this is  
13 Mike, and I guess, then, we do agree to  
14 disagree. As someone who has at least 15  
15 years of D&D experience personally, no, I  
16 don't think you can just arbitrarily pick a  
17 data point at the beginning and assume that  
18 that's the only thing that's going to happen  
19 throughout a D&D period.

20 CHAIR ROESSLER: This is Gen.  
21 John, I think you put it very well and by

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1 mentioning OTIB-70 and the approach to using a  
2 plausible upper bound. I think that's where  
3 our division goes here.

4 I think really the only way that  
5 we can handle this particular part of our  
6 discussion is to just say we're going to  
7 present this to the Board, because we will  
8 keep going back over and over the things we've  
9 already discussed and still have a  
10 disagreement.

11 So my suggestion on this  
12 particular part is, and we're not talking yet  
13 about radon in tunnels but the exposures in  
14 the buildings, is that, again, we present this  
15 to the Board, that we try and get something  
16 out ahead of time with the supporting  
17 documentation, and we're just going to have to  
18 leave it to the Board to make the decision.

19 Either everybody is off the line  
20 or --

21 MEMBER BEACH: Gen, this is Josie.

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1 I agree with that approach.

2 CHAIR ROESSLER: Jim Lockey, Bill  
3 Field, anybody else who's involved here have  
4 any thoughts on this?

5 MEMBER LOCKEY: Hi, Gen, Jim  
6 Lockey. I mean, I agree with that approach.  
7 Using the -- you know, what SC&A did was take  
8 the exposure levels that were measured during  
9 the initial time period and actually flatlined  
10 them for the future, which is really a very  
11 claimant-friendly approach, no doubt about  
12 that, approach to take.

13 In reality it's really an  
14 overestimation of exposure, and we certainly  
15 could not use that type of dose reconstruction  
16 in a scientific paper, because it just is an  
17 overestimation, but it is a very claimant-  
18 friendly approach.

19 There's no question about that,  
20 and I'll be supportive of that, because it  
21 assumes that the exposures were at those

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1 levels over the ensuing number of years, even  
2 though a lot of the process had been resolved.  
3 So as far as a claimant-friendly approach, it  
4 is a very claimant-friendly approach, and I  
5 agree we're going to have to just agree to  
6 disagree.

7 CHAIR ROESSLER: So I think that's  
8 -- this is Gen. I think that's the point  
9 we're at. Unless somebody has something else  
10 to add, I think we should move on to the next  
11 item. That item, then, is to further discuss  
12 the radon in the tunnels.

13 We had a number of different ways  
14 of coming up with a bound here. What I had  
15 done after our meeting and particularly  
16 because John Mauro had an idea that perhaps  
17 some data from -- some radon data from records  
18 with regard to various areas of the country  
19 and in particular this area be brought in to  
20 see how that might add to the other  
21 information that DCAS had already worked on.

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1                   So I thought maybe SC&A could just  
2 pull together all of the information that has  
3 been discussed for bounding of radon in  
4 tunnels, including this data from what we  
5 thought was Niagara County, but we have  
6 learned from Antoinette that Linde is not  
7 located in Niagara County, and, Antoinette,  
8 chime in here if I'm right now.

9                   MS. BONSIGNORE: That's right, Gen.  
10                  It's located in Erie County.

11                  CHAIR ROESSLER: In Erie County, so  
12 I think we need to get into this discussion.  
13 I will mention that I think we also have data  
14 on Erie County, which Bill Field has, so I  
15 don't think it's going to be a real stumbling  
16 block.

17                  DR. ANIGSTEIN: Excuse me. This is  
18 Bob Anigstein, if I can break in, perhaps. I  
19 sent emails out. North Tonawanda is, in fact,  
20 in Niagara County. I confirmed that.  
21 Tonawanda is in Erie County.

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1 MS. BONSIGNORE: Right. Well, Bob,  
2 I'm reading from an Army Corps of Engineers  
3 report on the Linde site, and it's titled  
4 "Five-Year Review Report for the Linde FUSRAP  
5 Site, Town of Tonawanda, Erie County, New  
6 York," and it's dated August of this year.

7 DR. ANIGSTEIN: Oh, okay. I stand  
8 corrected, because the NIOSH Site Profile said  
9 it was in North Tonawanda.

10 MS. BONSIGNORE: It's in --

11 DR. ANIGSTEIN: And then that memo  
12 -- email said North Tonawanda.

13 MS. BONSIGNORE: It's -- well, I'm  
14 reading from the Army Corps of Engineers  
15 report here.

16 DR. ANIGSTEIN: Okay. Okay.

17 MS. BONSIGNORE: It says Town of  
18 Tonawanda, and that's in Erie County.

19 DR. ANIGSTEIN: I agree. Tonawanda  
20 is in Erie County. It's just across the line.

21 MS. BONSIGNORE: Okay.

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1                   CHAIR ROESSLER: Okay, does NIOSH  
2                   have any response to -- I think we should  
3                   settle where the site was located before we  
4                   continue on.

5                   DR. NETON: Well, we don't really  
6                   have a response to that, other than, as Bob  
7                   Anigstein pointed out in his earlier email,  
8                   the county location is not as important as the  
9                   concept of, you know, can this approach be  
10                  used to bound the radon concentrations at the  
11                  facility.

12                  GEN ROESSLER: I think the only  
13                  thing that we were using --

14                  COURT REPORTER: I'm sorry. This  
15                  is the court reporter. Who was just speaking,  
16                  please?

17                  DR. NETON: I'm sorry. This is Jim  
18                  Neton.

19                  CHAIR ROESSLER: And I'm sorry,  
20                  too. This is Gen Roessler. I think the  
21                  reason this came up is that Bill Field, who is

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1 on the line, and you might clarify this, said  
2 that it might, following John Mauro's  
3 suggestion, it might support some of our  
4 information by looking at some typical values  
5 of radon measurements in homes, I believe they  
6 were, Bill, from specific counties in New  
7 York.

8 MEMBER FIELD: Right. Bill Field.

9 These were what's provided by the State of  
10 New York for basement concentrations, which in  
11 many ways, you know, should mirror what you  
12 find from tunnels as far as the decreased, in  
13 many cases, decreased pressures that you find  
14 within a basement tunnel in surface area to  
15 volume ratios. What it provides is the whole  
16 distribution of what you find in either county  
17 under consideration.

18 MEMBER LOCKEY: Jim Lockey. I  
19 guess I'm not clear now. Is the Linde  
20 Ceramics in North Tonawanda?

21 MS. BONSIGNORE: No, it's in

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1 Tonawanda, Tonawanda, New York.

2 MEMBER LOCKEY: So it's located in

3 --

4 MS. BONSIGNORE: There are actually  
5 -- there's -- there is the Linde Chandler  
6 Site, which is actually in the City of  
7 Buffalo, and then there is the Tonawanda site,  
8 which is in the Town of Tonawanda, which is in  
9 Erie County.

