

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
CENTERS FOR DISEASE CONTROL
NATIONAL INSTITUTE FOR OCCUPATIONAL
SAFETY AND HEALTH

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ADVISORY BOARD ON RADIATION AND
WORKER HEALTH

+ + + + +

LINDE CERAMICS WORK GROUP

+ + + + +

MONDAY
OCTOBER 24, 2011

+ + + + +

The Work Group convened via teleconference at 1:00 p.m. Eastern Daylight Time, Genevieve Roessler, Chairman, presiding.

PRESENT:

GENEVIEVE S. ROESSLER, Chairman
JOSIE BEACH, Member
MICHAEL H. GIBSON, Member
JAMES E. LOCKEY, Member

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ALSO PRESENT:

TED KATZ, Designated Federal Official
ANTOINETTE BONSIGNORE, Petitioner
NICOLE BRIGGS, SC&A
CHRISTOPHER CRAWFORD, DCAS
JASON DAVIS, ORAU Team
JENNY LIN, HHS
JOHN MAURO, SC&A
JAMES NETON, DCAS
STEVEN OSTROW, SC&A
MUTTY SHARFI, ORAU Team
JOHN STIVER, SC&A

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

2 1:02 p.m.

3 MR. KATZ: This is the Advisory
4 Board on Radiation and Worker Health, Linde
5 Work Group, and please speak to conflict of
6 interest since we are dealing with a site,
7 starting with the Chair.

8 (Roll call.)

9 MR. KATZ: Okay, well, so it's
10 your agenda. The agenda by the way for people
11 on the line is also posted on the NIOSH
12 website under the Board section.

13 And Gen, it's yours. Let me just
14 remind everyone on the line to mute your
15 phones except when you are speaking. If you
16 don't have a mute button, please use *6, *6
17 again, will unmute your phone. Thank you.

18 CHAIR ROESSLER: Okay thank you,
19 Ted. I sent out a rather detailed agenda
20 which may or may not be pertinent after we

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1 hear the first item. The first item on the
2 agenda I had asked for NIOSH DCAS to present a
3 brief summary of the ER for this SEC period.

4 I understand from information I
5 got this morning that there is some new
6 information from NIOSH, so I think what we
7 ought to do is start out with Jim Neton and
8 Chris Crawford bringing us up to date on this
9 new information and then we may have to all be
10 flexible and decide where to go from there.

11 DR. NETON: Okay. Thanks, Gen,
12 this is Jim Neton. I guess I'll kick things
13 off here. If you remember our SEC Petition
14 Evaluation Report for petition number 154 was
15 issued on November 2nd, 2010, and that
16 petition was for all employees who worked in
17 any area of Linde Ceramics from November 1st,
18 1947, through December 31st, 1953.

19 Our position at the time that the
20 report was written until very recently was

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1 that we could do dose reconstructions for all
2 workers for all exposure pathways at Linde
3 during that time period.

4 At the last Working Group meeting
5 that was held at the airport Marriott, SC&A
6 brought up some issues that had heretofore not
7 been -- come to the surface before, and that
8 was -- it was related to the progeny ratios
9 that were applied to workers during the 1947-
10 53 period.

11 That is, we maintained that
12 exposure to uranium was primarily to pure
13 uranium after 1947, and that we would apply
14 these ratios that were measured either at
15 FUSRAP studies or other studies that were more
16 contemporaneous, more recent, to those values
17 to bound exposures.

18 And in taking a very, very
19 detailed look at all of the information, and
20 there is a lot of information out there on our

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1 Site Research Database and I personally went
2 through much of this on my own, it's come to
3 light that we don't believe our ability to
4 bound dose reconstructions is as good as we
5 thought, and here's why.

6 In the -- at the end of 1947, and
7 virtually most of 1948, and Chris can correct
8 me if I am a little bit off base here, but
9 during that time period, there were two
10 activities ongoing simultaneously.

11 One was the production of uranium
12 starting with purified material in Building
13 38, and that of course would only expose the
14 workers to uranium.

15 And we in fact decided that we
16 have bioassay data during that period,
17 somewhere in the order of six to seven hundred
18 bioassay samples were collected between 1947
19 and '50, and that those would indeed bound
20 worker exposures in Building 38.

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1 But what we have here also is a
2 cleanup activity going on in Building 30,
3 which you will remember was a Step-1 process
4 that started with uranium ore that contained a
5 lot of the -- much of the long-lived progeny.

