

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

convenes the

WORKING GROUP MEETING

ADVISORY BOARD ON
RADIATION AND WORKER HEALTH

LINDE SITE PROFILE

The verbatim transcript of the Working
Group Meeting of the Advisory Board on Radiation and
Worker Health held in St. Louis, Missouri, on June
23, 2008.

*STEVEN RAY GREEN AND ASSOCIATES
NATIONALLY CERTIFIED COURT REPORTERS
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TRANSCRIPT LEGEND

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-- (sic) denotes an incorrect usage or pronunciation of a word which is transcribed in its original form as reported.

-- (phonetically) indicates a phonetic spelling of the word if no confirmation of the correct spelling is available.

-- "uh-huh" represents an affirmative response, and "uh-uh" represents a negative response.

-- "*" denotes a spelling based on phonetics, without reference available.

-- (inaudible)/ (unintelligible) signifies speaker failure, usually failure to use a microphone.

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P R O C E E D I N G S

(4:30 p.m.)

1

2

WELCOME AND OPENING COMMENTSDR. CHRISTINE BRANCHE, DFO

3

DR. BRANCHE: Good afternoon. Dr. Lockey, can you still hear me?

4

5

DR. LOCKEY: Yes, I do.

6

DR. BRANCHE: Great. Ray, are you ready?

7

THE COURT REPORTER: Yes.

8

DR. BRANCHE: Welcome to the Linde workgroup meeting. I'm Dr. Christine Branche and I have the distinct honor of being the Designated Federal Official for the Advisory Board on Radiation and Worker Health.

9

10

11

12

13

Dr. Roessler, are you ready?

14

DR. ROESSLER: I'm ready.

15

DR. BRANCHE: Okay, then let's start the formalities.

16

17

Would the Board members who are in the room please state your names.

18

19

DR. ROESSLER: Gen Roessler, I'm chair of the Linde workgroup.

20

21

MS. BEACH: Josie Beach.

1 **DR. BRANCHE:** Would the workgroup members who
2 are participating by phone please state your
3 names?

4 **DR. LOCKEY:** James Lockey.

5 **MR. CRAWFORD:** Chris Crawford.

6 **DR. BRANCHE:** We're just doing the -- we're
7 doing by categories, Mr. Crawford, if you could
8 please hold. I might ask you to say your name
9 at the next inter-- intro--

10 **MR. CRAWFORD:** Oh, sorry. I missed that.
11 Thanks.

12 **DR. BRANCHE:** Okay. Thank you very much. Are
13 there any other Board members?

14 (No responses)

15 We do not have a quorum of the Board so we may
16 proceed.

17 Would the NIOSH staff in the room please state
18 your names and say if you have a conflict for
19 the Linde site.

20 **MR. HINNEFELD:** Stu Hinnefeld from Cincinnati.
21 I don't have a conflict.

22 **MS. CHANG:** Chia-Chia Chang, no conflict.

23 **MS. ADAMS:** Nancy Adams, no conflict.

24 **DR. BRANCHE:** NIOSH staff participating by
25 phone, would you please state your names and

1 tell us if you have a conflict with the Linde
2 site.

3 **MR. CRAWFORD:** Chris Crawford, no conflict.

4 **DR. BRANCHE:** ORAU staff in the room, please
5 state your name -- sorry, ORAU staff
6 participating by phone, please state your names
7 and say if you have a conflict.

8 **MR. GUIDO:** This is Joe Guido, I do not have a
9 conflict.

10 **MS. HOFF:** Jennifer Hoff, no conflict.

11 **DR. BRANCHE:** SC&A staff in the room, please
12 state your names and tell us if you have a
13 conflict, please.

14 **DR. MAURO:** John Mauro, no conflict.

15 **DR. ANIGSTEIN:** Robert Anigstein, no conflict.

16 **DR. BRANCHE:** SC&A staff by phone, would you
17 please state your names and tell us if you have
18 a conflict?

19 **DR. OSTROW:** Steve Ostrow, no conflict.

20 **DR. BRANCHE:** Other federal agency staff in the
21 room, please state your names and tell us if
22 you have a conflict.

23 **MS. HOWELL:** Emily Howell, HHS, no conflict.

24 **MR. MCGOLERICK:** Robert McGolerick, HHS, no
25 conflict.

1 **DR. BRANCHE:** Federal agency staff -- excuse
2 me, other federal agency staff participating by
3 phone, would you please state your names and
4 tell us if you have a conflict.

5 (No responses)

6 Petitioners or their representatives, would you
7 please state your names and tell us if you --
8 I'm sorry, would you please state your names?

9 (No responses)

10 Workers or their representatives, would you
11 please state your names?

12 (No responses)

13 Any members of Congress or their
14 representatives, would you please state your
15 names?

16 **MS. GIVENS:** Dana Givens, Senator Clinton's
17 office.

18 **DR. BRANCHE:** Thank you, Ms. Givens. Are there
19 any others who would like to state their names
20 for the record?

21 (No responses)

22 Any other people who've joined the room?

23 **DR. NETON:** Jim Neton, NIOSH, no conflict.

24 **DR. BRANCHE:** Thank you, Dr. Neton. We
25 appreciate the participation by phone, but we

1 do ask that all phone participants mute their
2 lines. If you do not have a mute button, then
3 please use star-6. It is critical that
4 everyone participating by phone mute their
5 lines so that all phone participants can hear.
6 You might be very surprised at just how much
7 the phone line picks up.