10 MEMBER LOCKEY: So the Linde plant  
11 is in Tonawanda and not North Tonawanda?

12 MS. BONSIGNORE: That's correct.

13 MEMBER LOCKEY: Okay. Thank you.

14 CHAIR ROESSLER: Okay, so I think  
15 maybe --

16 COURT REPORTER: Excuse me. Who is  
17 the one who was just speaking, please?

18 CHAIR ROESSLER: I'm sorry, Gen  
19 Roessler. I think probably the approach on  
20 this would be now that we have identified that  
21 as one of the items to talk about is to, if

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1 everyone agrees, is to go to SC&A if Steve  
2 Ostrow is willing to do this to go over your  
3 evaluation, your report that came out. I  
4 think it was yesterday.

5 I had asked SC&A to just pull  
6 together all of the information and then to  
7 come up with their evaluation as to whether  
8 radon could be bounded, whether there was a  
9 plausible upper bound for radon in the Linde  
10 tunnels. Does that sound like a good  
11 approach?

12 DR. OSTROW: This is Steve Ostrow.  
13 Bob Anigstein was the main author of the  
14 report, so I think Bob will take this. Okay,  
15 Bob?

16 DR. ANIGSTEIN: Okay. Sure.

17 MR. KATZ: This is Ted. Just  
18 before you do that, the court reporter -- I  
19 think the court reporter was asking who was --  
20 who was just speaking, Gen, not you, so it  
21 would have been Antoinette. It would have

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1       been Antoinette Bonsignore.

2                   MS. BONSIGNORE:   Yes, I'm sorry.  
3       Yes, I apologize.

4                   COURT REPORTER:   Yes, that makes  
5       sense. Thank you.

6                   MR. KATZ:   You're welcome.    Go  
7       ahead, Bob. Sorry.

8                   CHAIR ROESSLER:   Okay, so this is  
9       Gen. I think we'll look for a report from  
10      Bob, and your report, which I just got a  
11      little bit ago, but it's five pages long, has  
12      a lot of detail in it, and I think what we're  
13      really looking for is the bottom line and then  
14      a brief summary of how you got there.

15                  DR. ANIGSTEIN:   Okay. Well, let's  
16      see. If I start off with the bottom line,  
17      subsequent to the email I got from Antoinette  
18      Bonsignore, notwithstanding that until just  
19      this moment I thought it was still in North  
20      Tonawanda, but I did run -- it was very  
21      simple, because the spreadsheet was set up, so

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1 I simply reran the analysis for Erie County,  
2 and it comes out that the 95<sup>th</sup> percentile  
3 value is higher instead of -- I think I had  
4 216 -- 231, sorry, picocuries per liter, and  
5 if we use the Erie County data, it's 358, but  
6 since the town is sort of on -- I mean, the  
7 site is really close to the border of the two.

8 Then there is also data for North  
9 Tonawanda as a town, and there's data for  
10 Tonawanda we didn't run. I didn't run the  
11 Tonawanda data. It looked like it would be  
12 lower, actually, just based on that.

13 Okay, that's the result. You want  
14 me to get to the bottom line, and it's not  
15 usually the way I like to tell the story. The  
16 way -- the approach that we used was we first  
17 looked at the, what I just said, the radon  
18 levels in the basements.

19 There is a -- on the New York  
20 State Health Department website -- actually,  
21 Dr. Field called our attention to it -- there

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1 is a listing of the statistics, not the  
2 individual readings, but the statistics,  
3 statistical summary of each county and also  
4 each town within each county.

5 So there is -- I forget how many  
6 counties there are in New York State, and it  
7 gives -- the data that was most useful here is  
8 the median, because we assume it's a log  
9 normal distribution, so this is the median and  
10 the geometric standard deviation -- I'm sorry,  
11 the geometric mean, the geometric mean and the  
12 geometric standard deviation for the basement  
13 level, for the basement radon by county and by  
14 town.

15 At the same time, there was a map.

16 There was a program back in the sixties  
17 trying to locate uranium deposits throughout  
18 the United States for uranium for nuclear  
19 weapons and for nuclear power.

20 They did aerial surveys all over  
21 the entire country using the gamma radiation

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1 that actually is emitted by a daughter, a  
2 radon daughter, bismuth-214. They used that  
3 to estimate the uranium concentrations, and  
4 there is a map published. I could not locate  
5 the actual numerical data, but there is a  
6 colored map, and each county is shown in a  
7 different color, and Erie County and Niagara  
8 County being adjacent, they look to be the  
9 same color.

10 So this gives us the uranium  
11 concentration, and from the uranium  
12 concentration you can calculate the radium  
13 concentration, especially since that's what  
14 they did in the other direction. They  
15 calculated the uranium for the radium. You  
16 just reverse the process.

17 So now we have the radium  
18 concentration, the average radium  
19 concentration in the soil, and we have the  
20 distribution of the radon levels, so we can  
21 get a distribution of ratios, radon to radium.

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1                   Then we took the data that NIOSH  
2                   has put together, and they had identified -- I  
3                   believe it was 31 or 32 readings in the  
4                   vicinity of the tunnels, so I didn't second-  
5                   guess that. I just said, "Okay, these are the  
6                   readings in the vicinity of the tunnels."

7                   So this is the data on the radium  
8                   at the Linde site, so we just take the radon-  
9                   to-radium ratio in the county and multiply it  
10                  by the radium on Linde, and we get an estimate  
11                  on the radon in the Linde tunnels, but because  
12                  you have a distribution, this log normal  
13                  distribution of the radon levels, and also  
14                  what I chose to call a discrete distribution,  
15                  just a large number, these 32 readings, we did  
16                  a Monte Carlo sampling where we simply said,  
17                  okay, we just ran -- actually, for the PAS  
18                  computer you need to do it 64,000 instances.

19                  We picked at random a radon  
20                  reading, not totally at random, but it's based  
21                  on, from that distribution. It was different

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1 probability, a different reading, so it was  
2 weighted by the probability. We picked a  
3 radium reading from the Linde site based on  
4 the thickness of the core.

5 So, for instance, a lot of them  
6 are just one-foot cores. Some of them were  
7 two-foot cores. One of them was a four-foot  
8 core, so that represents a weightier data,  
9 because it's like -- we gave that a weight of  
10 one, two, and four, as those cases may be, and  
11 we took those results, and we got 64,000  
12 results. From that, the program very nicely  
13 takes the 95<sup>th</sup> percentile, and that's how we  
14 got this value that I just quoted of 231  
15 picocuries per liter.

16 Since then, I reran it for the  
17 Erie County, and I got 359 -- 358 picocuries  
18 per liter at the 95<sup>th</sup> percentile. So I could  
19 run it for the Town of Tonawanda, which  
20 actually has much lower radon levels in the  
21 houses. I forget how many measurements this

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1 is based on.

2 So that might be another approach,  
3 but in any case, the idea is this is an  
4 example of how the radon that we can quibble  
5 about which is the best data, which are the  
6 best data, but the fact is that we can -- the  
7 value can be bounded.