6 During that cleanup activity, in
7 reviewing the records, it became clear that
8 much of the cleanup was done by a
9 subcontractor, H.K. Ferguson, and it
10 specifically called out in their work
11 activities that they were responsible for
12 their own worker monitoring program.

13 Is that right Chris?

14 MR. CRAWFORD: That is correct.

15 DR. NETON: And so it's pretty
16 clear to us at this point that the bioassay
17 samples that we have covering 1947-50 do not
18 cover cleanup activities that occurred in
19 Building 30.

20 So the end of '47 and 1948, we

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1 don't believe we can reconstruct. There's
2 also the complication that they were cleaning
3 out Building 30, which had a lot of the long-
4 lived progeny in there, and particularly maybe
5 some hold-up materials, at which point we are
6 not convinced that the raffinate ratios that
7 we were applying might necessarily be bounding
8 in all cases.

9 So through '48, we can't
10 reconstruct doses. And now let's examine '49
11 through '53. Well, it turns out that the
12 bioassay data only goes through 1950. We have
13 bioassay from 1947 to '50.

14 And I believe that production of
15 uranium stopped somewhere in the middle of
16 '49. Right. So you have this extended period
17 of time where there large amounts of
18 contamination in Building 38, uncleaned-up,
19 however we do know that they were eventually
20 cleaned because the FUSRAP surveys later on

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1 showed evidence of contamination, but not
2 contamination consistent with a facility that
3 had just been shut down and moth-balled.

4 So during that entire period we
5 really don't have any bioassay data to hang
6 our hat on. So at this point, we believe we
7 are going to move forward and revise the
8 Evaluation Report to indicate that we can't do
9 dose reconstructions between 1947 and 1953
10 because we cannot bound internal exposures to
11 uranium and progeny during that period with
12 sufficient accuracy, right.

13 So that's our position and I know
14 it's quite a reversal, but we've combed
15 through this data quite meticulously in the
16 last, you know, six weeks or so and this is
17 where we have ended up.

18 MEMBER BEACH: Jim, this is Josie.

19 Do you plan on doing that in an 83.14?

20 DR. NETON: No. I talked to our

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1 counsel about this and since the Board has not
2 taken any action on our original Evaluation
3 Report, then we can modify the Evaluation
4 Report to indicate our current position and we
5 will re-present that to the Board.

6 It is our hope to have that ready
7 in time for the December meeting in Tampa. I
8 hope we can meet that goal.

9 CHAIR ROESSLER: Jim, this is Gen.
10 This is all pretty new.

11 DR. NETON: Yes.

12 CHAIR ROESSLER: And I think
13 there's a lot that has to be evaluated to
14 understand this. For one, on your first item,
15 I'm not clear just on your brief discussion,
16 why the bioassay samples don't cover Building
17 30.

18 As I remember in your ER and in
19 SC&A's evaluation of it, you felt that those
20 bioassay samples which were from Step-3, or

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1 from workers in Building 38, were maximizing,
2 and I can't understand what it is now that is
3 different.

4 DR. NETON: Well, they are
5 maximizing for workers in Building 38 that
6 were working with purified uranium, but these
7 were ongoing D&D activities in Building 30
8 that did not -- it appears to us did not
9 include -- those bioassay samples did not
10 include workers from Building 30 in the
11 sampling.

12 I mean, we have a very detailed
13 listing of all the samples and actually the
14 job titles of all the workers, and we see no
15 evidence that these H.K. Ferguson
16 subcontractors were monitored, or were covered
17 by those bioassay samples.

18 They may indeed have been sampled
19 but we don't have the data. And also the fact
20 that the type of holdup material that might

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1 have been in there, you sort of run into a
2 situation like you had at Mallinckrodt, where
3 there was various steps in the process.

4 Now I don't think it was
5 chemically equivalent to Mallinckrodt, but at
6 some point you are going to have separated
7 precipitation of raffinate material that is in
8 disequilibrium with the uranium parent.

9 And if you have taken out -- this
10 is exactly what happened at Mallinckrodt -- if
11 you take out the uranium parent by chemical
12 separation, now you have this raffinate
13 material that people could have been D&D, you
14 know, doing a decontamination and
15 decommissioning activity on, there's really
16 almost little, very little exposure to
17 uranium.

18 So, we just don't know.

19 CHAIR ROESSLER: So if I
20 understand what you are saying correctly, what

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1 you have now, it seems, is more information on
2 the activities in Building 30 that then
3 question your method for bounding.