8 Also, if you do need to leave the line
9 momentarily, please do not put us on hold. We
10 would then have the interference of whatever
11 music or sound your hold button or hold system
12 uses.

13 When you're ready to speak please unmute your
14 phones or use the star-6 so that you can
15 participate. And thank you so much for your
16 participation by phone and your adhering to the
17 telephone etiquette.

18 Dr. Roessler?

19 **INTRODUCTION BY CHAIR**

20 **DR. ROESSLER:** We have, I think, all critical
21 members here except for Mike Gibson, who's a
22 member of the workgroup. Mike is I think -- I
23 hope on the way from the airport and I asked
24 him to join by cell phone if he could, so --

25 **DR. NETON:** I came in from the airport with

1 Mike, so...

2 **DR. ROESSLER:** You did, so Mike is in the
3 hotel.

4 **DR. NETON:** He's in the hotel.

5 **DR. ROESSLER:** Okay. Then we should -- we
6 expect him here shortly, I hope.

7 We last met by teleconference on June 6. At
8 that time we discussed one remaining issue that
9 has to do with the site profile. And by the
10 way, just as a reminder, this is a site profile
11 review. That issue we have called the burlap
12 bag issue. At that meeting on June 6th SC&A
13 reported that they realized they needed to make
14 some adjustments in their evaluation --

15 **DR. BRANCHE:** Excuse me, Dr. Roessler.

16 **DR. ROESSLER:** Sure.

17 **DR. BRANCHE:** There's a person participating by
18 phone, we do need you to mute your line, star-6
19 if you do not have a mute button. Thank you so
20 much. I'm sorry, Dr. Roessler.

21 **DR. ROESSLER:** One of the adjustments that SC&A
22 said they needed to make was with regard to the
23 concentration of U-308 in the African ore.
24 They also presented some rationale for doing
25 some beta calculations. This was all included

1 in the June 10th revision to their report,
2 Linde -- the title is "Linde Radiation Exposure
3 to Ore-containing Burlap Bags." I have not
4 passed that report out. Members of the
5 workgroup have it, SC&A has it and NIOSH has
6 it, and it has not been Privacy released yet so
7 --

8 **DR. BRANCHE:** It hasn't been cleared.

9 **DR. ROESSLER:** Cleared, right -- so I don't
10 have copies here, but I think everybody has
11 that.

12 That report went to NIOSH and NIOSH has had a
13 chance to respond. Again there we have a
14 short, one-page summary of their review of the
15 SC&A response. That came out on June 19th and
16 I have a copy here. Others on the workgroup
17 and other pertinent people should have it, but
18 that one I assumed also, Christine, that I
19 couldn't pass out so I didn't make --

20 **DR. BRANCHE:** Okay, thank you.

21 **DR. ROESSLER:** -- copies of it.

22 **DR. BRANCHE:** You're right.

23 **DR. ROESSLER:** So what I thought we'd do today
24 --

25 **DR. BRANCHE:** If I could say to -- something

1 for the record so the people participating by
2 phone could understand, we got the documents
3 very close to our departure for this meeting,
4 and so it isn't that we're holding off on them,
5 it's just that they have to be Privacy Act
6 cleared. And once that happens, we can post
7 them on -- in the appropriate places, so I'm
8 sorry, Dr. Roessler.

9 **DR. ROESSLER:** I thought the procedure we'd
10 take today is to have Steve Ostrow, who's on
11 the phone, briefly go over his revision to the
12 -- in the June 10th report -- very briefly,
13 Steve. Then we'll ask NIOSH to respond. We do
14 have Chris Crawford and Joe Guido on the phone
15 and we have Jim Neton and Stu Hinnefeld here.
16 Then I'm hoping that on this one -- less than
17 one full issue, we can come to a resolution
18 today so that we can complete the site profile
19 review and get on to the next step. So that's
20 -- that's my goal.

21 **REVISION REPORT SUMMARY**

22 So the first thing then, I'd like to ask --
23 Steve, would you do a very brief summary of
24 your revision report?

25 **DR. ANIGSTEIN:** I was pointing at -- Steve, is

1 -- if it's okay by you -- this is Bob, I -- I
2 took the lead on this at this point so perhaps
3 I -- I might be in a better position to do
4 that.

5 **DR. ROESSLER:** If that's okay with Steve, it's
6 okay with me.

7 **DR. OSTROW:** That's okay with me, Bob, sure.

8 **DR. ROESSLER:** Okay.

9 **DR. OSTROW:** Go right ahead.

10 **DR. ANIGSTEIN:** Yeah. Basically, we changed
11 the -- we -- we redid the MCNP calculations
12 using a lower -- what we used was actually the
13 base -- not the TBD, but the report -- the
14 December 1981 report prepared -- I referred to
15 it as Wallow* because he was the author. It's
16 the Aerospace -- at that time he was working
17 for the Aerospace Corporation. And what
18 appeared to be a reasonable amount to use was -
19 - there was a table in that report which refers
20 to the assumed concentration of African ore
21 that they used in their analysis, and they said
22 that for 1944, the first nine months of 1944,
23 African L-30 ore was between eight and 12, but
24 they assumed for the purposes of their
25 assessment 10.8 percent. So that seemed like a

1 reasonable upper bound of the concentration to
2 use for a chronic exposure. I mean it may have
3 -- obviously some -- some of the ores were --
4 were more, some of them were less, but this is
5 the highest for a continuous period. And then
6 we had to redo the analysis because then we
7 also used -- got the actual concentrations of
8 various other elements in the ore, so you need
9 -- you need that. In other words, the ore was
10 -- before we just assumed it was U-308 and 70
11 percent, and the balance was silicon dioxide,
12 and now we had a more realistic. So I would
13 say -- these are like techni-- min-- minor
14 tweaks to make the analysis more realistic.
15 That was the primary change. And then we
16 simply, in the report, took note of these
17 changes of these amendments.