8 It's just a matter of, you know,  
9 exactly which number, which approach we use,  
10 but there is enough information out there that  
11 we can do this, or NIOSH can do this. We've  
12 done it once as a demonstration. NIOSH is  
13 certainly capable of doing something similar  
14 or something -- perhaps they have a similar  
15 approach, but our point was -- I'm being  
16 repetitive -- it can be done.

17 CHAIR ROESSLER: Yes, I think  
18 that's where we're at on that is this would  
19 then supplement all of the other approaches.  
20 In fact, NIOSH did some modeling in the  
21 tunnels. Dave Allen did that and I think came

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1 up with some -- with an approach to doing the  
2 bounding. There have been some other  
3 approaches on it.

4 I guess the question, then, goes  
5 back -- I'm sorry, court reporter, this is  
6 Gen. The question goes back to NIOSH. Since  
7 SC&A feels that it can be bounded, what would  
8 your approach be?

9 DR. NETON: Well, this is Jim Neton  
10 again. As you mentioned, Gen, we've gone  
11 through several iterations where we originally  
12 modeled the radon concentration, which  
13 interestingly enough corresponds to the 90<sup>th</sup>  
14 percentile of SC&A's measurements, but that's  
15 neither here nor there. And then we recognize  
16 the deficiencies in that model, so we went and  
17 obtained the only measurement we could find or  
18 series of measurements taken in one day, six  
19 measurements, I think, that were measurements  
20 in the conveyor tunnel.

21 We still believe there's relevant

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1 information in there that can be useful in  
2 bounding the exposures, but we understand the  
3 concern raised by the Working Group, and I  
4 think in particular Dr. Fields, that, you  
5 know, reliance on a single measurement on one  
6 day, you know, in a conveyor tunnel that is  
7 not exactly analogous. There are some  
8 limitations there, so we would acknowledge  
9 that.

10 We have reviewed the SC&A approach  
11 as outlined, and we would not be averse to  
12 using such an approach to bound any exposures  
13 in the tunnels. We certainly believe that it  
14 is bounding as calculated by SC&A.

15 There may be subtle refinements  
16 that could be made, I'm not sure, but the  
17 approach of using the existing data of radon  
18 in basements in the area and using some sort  
19 of ratioing technique based on the soil  
20 contamination at Linde seems to us to be a  
21 reasonable approach that could be used to

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1 bound the value.

2 CHAIR ROESSLER: Now, if you were  
3 to do this, I think that before we could bring  
4 this item to the Board, I think we'd need to  
5 have you look at the information that SC&A has  
6 put together, including, you know, the -- pick  
7 a bounding value from these tables that Bill  
8 Field has provided. I guess what I'm getting  
9 at is I think you have to say, "This is what  
10 our bounding number is and that's why," before  
11 we can present this to the Board.

12 DR. NETON: Yes, there may be some  
13 -- we have to think about this, because there  
14 are some concerns about using a single number  
15 over the entire time period. For instance, if  
16 the tunnels -- portions of tunnels that are  
17 near --

18 There's really one number that's  
19 driving this high value, that 200 picocurie or  
20 so per gram radium number, and if those  
21 portions of tunnels have been demolished or

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1 subsequently demolished or when they were  
2 demolished, you know, that calculation would  
3 not be valid for that portion of the tunnel.

4 So we'd have to be careful how we  
5 would apply the numbers, but we do agree or  
6 acknowledge that the approach outline is  
7 appropriate. I'm not sure exactly. We could  
8 do a calculation of very similar nature with  
9 some caveats that it would be, you know, valid  
10 under these situations.

11 I guess what you're saying, Gen,  
12 is even though NIOSH agrees, you're going to -  
13 - you want us to generate our own version, I  
14 guess, our own version of this approach for  
15 your review.

16 CHAIR ROESSLER: Well, I'm not  
17 quite sure where we should go from here.  
18 Maybe we should call on Bill Field. I hear  
19 some background talk that's a little  
20 confusing.

21 MEMBER FIELD: Bill Field. Gen, I

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1 think the question is not really what the  
2 number will be but whether or not it can be  
3 bounded. You know, based on those  
4 percentages, I think it's pretty reasonable  
5 bounding. It's not, I think, unreasonable to  
6 think that that would be an extreme upper  
7 bound.

8 If you look at what the highest  
9 concentration is in the whole state, I think  
10 it's on the order of 400 or so for the whole  
11 state, and that's, you know, well beyond the  
12 95<sup>th</sup> percentile, as you can imagine. It's the  
13 very top number, and it compares to ten times  
14 higher than the 40 that was measured in the  
15 other tunnels.

16 I think it's a very upper end  
17 bound, you know. If we're talking around the  
18 300 number or the 200 number, I think, you  
19 know, that's a very good number for bounding.

20 It's based on excellent information and  
21 really a wealth of information.

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1                   MEMBER LOCKEY: Bill, Jim Lockey.

2                   This one outlier, the 213, when all the other  
3                   values are relatively low, what do you make of  
4                   that value?

5                   MEMBER FIELD: Well, from my  
6                   understanding, from what I read, it looks like  
7                   that was a measurement that was sort of  
8                   selected -- or not a measurement that was  
9                   selected, but the sites were selected for  
10                  where measurements would be made, likely due  
11                  to some sort of gamma measurements on the  
12                  surface, and they were looking for areas that  
13                  were -- that were elevated.

14                  I think this is the one high  
15                  number. I think it was near the -- if my  
16                  understanding is correct, it's near the  
17                  railroad spur for the site.

18                  You have to excuse me. I have a  
19                  very bad cold, so I'm trying to get through  
20                  with my voice here, but I think it was near  
21                  the railroad spur, so when you're looking at

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1 that, it's a lot different than looking at a  
2 continuous distribution in the soil column of  
3 a certain radium concentration.

4           You're looking at a superficial  
5 deposit that really functions more as a point  
6 source, so it depends where that point -- how  
7 far that point source is away from the tunnel,  
8 and the effect over the whole column surface  
9 is going to be pretty minimized compared to a  
10 continuous column of soil over the tunnel.

11           So I think, you know, it is  
12 driving a lot of it, and I think it's  
13 extremely claimant-favorable, you know, to  
14 include that in there, because it wasn't a --  
15 it wasn't some sort of random survey of  
16 measurements above the tunnels.

17           This was a high point that was  
18 selected. It's really a biased sample, but I  
19 think, you know, looking at it from a client  
20 or a claimant-favorable perspective, I think  
21 it's very claimant-favorable.

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1                   CHAIR ROESSLER: This is Gen. I  
2                   guess in hearing the discussions using those  
3                   kind of numbers, I'd say maybe it's not a  
4                   plausible upper bound, but it's an extreme  
5                   upper bound, and it's certainly claimant-  
6                   friendly. Is that kind of where we're at?