4 DR. NETON: Right, well we have a
5 lot more information on what was not -- what
6 our bioassay samples represent, and it's
7 pretty clear in our mind they do not represent
8 workers who were in Building 30, and you are
9 right, the additional thinking now is that
10 since they were removing major pieces of
11 equipment during this time period, one cannot
12 assume that the ratios that were measured
13 environmentally would reflect what the
14 exposures of the workers were to the long-
15 lived progeny.

16 CHAIR ROESSLER: So what I assume
17 you would be changing in your ER is to say you
18 can't do dose reconstruction based on not
19 being able to do internal doses for all
20 workers. Does that kind of sum it up?

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1 DR. NETON: Well, it could be
2 internal exposures to uranium and progeny from
3 the operations and the D&D. That's correct.
4 There would still be other exposures we would
5 reconstruct for those with nonpresumptive
6 cancers and less than 250 days in the Class.

7 And those we would leave intact as
8 we have outlined in our Site Profile.

9 DR. MAURO: Jim, this is John
10 Mauro. I have got a quick question related to
11 the ratios. It was our understanding that
12 those ratios that were obtained from
13 information collected from sumps and
14 elsewhere, much later on, you felt -- whereby
15 you had a ratio of uranium to radium and
16 thorium, and the number, if I remember, you
17 recommended was something like 0.26, of that
18 order.

19 I guess notwithstanding the
20 challenge you have of course in front of you

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1 now regarding uranium -- I understand the
2 uranium problem now -- but the ratio seems to
3 still be valid.

4 The problem now is the reverse.
5 You don't know what the uranium intake is.
6 Would that be a true statement, or do you feel
7 that even the ratios -- see we basically felt
8 that that strategy that you have adopted,
9 namely if you know the intake of uranium from
10 '47 to '53 based on bioassay data, and now we
11 understand that you really don't, but if you
12 did, and then you were concerned that along
13 with that uranium, there might have been some
14 thorium-230 and radium-226 coming in because
15 it was residual from the operations period
16 before '47, that -- and that you could take
17 advantage of the residue analyses that was
18 done much later, we found that to be a
19 reasonable strategy of a way to prorate.

20 But I am hearing that even that

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1 ratio approach, you are not comfortable with.

2 DR. NETON: John, I think I was
3 fairly comfortable with the radium-226 and the
4 thorium-230. At worst case, you could say
5 that they were in equilibrium as they came
6 into the plant.

7 What really gave me some pause was
8 the actinium-227 and protactinium-231 values.

9 DR. MAURO: Oh, okay.

10 DR. NETON: Because those, as you
11 know, those are in the U-235 decay chain.

12 DR. MAURO: Yes.

13 DR. NETON: And they were much
14 more enhanced than you know, you would expect.

15 But if you go back and look at some of the
16 reports, even the FUSRAP report talks about
17 the disequilibrium created in the
18 chemical-separation process.

19 So imagine now that you are in the
20 plant and your job is to remove all of the

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1 equipment including all the holdup material,
2 there could have been situations in the plant
3 where these filter presses or these leads
4 machines that would actually take the
5 precipitate and remove it, would have
6 essentially that purified material with very
7 little uranium that was removed.

8 So some workers could have been
9 exposed to that and we just don't know how and
10 how much.

11 DR. MAURO: Okay, so really you
12 have a two-pronged problem. One is uranium in
13 bioassay data itself is not representative of
14 Building 30, and the ratios that were measured
15 in the sumps and elsewhere during the FUSRAP
16 program, you're not too comfortable with any
17 longer because of the reasons you just
18 described.

19 So these are the two things that
20 really put you in a difficult spot.

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1 DR. NETON: Right. At the end of
2 the day, we couldn't reconcile those pieces of
3 information and convince ourselves that this
4 was sufficiently accurate.

5 DR. MAURO: Okay.

6 DR. NETON: And this will all be
7 written up in our revision to the Evaluation
8 Report for everyone to review again and to,
9 you know, give you a chance to look at the
10 logic and rationale behind it.

11 But I just thought I would start
12 with that because this is obviously a very
13 significant departure from the past.

14 CHAIR ROESSLER: It certainly is
15 and I think it makes the rest of our agenda
16 really not even pertinent at this point. We
17 had a lot of tunnel discussion and other
18 things but if what you are saying now holds
19 up, and the Board agrees, then nothing else is
20 pertinent. I guess --

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1 DR. NETON: Well, Gen, I would say
2 eventually they will become Site Profile
3 issues because again, we will have to, you
4 know, we will have to demonstrate that you
5 know, we can do the nonpresumptive cancers
6 with sufficient accuracy with those other, you
7 know, those other pieces of exposure that we
8 are saying that we can't reconstruct.