18 The results are reasonably consistent with the
19 Skinner analysis -- not quite, but we feel --
20 we saw -- there is the NIOSH response. We
21 still feel that it would make more sense to use
22 the calculated results, because the calculated
23 results use an average concentration over a
24 period of almost a year, whereas the
25 measurement was just one measurement, based on

1 one particular batch of ore.

2 **DR. MAURO:** Do we know the difference between
3 the two annual doses that are equivalent -- in
4 other words, in the end, the difference between
5 the measured dose rate and the --

6 **DR. ANIGSTEIN:** It's -- it's not very large.
7 It's on the order of -- I forget now, 25 -- on
8 the order of -- it's within about 20, 30, 40
9 percent; I don't have the number --

10 **DR. ROESSLER:** Do you have the actual --

11 **DR. ANIGSTEIN:** -- at my fingertips.

12 **DR. ROESSLER:** -- dose number? What sort of
13 dose level are we talking about?

14 **DR. ANIGSTEIN:** We're talking about dose rates.
15 Okay, what we come up with, based on this now,
16 is a -- would be an annual exposure -- if
17 someone was standing at one foot from the ore -
18 - or shall we say -- can't really say exposure
19 to -- because exposure's to the air, not to a
20 person, so at a point one foot from the ore for
21 one hour a day, 250 days a year, by coincidence
22 we get 1.85 R per year.

23 **DR. OSTROW:** Excuse me, Bob, this is Steve.

24 I'm just looking at the numbers now. As you
25 said, our calculation is 1.85 R per year. The

1 Skinner measurements are 1.50 R per year, so
2 they're very close at one foot.

3 **DR. ANIGSTEIN:** Yes. Okay, thank you.

4 **DR. OSTROW:** It's 1.85 versus 1.5.

5 **DR. ANIGSTEIN:** But again, the -- you know,
6 obviously this is not what -- you know, a point
7 -- a point of contention.

8 **DR. OSTROW:** Yes.

9 **DR. ANIGSTEIN:** The main point we have is also
10 -- we still maintain that if, as one worker
11 reported, someone was actually sitting on those
12 bags during their lunch hour -- say the empty
13 bags, because even there we did both the full
14 bags and the -- the empty, quote/unquote, so
15 these -- the empty bags had been shaken and
16 when the -- by shaking them, they left only
17 half a pound of ore in each bag, according to
18 this Olevitch report, and then they were
19 washed. We don't know how much came out in the
20 washing. The goal was to get 70 percent out.
21 They said it was -- up to 70 percent was
22 feasible. That was in the report that was
23 written about the feasibility of the washing,
24 so we just made the assumption that it's 50
25 percent. You know, that seemed reasonable. If

1 it was less than 50 percent -- much less than
2 50 percent, why bother washing them, but it --
3 it's just an educated guess.

4 And so with that, we end up at one foot --
5 sitting on the bags now, we get a rate that is
6 about one and a half times, almost twice as
7 much, as at one foot -- as at one foot from the
8 -- from the full bags. And we think that this
9 would be a reasonable thing to use.

10 In addition, because if someone is sitting on
11 the bags the lower organs are very close to the
12 bags, and at one foot is not longer a claimant-
13 favorable assumption because, as everyone I'm
14 sure realizes, the purpose of calculating an
15 exposure rate at a point in air is there is
16 then the -- what is it, OCAS OG-1 -- the dose
17 conversion factors, which use the exposure rate
18 to give the dose to each different organ. But
19 it -- you know, since here the -- the exposure
20 rate would change with distance, you've got to
21 use it where the organ is. So -- and of course
22 if it's the full bag -- if they really were
23 sitting on full bags, then it's much higher.
24 Then we have a rate -- in other words, we have
25 the hourly rate is 12.9 MR per hour contact

1 with the empty bags and 40.9 --

2 **DR. ROESSLER:** MR or --

3 **DR. ANIGSTEIN:** -- contact with the full bags.

4 **DR. ROESSLER:** Earlier you said --

5 **DR. ANIGSTEIN:** Pardon?

6 **DR. ROESSLER:** Earlier you said 1.85 R per

7 hour, now you just said --

8 **DR. ANIGSTEIN:** Per year.

9 **DR. ROESSLER:** -- MR -- per year.

10 **DR. ANIGSTEIN:** Per year.

11 **DR. ROESSLER:** Okay, now we're at R. Okay.

12 **DR. ANIGSTEIN:** Right. In the report we did

13 not put in per year, we just -- we did not make

14 -- we didn't want to go further and make the

15 assumption about how many -- you know, we le--

16 we leave that to NIOSH, but it was just as an

17 illustration we said that if we assume 250

18 hours a year, it happens to come out to the --

19 **DR. ROESSLER:** I see.

20 **DR. ANIGSTEIN:** -- 1.85 R per year.