7                   MEMBER FIELD: Yes. This is Bill  
8                   Field again. I think what you're saying, Gen,  
9                   is true. I think it's not -- it's not an  
10                  unreasonable upper bound, and I'm looking at  
11                  that from the perspective of, if you look what  
12                  the highest radon concentration is in a  
13                  basement in that state, you know, it's within  
14                  -- it's within that range.

15                  So it's not like the analysis is  
16                  coming up with something on the order of 4,000  
17                  or 5,000 picocuries. It's really in line with  
18                  what you would find was an extreme measurement  
19                  that was performed within the state.

20                  DR. MAURO: Gen, this is John  
21                  Mauro. You used the term plausible, which

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1 always sort of sparks my attention, and I did  
2 think about this also. I think this is not  
3 only an upper bound, but this is also a  
4 plausible upper bound, certainly fairly  
5 extreme, but as Dr. Field pointed out, it's  
6 within the range of what was actually  
7 measured.

8 So, I mean, depending on how you  
9 want to define plausible, I guess the typical  
10 common sense definition means it could have  
11 been this high. I guess that's the point  
12 being made.

13 This is a very high number, but it  
14 could have been that high, and therefore, in  
15 my mind, it does make it plausible. It's not  
16 outside the range of values that were actually  
17 measured in basements in that area.

18 CHAIR ROESSLER: Okay. This is Gen  
19 --

20 DR. ANIGSTEIN: Bob Anigstein. If  
21 I could make another observation about the

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1 radium measurement. You know, I'm not sure if  
2 this was made clear. It sounded a little  
3 confused.

4 That high number, the 213, was it,  
5 picocuries per gram number was not used as,  
6 you know, that that's the value. That was  
7 simply -- it was sample, so there's just the  
8 random chance, since there were 33 -- if you  
9 stacked all the cores together, there were 33  
10 feet of cores, and so this represented two  
11 feet of cores.

12 So there is a like, you know, one  
13 in 16 chance of sampling that particular  
14 number during the Monte Carlo simulations, so  
15 it's not like it was the value that was used,  
16 and, also, to put that in perspective, the  
17 earlier FUSRAP, 1976 FUSRAP survey, actually  
18 found in the vicinity of the tunnels a high  
19 reading of 813 picocuries per gram, so there  
20 were some high contamination, highly  
21 contaminated points out there.

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1 DR. NETON: Right. Bob, that 800  
2 wasn't near the tunnel sufficiently close to  
3 contribute to the radon. That's why we went  
4 and re-mapped it or redid the calculation to  
5 figure out --

6 DR. ANIGSTEIN: Yes, I agree, but  
7 it was in the general vicinity. All I'm  
8 saying is it's not -- these numbers -- that's  
9 not a -- that 213 is not a single number like  
10 one little, you know, one little dot of radon  
11 at the whole site. There were -- there were  
12 others. It just --

13 DR. NETON: Right.

14 COURT REPORTER: Excuse me. Who  
15 just made the comment to Dr. Anigstein?

16 DR. NETON: This is Jim Neton  
17 again. Sorry.

18 CHAIR ROESSLER: And this is Gen.  
19 I think we've come down to a conclusion that  
20 SC&A agrees that NIOSH can provide a plausible  
21 upper bound for the radon exposures in the

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1 tunnels, and I think that's really about all  
2 we can say.

3 DR. MAURO: That's correct, Gen.  
4 This is John Mauro. That statement is  
5 correct.

6 CHAIR ROESSLER: And I think what  
7 we've done and what SC&A has done is taken  
8 into consideration the additional information  
9 that Antoinette has provided on this, so I  
10 sort of feel we're at the point where we have  
11 resolved this whole point and that we can put  
12 together a report and go to the Board, or am I  
13 missing something?

14 DR. MAURO: This is John Mauro  
15 again. In light of the conversation we had  
16 about above grade where we agreed to disagree,  
17 I guess I'd like to pose the question now:  
18 this strategy that was discussed is a  
19 surrogate strategy. In effect, we're using  
20 data from basements with appropriate  
21 adjustments and take into specific

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1 consideration certain site-specific issues,  
2 the radium contamination, which we believe is  
3 very much in accord with Part 83, but we don't  
4 actually have measurements in the utility  
5 tunnels for radon.

6 I guess, you know, it's not unlike  
7 the other problem of above grade. I guess I'm  
8 just presuming that, you know, that Josie and  
9 Mike, you probably may have a problem with  
10 this.

11 I guess I'm pushing a little bit,  
12 but it is an approach that's not unlike the  
13 above grade, where we don't actually have  
14 measurements, in the tunnels, of radon, and  
15 we're using a way around that that, I guess,  
16 we feel scientifically seems to be prudent and  
17 claimant-favorable, but that doesn't  
18 necessarily mean that it meets your standard  
19 of what's acceptable.

20 MEMBER GIBSON: John, this is Mike.  
21 You know, I don't -- the work that NIOSH

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1 does, the work that you all do on the  
2 scientific end, I don't question the  
3 scientific basis. The problem I have is the  
4 lack of data, and then it just -- this process  
5 seems to just go on and on until it seems to  
6 me, at least, once a conclusion is drawn,  
7 people go to no end to support that decision,  
8 rather than to just say, "You know, we don't  
9 have the data."

10 CHAIR ROESSLER: And again, this is  
11 Gen. Mike, I think your concerns really apply  
12 to more than just Linde, and somehow or  
13 another I think we have to bring this up to  
14 the Board. You're saying you don't question  
15 the scientific basis. Well, this whole  
16 program was built on using the best available  
17 science.

18 The bounding, developing a  
19 plausible upper bound is an acceptable  
20 approach to saying we can do dose  
21 reconstruction, so it seems to me you're

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1 questioning the whole process.

2 MEMBER GIBSON: Well, this is Mike  
3 again. If I could just add, along with the  
4 law allowing that, Gen, it also mentions  
5 timeliness. I just want to get that on the  
6 record, but, you know, again, I said this  
7 earlier. It is an overarching issue, but just  
8 this whole process through the Linde SEC  
9 petition has just somehow brought it to light  
10 to me more.

11 CHAIR ROESSLER: Well, this is Gen.  
12 I agree with you, Mike. The timeliness  
13 factor here is really important. This has  
14 been a real disservice to these claimants to  
15 be continuing to, you know, kind of go over  
16 the same things over and over.

17 I really think that we need to  
18 bring this to the Board. They've had time to  
19 review the documents. They'll have additional  
20 documents. I think we have to lay everything  
21 on the table.

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1                   I think we have to be very up-  
2 front, though, with the fact that I think your  
3 concerns, anyway, Mike, do address a process  
4 that has been accepted, so you're really  
5 questioning a process that has been developed  
6 and followed in many other petitions.

7                   MEMBER GIBSON: Well, this is Mike  
8 again. Yes, in a way, but, you know, again, I  
9 just -- this one seems to have drawn out so  
10 long that you're right, Gen. I mean, it's  
11 just not fair to the claimants for this just  
12 to go on and on and on.

13                  CHAIR ROESSLER: Okay. Does  
14 anybody else on the Work Group have any  
15 enlightenment on how we should approach this?