9 CHAIR ROESSLER: I had actually
10 seen those as more Site Profile issues anyway.

11 DR. NETON: Right.

12 CHAIR ROESSLER: I'm trying to
13 think now what is the most efficient way to go
14 about this. Perhaps what we should do first of
15 all is -- I have some suggestions -- but ask
16 for questions from other Work Group members or
17 comments from Steve Ostrow or anybody else who
18 is involved in this.

19 MEMBER BEACH: Gen, this is Josie.
20 I am going to bring this tunnel issue up only

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1 because I think there's a real disagreement
2 between when those tunnels were built, and I
3 realize with what workers would be covered, it
4 may not be pertinent, but there is a radon
5 issue in the tunnels, and I think it's
6 important to establish the dates of those
7 tunnels.

8 Based on what I have read with the
9 workers' testimonies, I believe those tunnels
10 were in existence. So I am just kind of
11 curious if there is going to be some closure
12 there.

13 DR. OSTROW: Josie, this is Steve
14 Ostrow. Our position, SC&A's position on the
15 tunnels is that we reviewed everything that
16 NIOSH supplied, reviewed everything that
17 Antoinette Bonsignore supplied, various
18 things, and we really can't -- we think that
19 there is no definitive answer when the tunnels
20 were built. We are not convinced when they

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1 were built.

2 MEMBER BEACH: Yes, I did read
3 both your reports and understand that.

4 DR. OSTROW: And also, Antoinette
5 sent more stuff last Friday which didn't
6 appear in any of our reports yet because it
7 just came out on Friday afternoon.

8 MEMBER BEACH: Right.

9 DR. OSTROW: And with the
10 additional information, Antoinette's argument
11 makes a compelling case in that, just by --
12 logically whenever you build a building, you
13 have to connect it to the utilities, which
14 means you have to connect it to electric,
15 steam, water, so forth, so logically you would
16 think that they would build a tunnel or extend
17 a tunnel whenever they built a new building.
18 That just makes sense.

19 However, we don't have documented
20 evidence to say that they actually built a

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1 tunnel so while logically there should be
2 tunnels, we don't have real documentation for
3 it, and the documentation we do have, doesn't
4 -- they said when tunnels existed at different
5 times, but they don't really say either
6 exactly when they were built.

7 So our conclusion is that there is
8 really insufficient hard evidence to say when
9 the tunnels were built, and that a, I guess
10 claimant-favorable, conservative assumption
11 would just be assuming the tunnels were there
12 all the time.

13 MEMBER BEACH: Absolutely.

14 DR. MAURO: Steve, can I add
15 something too that might be of interest, and
16 Josie too on this matter? Sort of a light
17 went on while we were working the problem, and
18 I said to myself, you know, if you build a
19 building, you are going to have a basement
20 for, even if you don't have tunnels, you are

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1 going to have a basement where you do have
2 your utility equipment.

3 Maybe they didn't connect up or
4 maybe they did to the other facilities through
5 these utility tunnels, but you are going to
6 have a basement.

7 Now, if you have a basement, you
8 still have the radon problem in the basement,
9 notwithstanding whether there are tunnels
10 connecting the basement.

11 So this may be an over-
12 simplification and I would be very interested
13 in hearing any comments others have but it's
14 one of these things where the light just went
15 on and we said well wait a minute, maybe the
16 tunnels aren't even relevant.

17 It's kind of crazy to say this,
18 but the most important thing is, is there a
19 basement, and did people spend a lot of time
20 in the basements maintaining equipment,

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1 whether or not there was tunnels connecting
2 the basements of various buildings, if you see
3 how I am thinking about this.

4 So I think that's another -- well
5 even if it's a question that says that well,
6 you know, what Steve said, certainly, but in
7 addition, there's still the issue that people
8 might very well have been working in basements
9 beneath these buildings where there might have
10 been radon issues.

11 DR. NETON: That is interesting,
12 John, but if we are adding the entire site
13 over all times now, you end up with all the
14 lung cancers being, well, with 250 --

15 DR. MAURO: Anyway --

16 DR. NETON: -- being compensated -
17 -

18 DR. MAURO: Anyway, that's right.

19 DR. NETON: And the amount of
20 radon of course would contribute small amounts

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1 of dose to the other organs, but it's pretty
2 small. I mean I don't know that it would ever
3 get to the point where it would move somebody
4 into the compensable range.