21 **DR. NETON:** Bob, that R per hour is beta/gamma

22 combined?

23 **DR. ANIGSTEIN:** No, the R per hour is purely --

24 that's a -- by definition, R can -- is only a

25 measure of photons.

1 **UNIDENTIFIED:** No, it's not.

2 **DR. ANIGSTEIN:** Roentgen -- only photons
3 contribute to Roentgen.

4 **UNIDENTIFIED:** Since when?

5 **DR. MAURO:** Roentgens, by definition --

6 **DR. NETON:** They're called rad --

7 **DR. ANIGSTEIN:** By definition.

8 **DR. NETON:** Oh, yeah, but I mean --

9 **DR. ANIGSTEIN:** Ionization in air.

10 **DR. NETON:** -- a lot of times you combine
11 beta/gamma into one unit.

12 **DR. ANIGSTEIN:** Yeah, but then it would --

13 **DR. NETON:** So this is purely gamma.

14 **DR. ANIGSTEIN:** -- then it would be -- okay,
15 that's a -- that's a thing -- no, no, we --
16 remember, we did an MCNP calculation. We
17 didn't have a meter there to worry about the
18 shielding. The -- the betas are separate.
19 The betas actually are less than the -- than
20 the -- in this instance, now that we've used
21 the less-rich -- less-rich ore, the -- there
22 was enough self-absorption of the betas by the
23 non-radioactive elements that the betas come
24 out to less.

25 **DR. ROESSLER:** Less --

1 **DR. ANIGSTEIN:** The betas look --

2 **DR. ROESSLER:** Less than -- less than what?

3 **DR. ANIGSTEIN:** Less than the gammas. Now as
4 the beta -- again, you're comparing apples and
5 oranges. The -- the numerical value of the
6 beta dose rate in millirads per hour to the
7 skin is less than the numerical value of the
8 exposure rate in MR per hour -- milliroentgens
9 per hour. So again, the -- they're two
10 different units. Of course the conversion is
11 on the order of 70, 80 -- about 80 percent, so
12 it's not a huge difference in the conversion.
13 The other point that we have in response to the
14 -- response to the NIOSH response is -- the
15 NIOSH response was that it's already accounted
16 for because, by coincidence, the 1.85 R per
17 year has been assigned in -- for that period of
18 time, based on film badge data, to workers
19 doing removal of contaminated equipment. And
20 so 1 -- 1.85 R per year was assigned as the
21 median, and then there was a GSD that would
22 result in a 95th percentile that was ten times
23 that.

24 And our response to that is that that
25 assignment was done independently of this

1 burlap bag issue. In other words, NIOSH was
2 not -- not -- NIOSH and SC&A were not aware of
3 the burlap bag issue at that time, so it does
4 not seem to us to be reasonable to say it's
5 already accounted for when in fact this is a
6 new exposure pathway. And if it was, you know,
7 ten percent of the other one, we would say, you
8 know, it's a minor perturbation. It can't
9 really matter. But since it's numerically
10 equal to that, so now -- during the lunch hour
11 people are getting a dose -- exposure rate that
12 is now equal to the exposure rate that was
13 assigned them by NIOSH for the entire work day,
14 it would seem that if this exposure pathway of
15 this scenario is believable, is credible, then
16 the two should be added together.

17 **DR. OSTROW:** Bob, plus -- this -- this is
18 Steve. Also the fact that you mentioned
19 before, that the one-foot dose, if someone is
20 actually sitting on the bag, if that's
21 credible, then you have to take that into
22 account also. That's higher.

23 **DR. ANIGSTEIN:** Yes. This is for standing next
24 to the bag. Also for someone sitting on the
25 bag and the upper organs, the organs in the

1 chest and higher that would be like one foot or
2 more from the -- you know, from the bags.

3 **DR. ROESSLER:** So this -- adding the two
4 together then only applies to the organs that
5 are close to the --

6 **DR. ANIGSTEIN:** No, the adding the --

7 **DR. ROESSLER:** -- you know, like prosta--

8 **DR. ANIGSTEIN:** -- two together would be -- the
9 1.85 R per year would be at one foot, so that
10 would basically encompass the entire body of
11 the person --

12 **DR. ROESSLER:** But then the --

13 **DR. ANIGSTEIN:** -- unless you wanted to do an
14 organ-by-organ and say well, the -- you know,
15 the thyroid is higher, the leg bones are lower.
16 But I mean --

17 **DR. ROESSLER:** Yeah, but the beta dose, explain
18 now the beta dose.

19 **DR. ANIGSTEIN:** Now we're talking about the --
20 now I'm just talking about the gamma dose. The
21 beta dose is about a -- seems to be about a
22 third of the gamma exposure rate.

23 **MR. GUIDO:** This is Joe Guido, I just wanted to
24 make a comment, something you just said. For
25 the -- the organs in the upper chest area, if

1 you're sitting on these bags, wouldn't the
2 person's buttocks shield them from the
3 radiation more than the air? In other words,
4 would it -- is it really -- are we really
5 talking about the dose to let's say the lungs
6 being the same as -- you know, through the seat
7 of the pants being the same as one foot through
8 air?

9 **DR. ANIGSTEIN:** Well, in answer --

10 **MR. GUIDO:** Or had you considered that? I mean
11 it's in...