16                  MEMBER LOCKEY: This is Jim Lockey.  
17 And I understand what Mike is saying. It's  
18 taken a long time, and it takes a long time,  
19 because new questions are raised, and they  
20 have to be answered and explored, and  
21 sometimes things have to be revised.

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1                   The     process     actually     causes  
2     revision on some of the things we've done in  
3     the past, so I think the process is a good  
4     process, but it does take a long time.  
5     There's no question about it.

6                   I     think     the     legislation     was  
7     probably not -- when it was written, the due  
8     diligence that has to take place in something  
9     like this wasn't well recognized at the time,  
10    but it doesn't excuse that the claimants are  
11    waiting a long time to get an answer one way  
12    or the other.

13                  In regard to this issue, though,  
14    in regard to the radon issue, what I look at  
15    is are we being -- are we being fair to the  
16    cohort that has the potential exposure in  
17    relationship to biological plausibility of the  
18    cancers that are related to radon? On the  
19    flip side of that, are we taking this  
20    scientific approach in relationship to these  
21    biological plausibility issues that could be

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1       defended?

2                       I would ask the Working Group,  
3       when you talk about radon, the cancers we're  
4       talking about are lung cancer and perhaps  
5       chest-based hematopoietic cancers or blood-  
6       borne cancers, so in these circumstances with  
7       this type of upper limit of exposure, I'm very  
8       confident that somebody who develops one of  
9       those cancers most likely is going to be  
10      compensated for that.

11                     Now, is it right that we  
12      compensate people for prostate cancer in  
13      relationship to radon, because we feel we  
14      can't, we don't have measurements? There's no  
15      biological plausibility that prostate cancer  
16      is related to radon, so that's not a correct  
17      approach to take. It raises all kinds of  
18      moral hazards in relationship to other  
19      workplace populations and who gets compensated  
20      and who doesn't, and we have to take that  
21      under advisement.

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1                   In this case, radon causes lung  
2 cancer, and it may cause blood-borne tumors,  
3 and so are we being claimant-friendly in  
4 relationship to the people who are at risk for  
5 those tumors based on the Exposure Matrix?  
6 And the answer, I think, is yes.

7                   CHAIR ROESSLER: So this is Gen.  
8 So, Jim, are you approving the strategy of  
9 going ahead and reporting to the Board that at  
10 least, I'm assuming, two of the Work Group  
11 Members feel that in all areas of the Linde,  
12 this particular Linde petition, that NIOSH has  
13 come up with an approach, SC&A has agreed with  
14 this approach, and I think I'm correct in  
15 saying that, and therefore here is our Work  
16 Group report?

17                   Two of us agree, two don't, and I  
18 think -- I am assuming that Josie, at this  
19 point, you don't, either. At that point, I  
20 think we have to bring in the fact that --  
21 bring in some comments about the reasons that

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1 the two Work Group Members do not agree.

2 MEMBER BEACH: Gen, this is Josie.

3 I do agree with some of that. I do have a  
4 question. You said that NIOSH came up with an  
5 approach for the radon, and SC&A agreed.  
6 Isn't that reversed? SC&A came up with it?

7 CHAIR ROESSLER: Yes, I think  
8 you're right.

9 MEMBER BEACH: I think that should  
10 be clear.

11 CHAIR ROESSLER: Is that right,  
12 Jim?

13 MEMBER BEACH: I think that should  
14 be made clear, also.

15 CHAIR ROESSLER: Yes. Of course, we  
16 have a number of different supporting ways of  
17 getting at these upper bounds.

18 MEMBER BEACH: Now, I do have one  
19 more question. I know this wasn't brought up  
20 previous. This is Josie again. On the time  
21 that the tunnels were constructed, does that

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1 have any effect on -- because I know there are  
2 still some questions there.

3 DR. NETON: Josie, this is Jim.

4 MEMBER BEACH: Hi, Jim.

5 DR. NETON: The construction of the  
6 tunnels really doesn't have a bearing on the  
7 decision of whether or not this time period  
8 should be in the SEC. It certainly would have  
9 a bearing on what doses would be reconstructed  
10 starting at what time, but it really wouldn't  
11 make a difference, because the tunnels were  
12 there for sure during the SEC period.

13 MEMBER BEACH: Okay.

14 DR. NETON: It would just be a  
15 matter of deciding what the start date would  
16 be.

17 MEMBER BEACH: Well, I thought  
18 there was some question on when they were  
19 built.

20 DR. NETON: There is, but that --

21 MEMBER BEACH: The later --

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1 DR. NETON: It's more relevant to  
2 the SEC petition that was being evaluated in  
3 relation to the covered period, the  
4 operational period.

5 MEMBER BEACH: Okay.

6 DR. NETON: And that's before 1954,  
7 because if they, in fact, weren't there before  
8 1954, then there would be no need to  
9 reconstruct radon.

10 MEMBER BEACH: Okay.

11 DR. NETON: However --

12 MEMBER BEACH: I wanted -- thanks.

13 MR. KATZ: Can I -- I'm sorry.  
14 This is Ted. Jim, can you just clarify for  
15 me, though, so I understand this, were the  
16 Board -- I mean, obviously, if the Board were  
17 to decide as a whole not to add a class for  
18 this petition, then there is really no issue  
19 with that, but if the Board were to add a  
20 class of some description for this, then  
21 wouldn't they need to know the dates of

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1 construction, or is that a moot issue  
2 entirely?

3 DR. NETON: No. If the Board would  
4 decide to add a class in the residual period  
5 and the only issue on the table was radon --  
6 right now there are still other issues on the  
7 table. If they were going to decide to add a  
8 class solely because of radon, then it is true  
9 the start date of the class would be in  
10 question at this point.

11 MR. KATZ: Okay. Then, that is --  
12 I'm sorry.

13 DR. NETON: But if there are other  
14 reasons like, you know, Josie's and Mike's  
15 arguments prevail with the Board and they add  
16 it for reasons unrelated to radon, it doesn't  
17 matter.

18 MR. KATZ: No, and I understand  
19 that, Jim. Thanks. This is Ted again. I  
20 just -- but then if that scenario were to come  
21 to play that they were to add a class because

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1 of radon, we would need to have at that point  
2 resolution of this issue of tunnel dates.

3 DR. NETON: That is true.

4 MR. KATZ: Okay.

5 CHAIR ROESSLER: This is Gen.  
6 Okay, Ted, do you have a recommendation as to  
7 where we would go from here?

8 MR. KATZ: Am I still on, or am I  
9 on mute? Wait a second.

10 CHAIR ROESSLER: You're on.

11 MR. KATZ: I'm on?

12 CHAIR ROESSLER: Yes.

13 MR. KATZ: I'm going to -- I think  
14 you need to, just as you did before the last  
15 Board Meeting, you need to just plan out how  
16 you'll go about putting together a  
17 recommendation for the Board.