5 DR. MAURO: Right. Yes, I
6 realized that too when I was thinking about
7 it, I said, if you do go with, you know,
8 granting SEC status for all compensable
9 cancers, and since the radon dose is primarily
10 a respiratory-tract dose by far --

11 DR. NETON: It would have to mean
12 we wouldn't include it, I mean --

13 DR. MAURO: Yes, right. It's
14 almost a moot point.

15 DR. NETON: Yes, for anything --
16 for small levels of radon concentration, the
17 dose to the other organs is way, way small.

18 DR. MAURO: Right.

19 DR. NETON: Much less than a
20 millirem. But I would suggest that you know,

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1 we would like to move the SEC process forward
2 with our Evaluation Report, and that these
3 other issues would certainly be worth
4 considering at the Working Group level. I mean
5 we are not saying the door is closed on all
6 those, but you can take the Evaluation Report
7 and read it as it comes out, and then we can
8 you know, the Working Group can address the
9 other issues of exposure that we are
10 reconstructing and take them up at that time.

11 I don't know that we need to solve
12 all those issues in order to move this SEC
13 forward.

14 CHAIR ROESSLER: This is Gen. If
15 -- from what I am hearing, the DCAS argument
16 is pretty persuasive, I think that we as a
17 Work Group, and that certainly the Board
18 members and SC&A really need to look at the
19 details and evaluate everything.

20 I know I want to re-look at

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1 everything. But it seems like our next step
2 in order to be efficient on this should be to
3 take the new ER and evaluate that first and
4 then decide where to go.

5 I don't know Josie --

6 MEMBER BEACH: No, I agree with
7 you Gen, perfectly. Yes.

8 CHAIR ROESSLER: I don't know,
9 Jim, what you're thinking, or what anybody
10 else would recommend on this. To me it would
11 seem like it's not only the Work Group who
12 needs to look at this, but the new -- the
13 revised ER -- sorry for my voice here but --
14 also perhaps SC&A, as this is really a total -
15 - a total new approach, and I guess I'd like
16 to hear what Antoinette thinks about this
17 approach also.

18 MS. BONSIGNORE: Well, can
19 everyone hear me?

20 CHAIR ROESSLER: Yes.

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1 MS. BONSIGNORE: Okay. I am
2 always wondering if I am still on mute. I am
3 a little sort of shocked right now, so I am
4 trying to get my bearings.

5 I was -- on the issue of when to
6 proceed with the presentation of the revised
7 ER to the Board, are we still planning that to
8 be for the December 15th meeting?

9 CHAIR ROESSLER: I think what we
10 need to know now from NIOSH is when they think
11 they can get us a revision, and whether they
12 think we will have sufficient time to take a
13 look at it.

14 DR. NETON: Yes, this is Jim. We
15 believe that we can get a draft out far enough
16 in advance of the December -- I think it's 7th
17 meeting.

18 MS. BONSIGNORE: Okay, I thought
19 it was the 15th. I'm sorry.

20 DR. NETON: I think it's the 7th.

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1 I might be wrong.

2 CHAIR ROESSLER: Yes, I think so.

3 DR. NETON: But anyway, I think
4 that it's not -- it wouldn't represent that
5 big of a change in the body of the report
6 because most of the -- most of the dose
7 reconstruction methods we outlined stand.

8 It's just the pieces for the
9 internal exposure for uranium and progeny that
10 would need to be changed. So yes, I don't
11 have to write it so I can promise a lot.

12 No, I've been told it should be
13 available in advance of the meeting, no
14 problem.

15 DR. MAURO: Gen, this is John.
16 Just from past experience in working with SEC
17 reviews, I can say that in general, when NIOSH
18 recommended an SEC, I don't recall any time
19 that the Board came to SC&A to question
20 whether that SEC should be granted.

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1 The Board has come to SC&A with
2 respect to the degree to which the SEC covered
3 the appropriate time periods, and whether or
4 not the portions that NIOSH claims they can
5 reconstruct for a partial dose reconstruction.

6 But I do not recall an occasion
7 where SC&A was brought in to see whether we
8 agree that an SEC should be granted, when
9 NIOSH is recommending an SEC for a particular
10 time period and for particular exposure
11 scenarios.

12 CHAIR ROESSLER: Yes, John, I
13 think you are right on that. So I'd -- I
14 don't know -- Jim Lockey, what is your thought
15 on this?

16 MEMBER LOCKEY: Well, I am in
17 agreement. I'd like to look at all the data,
18 but I think before the -- maybe before the
19 Tampa meeting we can have a brief phone call
20 among the Working Group to finalize our

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1 position and then make a presentation in
2 Tampa.