12 **DR. ANIGSTEIN:** The -- the response to that
13 would be that if NIOSH is using the dose
14 conver-- exposure rate in dose conversion
15 factors, that's a simplified math -- method.
16 If you were actually to do an organ dose, or if
17 I was assigned to do that, I would run MCNP and
18 use that actual configuration and use the
19 anthropomorphic phantom and calculate the
20 actual dose to the organ. But that's not how
21 NIOSH typically does dose reconstruction
22 because that would be a very tedious way of
23 doing it for each and every individual.

24 **DR. MAURO:** May-- let me -- what I'm -- what I
25 see here is that we really don't have any

1 disagreement regarding exposure rates or dose
2 rates as a function of distance and -- and/or
3 given the scenario, if you would. The real --
4 the real question is do we -- does NIOSH feel
5 that a lunchtime scenario should be something
6 that should be factored into this particular
7 dose reconstruction, do we believe it's -- that
8 -- 'cause really, the -- the information we
9 have is based on an interview. The interview
10 says well, yeah, people might have been one
11 foot away from either these full or empty bags,
12 and this also -- and -- and the interview said
13 it sounds like that some people may very well
14 have sat on some empty bags. So what these
15 become are new scenarios that were not
16 explicitly embraced in the exposure matrix. If
17 in fact it's determined that yes, it's
18 plausible and maybe appropriate to include
19 those scenarios, then it becomes a matter --
20 matter of well, how do we do that. Right now
21 we do have, I gue-- sounds like some film badge
22 data that give you a distribution and that is
23 the basis for your exposure matrix, and tha--
24 and that was what was being embraced by NIOSH
25 from the beginning. Now we're saying well, now

1 here's another -- and whatever those exposures
2 from the -- are from their work day, they --
3 they're doing their work day and you -- so I
4 guess we not -- we're not disputing any of
5 that. We're saying is it appropriate to add to
6 that dose this additional dose, which is -- and
7 what -- from what I'm hearing, about comparable
8 to dose -- in other words, the dose -- if you
9 were to add in this other scenario, this one
10 hour per day up close and personal to the bags,
11 is it appropriate to consider that to be added
12 to the annual dose that's assoc-- that you
13 derive from the film badge data, or does it --
14 the film badge data already, for all intents
15 and purposes, take that into consideration and
16 the way in which you use the film badge data
17 already take that into consideration.

18 **DR. ANIGSTEIN:** John, it can't -- it can't take
19 it into consideration when the film badge was
20 based on an entirely different situation. On a
21 1940 -- film badge goes to 1948 when they were
22 dismantling --

23 **DR. MAURO:** Okay.

24 **DR. ANIGSTEIN:** -- moving some contaminated
25 equipment and NIOSH has used that as a

1 surrogate --

2 **DR. MAURO:** Okay.

3 **DR. ANIGSTEIN:** -- now for later years.

4 **DR. MAURO:** Okay.

5 **DR. ANIGSTEIN:** So those were --

6 **DR. MAURO:** Okay, so -- so you're saying that
7 it -- that particular -- those numbers really
8 don't apply to this other scenario. Okay, no,
9 I can understand that. That helps. So I -- I
10 -- what I'm hearing, and -- and thanks for that
11 correction, Bob -- is do we want -- does --
12 does it -- is it reasonable to -- to add this
13 in. And Steve, am I -- am I characterizing the
14 -- the -- really the fundamental question? I
15 don't think there's too much debate about what
16 this dose rate is. I think -- you know,
17 whether it's the beta, the gamma, one foot or
18 contact, if you were to assume that this was
19 the scenario, that would be the dose rate or
20 exposure rate, and -- and as far as time
21 period, whether you assume one hour per day or
22 whatever, it's really a matter of wha-- what do
23 we do with that information now. Do -- in
24 terms of the exposure matrix, and what's the --
25 what's the reasonable thing to do. I think the

1 -- correct me again, the reason we've -- we're
2 been looking at this is because I believe one
3 of the workers has some information that seemed
4 to indicate that this might be a plausible
5 scenario, and I guess right now we evaluated --
6 all right, if that's a plausible scenario --
7 what the doses would be. But now we're
8 confronted with the question of well, do we
9 consider this to be a plausible scenario and,
10 if so, what do we do about it.

11 **DR. NETON:** I should probably let Chris
12 Crawford speak, or Joe Guido, but since I'm in
13 the room -- it seems to me to be one of these
14 weight of the evidence type things. We have
15 one worker who asserts that he saw these bags.
16 And then to take that to what seems to us to be
17 an extreme to say that okay -- and there's no
18 disagreement on the dose rates coming off the
19 bags. I think you guys have done another good
20 job verifying that we're in the right ball park
21 -- after some mid-course corrections, but --

22 **DR. MAURO:** Yes.

23 **DR. NETON:** -- but then to take that scenario,
24 one person viewed these bags, and then to take
25 that and assume that -- to double the dose you

1 have to assume that every worker we're going to
2 assign a dose to now sat on those bags one hour
3 per day for 200 days per year on bags that may
4 or may not have been contaminated in the first
5 place. Remember, the worker never asserted
6 that these bags were actually contaminated and
7 had uranium in them. We have very credible
8 evidence -- and Chris Crawford can elucidate on
9 this, possibly -- that there was no uranium
10 there. They did a plant survey, they cleared
11 out the area. The uranium was all removed from
12 the facility. So you know, you've got two
13 extremes here. You have -- we're saying we're
14 not sure this -- if it really happened, and
15 then the SC&A approach is to say well, if it
16 did happen -- and it seems like you believe it
17 happened because that's your recommendation, to
18 add this dose in -- I don't know. So that's
19 where we're at.