18 I mean, I was just -- my point I  
19 was just raising there was, I think, you know,  
20 DCAS may want to do more work if they feel  
21 like there's more work that needs to be done

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1 to resolve the issue. I'm not sure that the  
2 petitioner agrees that the tunnel dates are  
3 resolved or what have you, but at the time  
4 that the Board takes it up, I imagine they'll  
5 want to understand that if they get to the  
6 point where they're trying to add a class  
7 based on radon.

8 So whatever DCAS can bring to the  
9 table at that time, any more information that  
10 might be available will be useful, but I don't  
11 think that needs to retard your process, Gen,  
12 for making, you know, reporting out on this to  
13 the Board, because that really is a -- you  
14 know, that's sort of a nitty-gritty detail  
15 that will -- could have relevance, but it's  
16 not one that the Work Group really needs to  
17 weigh in on at the end of the day, I don't  
18 think, further.

19 CHAIR ROESSLER: Okay, so -- this  
20 is Gen. It seems the approach is to prepare a  
21 Work Group report, and we'll certainly -- I'll

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1 try to draft something and involve all of the  
2 Work Group Members, including Bill Field, and  
3 then prepare it for presentation to the Board  
4 during the teleconference.

5 MR. KATZ: Right, during the  
6 teleconference. That's what I meant, that  
7 meeting, and, you know, we'll have to see what  
8 the Board wants to do at the teleconference.

9 Ordinarily, the Board has not  
10 wanted to make decisions in petitions, SEC,  
11 you know, particularly 13 decisions versus 14  
12 decisions during teleconferences, but I know,  
13 you know, they want to also be timely in terms  
14 of addressing this petition, so, you know, we  
15 can't predict that, but I think you present to  
16 the Board, and then we'll see where the Board  
17 wants to take it during the teleconference  
18 meeting.

19 CHAIR ROESSLER: Okay, and any  
20 thoughts from Work Group Members or anyone  
21 else as to how to approach this? You can send

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1 me emails. I very much appreciate it. Then I  
2 think one -- I think we really have to get  
3 through this particular petition before we can  
4 decide where to go on the 154.

5 MR. KATZ: Right. I guess the one  
6 thing I would say about 154 is, I mean, we can  
7 -- I don't think we need to do this online in  
8 the teleconference, but we could go ahead,  
9 and, depending on -- assuming -- and I don't  
10 know that -- if basic work is ready for the  
11 Work Group to start considering that, we could  
12 go ahead in the next, you know, week or two  
13 and try to schedule another Work Group  
14 meeting.

15 CHAIR ROESSLER: I think that would  
16 be a good idea, and I think what we should do  
17 is ask Work Group Members and others to -- why  
18 don't we send out a notice and try and look at  
19 good dates?

20 MR. KATZ: Well, yes, and, well, if  
21 someone would remind me on this call, I mean,

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1 what work we might have in progress, for  
2 example, remind me is SC&A -- Steve, is SC&A  
3 already reviewing the evaluation report?

4 DR. OSTROW: Hi, Ted. This is  
5 Steve Ostrow. Right now we've started looking  
6 at both the SEC 154 petition and NIOSH's  
7 Petition Evaluation Report, so we're just  
8 getting into it now.

9 MR. KATZ: Right, but you were  
10 tasked, right?

11 DR. OSTROW: Yes. Yes. You did  
12 task us to do that.

13 MR. KATZ: Okay, so do you have a  
14 sense -- I guess when we send around, try to  
15 schedule this if you're not ready to speak to  
16 this now, if you have a sense for how much  
17 time you'll need to complete your review work,  
18 that would be helpful for the scheduling.

19 DR. OSTROW: Okay. I'd rather not  
20 do it off the top of my head, but I could  
21 probably send out an email tomorrow.

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1                   MR. KATZ: Yes, that's great, just  
2                   in the next, you know, within the next week if  
3                   we could just get a general sense for you on  
4                   when you think a report would be available,  
5                   and take into consideration, you know,  
6                   whatever clearance it might need, as well.  
7                   That would be great. Thank you, Steve.

8                   DR. OSTROW: You're welcome.

9                   CHAIR ROESSLER: Okay, this is Gen.  
10                  I don't want to rush this important  
11                  discussion, but it seems we've examined  
12                  everything that we needed to and that we're  
13                  ready to come to a conclusion, but I want to  
14                  again invite Work Group Members' thoughts on  
15                  this, or SC&A or NIOSH.

16                  MEMBER FIELD: This is Bill Field.

17                  I have a quick question. I've seen in some  
18                  of the documents that radon measurements were  
19                  going to be planned to be made in the tunnel.

20                  I just want to have a  
21                  clarification if that's going to be -- if

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1 that's not the case or if measurements are  
2 planned. I know there were some discussions  
3 about whether or not the ventilation is the  
4 same as it was during previous years, as well  
5 as are the tunnels in the same condition or  
6 integrity as they were previously.

7 DR. NETON: Yes, this is Jim Neton.  
8 Bill, we are not currently pursuing the  
9 additional measurements in the tunnels. That  
10 was originally at the request of the Working  
11 Group that we initiated that effort, and it  
12 seems if we have a path forward without taking  
13 the additional measurements, at least for the  
14 moment for the SEC determination, we wouldn't  
15 be doing that.

16 There may be valid reasons down  
17 the line to obtain some type of measurement,  
18 because at the current moment there is no end  
19 date for -- there would be no end date for  
20 this class if it were to be added, and, you  
21 know, we need somewhere to anchor our number

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1 for more contemporary times, but right now  
2 we're not pursuing that at all.

3 MEMBER FIELD: Thank you, Jim.

4 CHAIR ROESSLER: Okay, anything  
5 else? Josie? Mike? Jim?

6 MEMBER LOCKEY: No, that's fine.

7 CHAIR ROESSLER: Okay, that was  
8 Lockey said he's good.

9 MEMBER BEACH: This is Josie. I'm  
10 good, too.

11 MEMBER GIBSON: This is Mike. I'm  
12 good.

13 CHAIR ROESSLER: Okay, and I'll be  
14 sure to, whatever I draft here, I'll be sure  
15 and pass it by all of you Work Group Members  
16 before we do the Board report.

17 MEMBER FIELD: Gen, this is Bill  
18 Field. I just have a quick question. What's  
19 the end date for this class, proposed class?

20 CHAIR ROESSLER: Okay, the end date  
21 on this particular period is July 31, 2006.

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1 MEMBER FIELD: Okay. Thank you.

2 MS. BONSIGNORE: Gen, this is  
3 Antoinette. I just wanted to get a  
4 clarification that you're going to be  
5 preparing a report for the Board for the  
6 January 12 teleconference. Is that correct?