3 CHAIR ROESSLER: Yes, I think -- I
4 think that's what my approach would be. So
5 what we need is sufficient time for the Work
6 Group to look at it, and then I would like for
7 us at least to get together for a
8 teleconference and I don't know if that has to
9 be official or how would we do that, Ted?

10 MR. KATZ: Yes, I mean that should
11 be official, and in other words it should be a
12 proper Work Group teleconference. But -- and
13 your timing is, I mean, you'd have to do it
14 the week before the Board meeting, which is,
15 you know, the very end of November, beginning
16 of December, that week.

17 So I think you check your
18 schedules now and of course that means that
19 you'd have to have a DCAS revised Evaluation
20 Report ahead of that week so that you guys can

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1 read it and be prepared, you know, because
2 it's probably going to be earlier in the week.
3 The very end of the week, like Thursday and
4 Friday, it's hard. I mean you could do it
5 then. It's just a little more difficult
6 because it leaves you very little time to
7 prepare to present at the Board meeting.

8 But if I'm hearing from Jim that
9 you -- they think they can get this report out
10 not immediately before the Board meeting but
11 before that week before the Board meeting,
12 then I think a teleconference would work. We
13 can schedule one. We could schedule one right
14 here while we are on this call.

15 CHAIR ROESSLER: My last week in
16 November, November 28th through December 2nd is
17 open, and I think that would be a good time
18 for a teleconference.

19 And I don't think we need much
20 time for the Work Group to look at this

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1 because we are pretty much up to speed on it.
2 If we could get something from DCAS the week
3 before, and at least have maybe -- I am
4 speaking for myself -- but three or four days
5 to look at it, it seems like we should be able
6 to get this taken care of.

7 MEMBER LOCKEY: How does the 2nd of
8 December look?

9 MR. KATZ: That's a Friday maybe?
10 Is that a Friday? It just leaves very little
11 time for anyone to prepare.

12 MEMBER BEACH: Yes. Ted, this is
13 Josie. I am moving that whole week so I will
14 try really hard to be on the call. It just
15 depends on when you hit it.

16 CHAIR ROESSLER: Okay, what date
17 did you say Jim, the 2nd of December?

18 MEMBER LOCKEY: But Ted said that
19 doesn't give us enough time. How about the
20 1st? Is that one day extra?

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1 MR. KATZ: Well, that's one day
2 better, I mean that's one day better for sure,
3 but --

4 MEMBER BEACH: I prefer the 30th if
5 we can do the November 30th.

6 MEMBER LOCKEY: I am down at
7 Research Triangle on the 30th Josie. I can't
8 do that --

9 MEMBER BEACH: Oh, okay, okay.
10 Well I'll just try to get on.

11 MR. KATZ: Let me just suggest
12 something, I mean if this Work Group meeting -
13 - if what you really want to do is see the
14 writing now that you have heard a brief
15 presentation of the general kind of status,
16 where things stand, if all you really want to
17 do is confirm that in writing, it is, you
18 know, what you are hearing, then I don't think
19 you need a Work Group meeting.

20 I think then you could read the

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1 report and all would be good. You could go to
2 the meeting you know, planning to say, you
3 know, the Work Group thinks this makes sense.

4 But if you really, if you need the
5 details because it will -- you think they
6 might raise questions, then let's schedule the
7 Work Group meeting and we can cancel it if
8 once you see the report you say oh, it's all
9 just as we thought.

10 But it would be good to schedule
11 something at least in case you find yourself
12 reading the report and it raising more
13 questions than answering them, as you were
14 expecting.

15 MEMBER LOCKEY: Ted, I agree, Jim
16 Lockey, I agree with that.

17 CHAIR ROESSLER: Yes, I do too.

18 MR. KATZ: So then let's go and,
19 even -- if December 1 is the only date that
20 works for Jim, why don't we just book for

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1 December 1st, and it's possible we won't need
2 it, if you read the report and it puts
3 everything to bed, then you won't need it, and
4 we'll cancel it.

5 CHAIR ROESSLER: Okay. I think
6 that sounds good.

7 MEMBER LOCKEY: What time?

8 CHAIR ROESSLER: How about 1 p.m.
9 like today?

10 MEMBER LOCKEY: One p.m. eastern
11 standard time, good.

12 CHAIR ROESSLER: Eastern standard.

13 And then let's go back to Jim and Chris.
14 When do you think we could expect the revised
15 ER?

16 DR. NETON: I'll let Chris answer
17 that since he is involved more than I am in
18 that portion.

19 MR. CRAWFORD: A lot of it depends
20 on administrative details unfortunately, that

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1 is I believe that we can come up with a draft
2 version possibly by the end of this week.