20 (Whereupon, Drs. Neton, Anigstein and Mauro all
21 spoke simultaneously.)

22 **DR. ANIGSTEIN:** No, it isn't. It actually
23 isn't.

24 **DR. MAURO:** It isn't.

25 **DR. ANIGSTEIN:** We say that if you -- if you --

1 **DR. NETON:** Well, what's your recommendation
2 then?

3 **DR. ANIGSTEIN:** -- no, my rec-- our
4 recommendation is if the scenario is accepted,
5 then the recommendation is to add the dose in.
6 If the scenario is thought not to be credible,
7 we don't have that position. Is that correct,
8 John? We don't --

9 **DR. MAURO:** I think that's fair. I mean 'cause
10 we're in the same situation you're in. This is
11 a judgment call based on the weight of the
12 evidence --

13 **DR. ANIGSTEIN:** The --

14 **DR. MAURO:** -- and the weight of the evidence
15 is -- is ambiguous right now. How much weight
16 do we give? Now in the past -- we've been in
17 this situation in the past. In fact, Arjun's
18 been in this situation. We do have information
19 from credible expert -- site experts. What do
20 you do when you have a piece of informa-- which
21 is not entirely compatible with some of the
22 historical records we have.

23 **DR. ANIGSTEIN:** Well, one -- one -- one thing
24 in favor of this is, again, this O-- this
25 Sergeant Olevitch, 1944, who did state that it

1 was something like 15,000 emptied burlap bags
2 in the back. Now by empty, quote/unquote,
3 meaning uranium -- that had contained uranium,
4 and they were being stored. They had been
5 washed. They had been stored. Then later then
6 instituted incineration to get the residue of
7 those ore out. The question is, did the
8 incinera-- was that just a procedure for new
9 ore bags coming in, or did they go to the back,
10 wherever that was, and incinerate all those
11 bags also. And so I'm just saying -- again,
12 I'm not arguing in that favor. I'm simply
13 saying here is something that makes it
14 plausible that the bags could have been left
15 over.

16 **MR. GUIDO:** Joe -- this is Joe Guido, though.
17 I want to mention something here. The -- the
18 scenario we're evaluating is specifically
19 because of an affidavit turned in by a former
20 Linde employee who specifically states that he
21 saw filled bags of something. These aren't
22 emp-- these aren't empty bags. These aren't,
23 you know, empty bags -- 'cause I -- I mean I
24 guess what you're kind of saying is maybe a
25 pallet of these bags that should have been

1 burned made their way to this warehouse
2 sometime and showed up in 1951 when they were
3 (unintelligible) burned in 1946, but it -- you
4 know, we're talking about full bags. So
5 really, I -- I think what we're all talking
6 about is a pallet of uranium ore that was still
7 there in 1951, not -- you know, it has nothing
8 to do with the -- you know, the -- the
9 laundering -- incineration of bags, in my mind.
10 You know, I guess I wanted to throw that out
11 because when we're talking about, you know, how
12 credible this scenario is, I think we have to
13 keep in mind the scenario we're talking about.
14 And the scenario we're talking about is, you
15 know, a pallet of uranium ore bags, filled.

16 **DR. ANIGSTEIN:** I agree that was --

17 **MR. GUIDO:** Right?

18 **DR. ANIGSTEIN:** -- what the affidavit said, but
19 Steve --

20 **MR. GUIDO:** Isn't that what we're going by,
21 or...

22 **DR. ANIGSTEIN:** -- Steve, during the interview
23 of that worker did he mention -- whenever he
24 said people were sitting on bags, was he
25 referring to -- did he say empty bags?

1 **DR. OSTROW:** I don't -- I don't -- I don't even
2 know if he put the word "empty" in or not. I'd
3 have to look at it again.

4 **DR. ROESSLER:** So I guess what --

5 **DR. MAURO:** (Off microphone) (Unintelligible)
6 where we are.

7 **DR. ROESSLER:** -- what I'm hearing is that --

8 **DR. NETON:** Yeah, I see where we are. I mean
9 that's the situation, it's a credible scenario.
10 Right now our position is as we've stated it.
11 Short of calling it incredible -- that's what
12 we tried to say that it's -- it's -- we don't
13 believe that the dose is -- the evidence is
14 sufficient to double the doses to all the
15 workers that are being reconstructed. I think
16 that's a reasonable position on our part.

17 **MR. GUIDO:** This is Joe Guido again. I just
18 wanted to -- the other thing I'd mention is --
19 is there's nothing to say that during the dose
20 reconstruction process for a specific claimant
21 that something like this couldn't be added in
22 if it was determined credible for a specific
23 claimant. But what we're talking about here is
24 the Technical Basis Document and an exposure
25 matrix that would get assigned to all workers,

1 and I think that's the sticking point we have
2 here is, you know, we really don't see this as
3 being a scenario to assign all workers this
4 exposure. We're not saying that the -- you
5 know, that you couldn't do this math and
6 couldn't do these calculations if it was
7 warranted for a specific instance. And I hope
8 I -- I said that right, Chris, but that's --

9 **DR. LOCKEY:** This is Jim Lockey. What does the
10 affidavit say? Does it say full bags or not?
11 Does anybody know?

12 **DR. ANIGSTEIN:** The affidavit says full bags.