7 CHAIR ROESSLER: Exactly, right.

8 MS. BONSIGNORE: Thank you.

9 CHAIR ROESSLER: All right. Thank  
10 you, Antoinette. Okay, anything else?

11 MS. LUX: This is Linda Lux. Can I  
12 ask a question?

13 CHAIR ROESSLER: Sure.

14 MS. LUX: When you talk about the  
15 numbers that you're proposing that you use for  
16 a re-dose construction, does that go for all  
17 workers, I mean, across the board, or is it  
18 just -- like, say, if you have an office  
19 worker, but he's right outside one of the main  
20 tunnel entrances, like do they still get the  
21 same percentage as anyone else, or is it still

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1 in that lower amount that office workers get?

2 Do you understand what I'm saying?

3 Like someone had said who was speaking  
4 earlier -- I'm not sure who it was. They had  
5 mentioned that they felt that anyone that had  
6 a lung cancer or a blood-borne cancer would be  
7 compensated, but I don't think that would be  
8 true unless they were a production worker. Am  
9 I hearing correctly?

10 DR. NETON: This is Jim Neton from  
11 NIOSH. The answer to that question is that  
12 still has yet to be decided. You know, once -  
13 - if it's determined that we can bound the  
14 exposures, then the percentage of time,  
15 occupancy time in the tunnels, would need to  
16 be established, and that's what we would  
17 typically call a Site Profile issue, not a  
18 Special Exposure Cohort issue, but there would  
19 have to be some determination made as to what  
20 fraction of the time one would assign, if not  
21 the whole time, in the tunnels to workers.

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1                   Typically, I would -- I would also  
2 point out that we rarely can position workers  
3 in time and space, so in many situations it's  
4 very difficult for us to segregate production  
5 versus administrative workers in situations  
6 like this, but that still has to be worked  
7 out.

8                   MS. LUX: Okay. Thank you.

9                   CHAIR ROESSLER: Okay, anything  
10 else? Ted, are we finished?

11                  MR. KATZ: I think you're ready to  
12 adjourn, Gen.

13                  CHAIR ROESSLER: Okay. Well,  
14 thanks to everyone, and we will be talking  
15 about this again on January 12, I guess, is  
16 the date.

17                  MS. BONSIGNORE: Ted, this is  
18 Antoinette. Are we -- should the information  
19 I provided about the Linde tunnels from the  
20 New York State Assembly Report, should that  
21 just be forwarded for the Board's full review

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1 at this point? I'm not quite sure. Are we  
2 not discussing that?

3 MR. KATZ: So, first of all, let me  
4 just be clear. I think we're adjourned, but  
5 let's carry on with this conversation,  
6 Antoinette. Absolutely. Any information that  
7 you want the full Board to have, Antoinette,  
8 we will provide to the whole Board.

9 MS. BONSIGNORE: Okay. I just --  
10 earlier Gen said that I was going to have an  
11 opportunity to discuss the documents that I  
12 had sent to the Working Group, but I guess  
13 that's not the case anymore.

14 CHAIR ROESSLER: Okay, this is Gen.  
15 I guess I was primarily concerned about your  
16 document that was really important about the  
17 Erie County versus Niagara County, and I  
18 thought we had discussed that. I think some  
19 other documents were responded to by NIOSH.

20 MS. BONSIGNORE: No, they have not,  
21 actually.

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1                   MR. KATZ: I'm sorry. Gen, so  
2 Antoinette is talking about -- now I  
3 understand what's going on here. Antoinette  
4 is -- let's unadjourn, if we can, for a  
5 second.

6                   MS. BONSIGNORE: Okay.

7                   MR. KATZ: But Antoinette is  
8 speaking of two documents that she sent that  
9 may have been New York State documents that  
10 she sent to all the Work Group Members. Gen,  
11 I don't know if you were able to access those  
12 where you are, but I imagine the rest of the  
13 Work Group got those two other documents.

14                  MS. BONSIGNORE: Right. That's --  
15 this is Antoinette. That's what I'm talking  
16 about. There were two documents. One was a  
17 24-page PDF document, and a second one was a  
18 202-page PDF document, and they were  
19 essentially some memos that related to the New  
20 York State Assembly's 1981 report dealing with  
21 the -- it was actually entitled "The Federal

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1 Connection," and it was a document that was  
2 released by the New York State Assembly in  
3 1981, and these were some of the FOIA  
4 documents that I had been searching for for a  
5 number of years that I came across on the  
6 DOE's OpenNet database last week.

7 MR. KATZ: Antoinette, this is Ted.

8 Do you want to just tell the Work Group what  
9 you think these documents sort of describe or  
10 inform them about what issues?

11 MS. BONSIGNORE: Sure. I'll just -  
12 - I'll just briefly just -- I think the email  
13 I sent was somewhat explanatory, but in  
14 particular, a number of the memos talk about  
15 the number of injection wells that were  
16 located at the site.

17 There were three injection wells  
18 near Plant 1, which is -- they use a term  
19 called Plant 1 in these memos, which was near  
20 the powerhouse or Building 8, near Building 8  
21 and Building 14, and then there were four

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1 other injection wells near the ceramics  
2 building.

3 So that's in these memos, and then  
4 on page 7 of the smaller PDF, the 24-page  
5 PDF, there is a memo that talks about surface  
6 water seeping into a pipe tunnel between the  
7 powerhouse, which is Building 8, and so it  
8 says there was surface water seeping into the  
9 pipe tunnel between the powerhouse, Building  
10 8, and the factory buildings, and it was  
11 having a corrosive effect on the conduit boxes  
12 and the cables.

13 So there has been this ongoing  
14 dispute between NIOSH and the petitioners  
15 about when the tunnels were constructed under  
16 these ceramics buildings, and I think this  
17 document, since it's actually a  
18 contemporaneous document, it's from 19 -- I  
19 believe it's either from 1945 or 19 -- it's  
20 actually from 1945, that shows that there was  
21 a pipe tunnel that extended from Plant 1,

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1       which was Building 8, and Building 14 at one  
2       end of the facility towards the other end of  
3       the facility, which were the factory buildings  
4       or the ceramics buildings.

5                       So these pipe tunnels were located  
6       within the utility tunnels, because the  
7       utility tunnels were used to service these  
8       buildings. They provided water, electricity,  
9       telephone services, et cetera, so this issue  
10      about the fact that these four ceramics  
11      buildings were built by the AEC but the  
12      tunnels were not extended to service those  
13      buildings, I think these memos demonstrate  
14      that that's not accurate.

15                      Secondly, some of the documents  
16      that NIOSH has presented to bolster their  
17      theory that the tunnels under the ceramics  
18      buildings were constructed in 1957 and 1961,  
19      what those documents actually show is that the  
20      tunnels -- that there were extensions made on  
21      the already existing tunnels under Buildings

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1 30 and 31.

2 So whenever they built a new  
3 building, like Building 70 or Building 57,  
4 they would extend the tunnels from the  
5 existing tunnel structure that was there under  
6 Buildings 30 and 31. So I just wanted to  
7 point that out.

8 I'm sure NIOSH will disagree with  
9 this characterization, so I'm just presenting  
10 the information. I will forward the  
11 information to the remainder of the Board  
12 Members for their review as well.