3 But it has to be vetted by ORAU,
4 by Jim, it has to be sent to probably the NGC.
5 It has to have DOE clearance.

6 DR. NETON: I think -- I would say
7 that we could have something at least a week
8 before your December 1st meeting, if not well
9 in advance of that, but that's -- that to me
10 would be sort of a worst case scenario.

11 CHAIR ROESSLER: Let's see. We
12 have Thanksgiving, I think -- is Thanksgiving
13 the 24th?

14 DR. NETON: You know, you're
15 right.

16 CHAIR ROESSLER: Yes. You know,
17 I'd say, could we aim at something --

18 MEMBER BEACH: Before.

19 CHAIR ROESSLER: If you thought
20 you could get us something the 21st to the

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1 22nd, then I think we would be in really good
2 shape.

3 DR. NETON: Okay, I think we
4 should be able to do that, because that's a
5 little less than a month from now, and --

6 MR. KATZ: This is Ted.

7 DR. NETON: I am not clear that
8 this needs to have DOE review. If it does,
9 that always adds a few days, but if you know,
10 we should be able to get it through the
11 process.

12 DR. MAURO: Jim, just a quick
13 technical question. Is there any troubling
14 problems with the external? As I recall, what
15 I'm hearing is that -- that the position that
16 you will be taking is you can't reconstruct
17 internal for lack of bioassay data for the
18 Building 30.

19 But all along, I believe, our
20 position was that when we reviewed the

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1 original work, that you were in pretty good
2 shape with external. How does this affect
3 external?

4 DR. NETON: Well, it shouldn't. I
5 think we are going to leave that portion
6 intact, and you know, say that we can do
7 external dose reconstructions with sufficient
8 accuracy.

9 DR. MAURO: And you have external
10 data that you can make a distinction between
11 the workers in Building 38 and Building 30?

12 DR. NETON: No, but I think the
13 areas where you have higher external dose
14 rates are where the borers were used.

15 DR. MAURO: Okay.

16 DR. NETON: And you can assume
17 that the person was in Building 30. That
18 would be our default position.

19 DR. MAURO: Okay.

20 CHAIR ROESSLER: But that would be

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1 a bounding --

2 DR. NETON: Yes, right, because
3 otherwise, as you know, when you have purified
4 uranium, the dose rates go way down.

5 DR. MAURO: Got you, and that
6 would be 38, where there's the purified --

7 DR. NETON: Right.

8 DR. MAURO: Those two years or so.
9 Okay. Good.

10 MS. BONSIGNORE: This is
11 Antoinette. I just have a quick question for
12 Steve and John. I had sent Ted some memos
13 from -- some Linde memos from 1945 and 1946,
14 actually last December.

15 And I resent them to Ted a few
16 days -- I think it was a few days ago -- for
17 everyone to take a look at because I was
18 wondering -- and I was wondering if the SC&A
19 team had had an opportunity to look at those
20 memos that talk about the diversion of

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1 effluents from injection wells at one end of
2 the Linde facility to another end of the Linde
3 facility?

4 DR. OSTROW: Antoinette, this is
5 Steve. We did look at it, and I was sort of
6 alluding to it at the beginning, when I was
7 talking before.

8 MS. BONSIGNORE: Right.

9 DR. OSTROW: We know that they
10 were -- the memos show that the effluent was
11 diverted, but it doesn't say specifically that
12 the effluent was diverted and they went
13 through tunnels, you know, certain --

14 MS. BONSIGNORE: Well, actually,
15 if you look -- if you look a little bit, there
16 are a couple of memos afterwards that talk
17 about the pipe tunnels.

18 DR. OSTROW: Yes.

19 MS. BONSIGNORE: And how the pipe
20 tunnels, how there was some water seepage into

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1 the ground and into the pipe tunnels and how
2 some of that water seepage was affecting the
3 conduit boxes.

4 DR. OSTROW: Yes, we read all
5 that, but it's still -- it raises questions.
6 It doesn't nail down exactly which tunnels
7 they are talking about, you know.

8 MS. BONSIGNORE: Right. I guess
9 my question was, and maybe this is just, you
10 know, this is just sort of -- just kind of
11 logically speaking, if you are talking about
12 an injection well located at Building 8, and
13 effluents being diverted to injection wells
14 over at Building 30, which are at opposite
15 ends of the facility, how would that have
16 occurred?