13 **DR. LOCKEY:** Full bags. So the affidavit
14 states full bags. The likelihood of that being
15 present in 1951, based on what I'm hearing, is
16 relatively remote. Is that correct?

17 **DR. ANIGSTEIN:** Now the affidavit -- to be
18 perfectly factual, the affidavit states that he
19 would stand near these bags. They looked like
20 canvas sandbags, by the way, they were not
21 burla-- and also -- however, there was ore
22 delivered in canvas bags, also. And his
23 foreman -- whom he named by name but who is
24 possibly deceased by now -- told him no, these
25 aren't sandbags, this is uranium ore. So he

1 was -- he was basically -- even though he made
2 an affidavit, he was quoting secondhand
3 information.

4 **DR. LOCKEY:** And does the affidavit say whether
5 it's full or empty bags?

6 **DR. ANIGSTEIN:** The affidavit says full.

7 **DR. LOCKEY:** Full bags.

8 **DR. ANIGSTEIN:** They -- yeah, they looked like
9 sandbags. He doesn't --

10 **DR. LOCKEY:** Okay, so I'm -- I go back to the
11 premise, what's the probability of having full
12 uranium bags at this site in 1951. That
13 doesn't sound like it's very probable.

14 **MR. CRAWFORD:** Dr. Lockey, I agree with you --
15 this is Chris Crawford. We know that they went
16 through quite a bit of trouble to account for
17 their materials. And we also know that there
18 was a survey done -- I guess Joe could fill in,
19 but it's -- I think it was the end of 1950 or
20 early '51 -- that didn't show any source of
21 this type in Building 30. So where would
22 suddenly full bags of ore have come from this
23 late in the game, when the last ore that
24 arrived was in '46 and all the equipment had
25 been cleaned out prior to the 1951 time frame

1 we're looking at here.

2 **DR. LOCKEY:** It doesn't mean there weren't full
3 bags there. The question is, is the
4 probability of being full uranium bags from '46
5 does not sound like it'd be a logical
6 conclusion. Doesn't mean they weren't full
7 bags of something, but it doesn't sound like --
8 with uranium being expensive and in short
9 supply as it was during that time frame, it'd
10 be difficult to figure out how they'd miss
11 that.

12 **DR. ANIGSTEIN:** And the -- and the SC&A report
13 actually states that.

14 **DR. LOCKEY:** It says that?

15 **DR. ROESSLER:** So aren't we doing sort of a
16 calculation based on a rather incredible
17 situation? It doesn't -- I think what we have
18 to decide is whether this is a credible
19 situation for which to do a dose calculation.

20 **DR. MAURO:** I agree.

21 **DR. LOCKEY:** And we sort -- we sort of have to
22 go by the weight of the evidence in this
23 particular case. Is it possible? Yes. Is it
24 as likely as not, or probable? That's the
25 question.

1 **DR. ROESSLER:** So I propose we're talking about
2 a non-issue at this point, but I think SC&A has
3 to weigh in on this.

4 **DR. MAURO:** I guess I'll just take the first
5 shot at it, is we're often in this difficult
6 position where the record that we have -- the
7 written record regarding the history of
8 operations and what took place -- would seem to
9 indicate that no, the bags weren't there at
10 that time -- the ore bags were not there at
11 that time. On the other hand, as we have on
12 other occasions, have test-- inf-- information
13 from workers that make reference to certain
14 exposures --

15 **DR. ROESSLER:** One worker.

16 **DR. MAURO:** One worker, one worker -- and --
17 and I think in keeping with our intent -- we
18 said okay, let's first -- step one, let's first
19 explore what the possible dosimetric
20 implications are if we were to accept that this
21 is a real scenario. And I think that's where
22 we are today. We're at a place now where --
23 where we have finally got to a point where we
24 all agree that if in fact you were to accept
25 one of these scenarios, whether standing next

1 to the bag or sitting on these empty bags, or
2 full bags, these would be the kinds of doses
3 that would be experienced. And now we're --
4 and I think that's -- well, I like to look at
5 things as the glass is half full. We're in
6 agreement that if you -- you know, what those --
7 -- those doses would be if you agree.
8 Now I have to say, an SC&A opinion on this, I --
9 -- I for one, I don't know -- you know, the
10 weight of the evidence, I don't know what we'd
11 do in a circumstance like this.

12 **DR. LOCKEY:** Well, that's the question we asked
13 you, your -- what's the weight of the evidence?
14 Would you say this is possible, equal, or
15 probable?

16 **DR. ANIGSTEIN:** Could I -- could I read --

17 **DR. MAURO:** Sure, go ahead.

18 **DR. ANIGSTEIN:** -- from -- from our -- I will
19 read the SC&A report on page A-1 of Appendix A.
20 (Reading) Given the ravenous appetite of the
21 Manhattan Project and its successor, the Atomic
22 Energy Commission, for every bit of recoverable
23 uranium, it would appear unlikely that uranium
24 ore would have been left at Linde in 1951.
25 Nevertheless, in the interest of a complete

1 analysis, we calculated the exposure rates --
2 et cetera.

3 **DR. LOCKEY:** I remember -- Jim Lockey. I
4 remember reading that in your report and -- and
5 -- and it -- it certainly is possible, but I --
6 I would say that the weight of the evidence
7 here would say it's possible but not probable,
8 that it just doesn't -- there's -- we don't
9 have enough -- there's no circumstantial
10 evidence that this went on at other sites,
11 based on how valuable that ore was, and there's
12 a five-year lag period and nothing was found
13 when the survey was done in '51. And so is it
14 possible? Yes, but does -- the weight of the
15 evidence is not -- does not push it to a
16 probable cause.