13 CHAIR ROESSLER: Antoinette, this  
14 is Gen. I think perhaps some of the Board  
15 Members have this. I think you should make  
16 sure we all have it. Also, I think it would  
17 be important to send this information to SC&A  
18 and NIOSH.

19 MS. BONSIGNORE: They all have it,  
20 Gen.

21 CHAIR ROESSLER: Okay, and then I

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1 think what we need to do is ask in particular  
2 Board Members, SC&A, and NIOSH to review the  
3 documentation to see if the information there  
4 changes the conclusions that we talked about  
5 during this meeting for this particular SEC  
6 period.

7 MS. BONSIGNORE: Okay. And just to  
8 be clear, everybody should have received that  
9 email with those two documents, the 24-page  
10 PDF and the 202-page PDF. I sent the initial  
11 one to the NIOSH team and the Working Group  
12 Members, and I believe Dr. Field, as well, and  
13 then I forwarded those documents to John and  
14 Steve.

15 CHAIR ROESSLER: Okay, so we'll all  
16 make sure that we have a chance to review  
17 that.

18 MS. BONSIGNORE: Okay. If anyone  
19 didn't receive them, just let me know.

20 MR. KATZ: This is -- this is Ted,  
21 Antoinette. You don't need to resend it for

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1 the rest of the Board. I'll take care of  
2 that.

3 MS. BONSIGNORE: Okay. Thank you.

4 MR. KATZ: I'll distribute it to  
5 the rest of the Board, you know, later today.

6 MS. BONSIGNORE: Great. Thank you  
7 very much, Ted. I appreciate it.

8 MR. CRAWFORD: This is Chris  
9 Crawford. NIOSH has received that material.  
10 I have looked it over. I have seen no  
11 evidence of any tunnels around the ceramics  
12 plant in this material. I am leaving out the  
13 witness statements for the moment.

14 The page seven that Ms. Bonsignore  
15 refers to has Tables 6 and 7, for instance,  
16 our log of Plant 1's difficulties. Plant 1 is  
17 the area around the powerhouse, the research  
18 lab, and Building 10. They had some corrosion  
19 in the pipe tunnel there.

20 MS. BONSIGNORE: Yes, but it says  
21 that there's a pipe tunnel between the

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1 powerhouse and the factory buildings.

2 MR. CRAWFORD: No, it doesn't. It  
3 doesn't say anything about the ceramics plant  
4 in that document.

5 MS. BONSIGNORE: Well, the  
6 reference to the factory buildings is the  
7 reference to the ceramics buildings.

8 MR. CRAWFORD: That is not what  
9 this document says. I invite the Board to  
10 take a look at that.

11 MS. BONSIGNORE: Well, Mr.  
12 Crawford, as I said earlier, I'm quite sure  
13 that I will not convince you of anything that  
14 I just said. I just wanted to provide the  
15 information for the Board's review.

16 MR. CRAWFORD: I'm just pointing  
17 out that we have looked at it, and we find  
18 that the evidence cited is not actually there.

19 CHAIR ROESSLER: This is Gen. So I  
20 think we would also want SC&A to look at it  
21 and Work Group Members, too, to make sure

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1 they've looked at the documents. Okay. We  
2 were unadjourned. Where do we stand now?

3 MR. KATZ: This is Ted. We can  
4 adjourn, but let me just -- on that last  
5 point, so it seems like it would be helpful if  
6 DCAS, when it makes its presentation, it's  
7 going to present on this tunnel question as  
8 part of the discussion of the Board at the  
9 teleconference in January, it seems like it  
10 would be useful for DCAS to include in its  
11 analysis this more recent documentation from  
12 Antoinette.

13 Antoinette, given -- normally,  
14 there isn't a public comment section, but in  
15 this teleconference, given that it's the  
16 petition that's being taken up, you will have  
17 an opportunity to comment. Certainly, you can  
18 provide your own analysis of these documents.

19 Gen, about SC&A reviewing this  
20 tunnel information, I mean, I don't have any  
21 objection to that. I don't think this nature

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1 of document, this is not really any kind of  
2 radiological analysis or anything. This is  
3 just a reading. If you think that's useful,  
4 that's fine.

5 Then, SC&A, consider it a tasking  
6 to try to sort through these documents the way  
7 DCAS will be to come to an understanding of  
8 what they might say about tunnel construction,  
9 since, you know, many Board Members may not  
10 have time to read through all these documents  
11 themselves and come to their own conclusion.  
12 That may be useful, and certainly, SC&A,  
13 consider yourself tasked to take that on.

14 CHAIR ROESSLER: I think it would  
15 be important to clarify that it's not a  
16 radiological concern or radiological piece of  
17 information.

18 MEMBER BEACH: Gen, this is Josie.  
19 I have a comment on the tunnels. While it's  
20 not a radiological concern, it may be an issue  
21 as we go forward with an SEC or not an SEC.

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1 Is there a way to get the permits for those  
2 tunnels when they were built, because I -- you  
3 know, I've looked at this document and  
4 reviewed those files and listened to worker  
5 comments, and I think there is a clear -- it's  
6 not clear to me when those tunnels were built,  
7 and I think it's important.

8 DR. NETON: Josie, this is Jim.  
9 We're researching that now. I mean, we have  
10 the engineering drawing numbers and such. I  
11 don't know that we can get them, but if we  
12 could, it would certainly assist in this  
13 evaluation, so we're working on that.

14 MEMBER BEACH: Okay. Thank you.

15 MR. KATZ: Okay. So, Gen, I think  
16 you can adjourn unless there is any last  
17 comment about anything or question.

18 CHAIR ROESSLER: Okay, any last  
19 comment or question?

20 MS. BONSIGNORE: This is  
21 Antoinette. I just wanted to point out that

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1 Arjun and Steve actually interviewed one of  
2 the workers at the Niagara Falls Board Meeting  
3 who spoke extensively about his experiences in  
4 the Linde tunnels.

5 So I think perhaps it might be  
6 useful to just have Steve and Arjun take a  
7 look at these particular documents, because we  
8 actually discussed these memos during that  
9 interview process, and I had actually  
10 commented to both of them that I had been  
11 unable to locate the documents to date, so I  
12 think it could be useful, because they have a  
13 particular knowledge of the worker experience  
14 with respect to the tunnels.

15 MR. KATZ: Antoinette, Steve has  
16 the lead for this petition review, so  
17 certainly SC&A will do whatever it thinks is  
18 best for how to look at these tunnel  
19 documents.

20 DR. OSTROW: This is Steve. We'll  
21 look at Antoinette's new documents. I took a

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1 quick look at them, and we'll also revisit the  
2 interview we had with the workers at Niagara  
3 Falls to see if they had anything that  
4 pertains to this.

5 MS. BONSIGNORE: Okay. Thank you.

6 CHAIR ROESSLER: Okay, then. I  
7 think we're ready to adjourn.

8 MR. KATZ: Okay, we're adjourned.  
9 Thank you, everybody.

10 (Whereupon, the foregoing matter  
11 was adjourned at 3:26 p.m.)

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