17 DR. OSTROW: I agree with you
18 logically. But as I said at the beginning, we
19 have a lot of circumstantial evidence that the
20 tunnels were around, but we don't really have

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1 a document that says for sure they were there.

2 That's why I sort of recommended
3 that -- well I did recommend that SC&A's
4 position is that we -- the most conservative
5 thing to do was just to assume the tunnels
6 were there. There's too much doubt about when
7 they were actually built.

8 MS. BONSIGNORE: Okay. Thank you.

9 I just wanted to clarify that because I
10 wasn't sure if you were referring to those
11 specific memos or not. Thank you.

12 DR. OSTROW: Yes, and we thank
13 you, we know you just sent them originally in
14 December, we had looked at them then, but we
15 didn't recall them when we were doing our
16 report right now. We sort of --

17 MS. BONSIGNORE: Right, yes and
18 that's what I noticed so that's why I wanted -
19 -

20 DR. OSTROW: I personally had them

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1 filed under the SEC-107, the last one we
2 looked at.

3 MS. BONSIGNORE: Yes, I thought
4 that maybe because the memo was titled SEC-107
5 and --

6 DR. OSTROW: Right, anyway, so we
7 appreciate your resending them.

8 MS. BONSIGNORE: Sure, okay.
9 Thank you Steve.

10 CHAIR ROESSLER: This is Gen
11 again. I have a question I guess of Ted. I
12 know Mike has not been -- Mike Gibson has not
13 been on the last couple of teleconferences
14 with us. Is he being kept aware of the
15 communications and the information and do we
16 expect that he might be able to join us either
17 for the Board meeting or for a Work Group
18 teleconference if --

19 MEMBER GIBSON: Gen, are you
20 talking about me?

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1 CHAIR ROESSLER: Hi, are you on
2 Mike?

3 MEMBER GIBSON: Yes, I got on
4 about five after. I just didn't get a chance
5 to cut in and --

6 CHAIR ROESSLER: Great. Okay,
7 well I just wanted to make sure that you had
8 all the information. Do you have any comments
9 or input at this point?

10 MEMBER GIBSON: No, I am satisfied
11 with the approach we are taking.

12 CHAIR ROESSLER: Okay then, it
13 seems to me unless somebody else has some
14 information or comments that we have a plan.
15 We are going to look for the revised ER by
16 November 21st or 22nd, that this will give the
17 Work Group a chance to take a look at it, and
18 then we will decide whether we need a
19 teleconference December 1st, 1 p.m. eastern
20 time.

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1 But we will plan, hopefully, to
2 make a presentation at the Board meeting in
3 December.

4 DR. MAURO: Gen, this is John. By
5 way of action items, should I assume that SC&A
6 will not be asked to review it or would you
7 like us to look at it?

8 CHAIR ROESSLER: Well, I think you
9 clarified that. I think, yes, I was -- I had
10 kind of forgotten that in a case like this
11 it's really not usually necessary.

12 DR. MAURO: Okay.

13 MR. KATZ: Gen, this is Ted. I
14 mean I think SC&A should look at it. I mean
15 they have been along for the ride and tasked
16 for reviewing all these reports on the Linde
17 all along, so I think they should review it.
18 I mean I don't think you need to produce a
19 report, John --

20 DR. MAURO: Okay, I understand.

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1 MR. KATZ: But I think -- I just
2 think -- I think you do need to be clear about
3 the basis being given and so that if the Board
4 at Tampa asks you, you know, what do you think
5 of this, this is, you know, a 180-degree turn
6 but does this make sense to you, I think you
7 need to be able to answer that question.

8 DR. MAURO: Fine. We'll read it
9 without a report and be prepared to discuss it
10 as needed.

11 MR. KATZ: Exactly, no report's
12 needed but just be prepared.

13 DR. MAURO: Very good. Fair
14 enough. Good.

15 CHAIR ROESSLER: Okay, any other
16 comments or are we ready to adjourn?

17 (No response.)

18 MR. KATZ: Okay, so I think we are
19 ready to adjourn. Thank you everyone. I will
20 send out -- we will send out a meeting notice

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1 for the first and just write in your calendars
2 that it's provisional.

3 And then we will make a decision
4 after you have all had a chance to read the
5 report. We can do that by email. You can
6 just email me and let me know if you think
7 it's a moot issue, don't need the meeting, or
8 that you want the meeting, whichever.

9 CHAIR ROESSLER: Okay. Thanks.

10 (Whereupon the above-entitled
11 matter adjourned at 1:42 p.m.)

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