17 **DR. ROESSLER:** I see John shaking his head yes.
18 Is SC&A ready to go with this conclusion that
19 it is very unlikely and that --

20 **DR. MAURO:** I think that we're making progress.
21 It sounds to me that -- especially from the
22 statement that was just read, that having full
23 bags of valuable ore at that time seems to be
24 kind of incredible. I guess now we're -- we've
25 got one more step. What about empty bags?

1 Does it seem to be credible that there might
2 have been some empty bags? Is there any reason
3 why that should be taken as a -- as a more
4 likely scenario than the full bags and --

5 **DR. ANIGSTEIN:** More -- more likely...

6 **DR. MAURO:** -- it's more -- and so I -- I'm
7 hearing Bob right next to me saying well, of
8 the two, full versus empty, empty certainly
9 seems to be more likely. But does it reach the
10 point of credibility and that it's -- you know,
11 we deal with that. I -- I --

12 **DR. NETON:** What do we base our -- our logic on
13 that there were empty bags, though? I mean we
14 have no -- no testimony to that effect. We
15 have testimony there were full bags --

16 **DR. MAURO:** Full bags.

17 **DR. NETON:** -- and now we're saying well --

18 **DR. MAURO:** Yeah.

19 **DR. NETON:** -- we could still be claimant
20 favorable and make them empty bags --

21 **DR. MAURO:** I'm not saying we should.

22 **DR. NETON:** -- just because that's --

23 **DR. MAURO:** I'm just -- but that --

24 **DR. NETON:** -- nice to do.

25 **DR. MAURO:** -- that's the last question,

1 though, and I can go --

2 **DR. NETON:** I think a cou-- I think what Joe
3 Guido stated a little while ago is probably
4 what our position would be, is that we see this
5 scenario as not really credible, but it could
6 be included in the site profile as an analysis
7 in case it did appear credible in some certain
8 dose reconstructions. I mean, you know, we
9 could acknowledge that fact, that this would be
10 the dose. And we -- I think we're in
11 agreement; we could tweak the numbers, but
12 whatever they come out, we would agree to those
13 numbers. But we would not certainly --

14 **DR. MAURO:** Automatically.

15 **DR. NETON:** -- I mean adopting them
16 automatically in every single dose
17 reconstruction, I mean that's -- I think that's
18 --

19 **DR. ANIGSTEIN:** I just want to say, the reason
20 -- the -- the reason why the empty bag would be
21 credible is in one case they would say -- one
22 could say well, this is ridiculous; why would
23 they not use the -- that ore. However, why
24 would they not get around to incinerating the
25 shaken and washed bags? That might just be a

1 little bit of slight careless-- you know, they
2 just -- you know, they had so much to do that
3 that little amount of ore was just not worth
4 recovering.

5 **DR. MAURO:** But it is important to point out
6 that's not what the interviewee said, that's
7 not --

8 **DR. ANIGSTEIN:** Exactly, and -- and --

9 **DR. MAURO:** -- what he said, so we're -- we're
10 the creators of this scenario right now --

11 **DR. ANIGSTEIN:** Right.

12 **DR. MAURO:** -- not the interviewee. And I have
13 to say, since we're the creators of it, I am --
14 and I -- I'm sort of inclined to agree with Jim
15 to say that okay, if in fact such a scenario
16 seems to be plausible on a case-by-case basis -
17 - I don't know under what circumstances that
18 might emerge -- you certainly are in a position
19 to add it in. I do find it difficult, in light
20 of the conversation here, to automatically say
21 that listen, we have to go with full or empty
22 bags. I -- I just don't feel that there's a
23 compelling argument to be made to -- to revise
24 the entire matrix in light of everything I've
25 heard. So I'd like to make sure that Bob and

1 Steve feel the same way, and Arjun's been
2 listening in to these arguments, and right now
3 I would propose that SC&A would -- would agree
4 with Jim to go with that scenario, but I'd like
5 to hear some minority opinions from my own, you
6 know, folks 'cause we're doing it in real time
7 right now.

8 **DR. ANIGSTEIN:** No comment.

9 **DR. OSTROW:** Well, John -- this is Steve -- I
10 think I agree with your argument. You know,
11 what we were trying to do is sort of neutral,
12 what -- we actually calculated the dose given
13 this scenario. How likely this scenario is --
14 this is my personal opinion -- doesn't seem
15 terribly likely. So -- so my opinion is
16 perhaps it is excessive to just require adding
17 this dose to everyone who was on the site at
18 that time.

19 **DR. ROESSLER:** So would -- let's maybe have Jim
20 state what the NIOSH position would be, for the
21 record. And then I would like to hear
22 confirmation from John representing SC&A.

23 **DR. NETON:** Hopefully the guys on the other end
24 of the phone won't shoot me, but I think our
25 general approach here would be to stay with the

1 site profile the way it's written for the
2 general case of dose reconstruction, but add a
3 component to the Technical Basis Document that
4 describes the dose -- dosimetric implications
5 of someone sitting on or standing near full and
6 partially empty -- or empty bags of uranium,
7 and allow for the possibility that could be
8 added, given that there was credible evidence
9 that that exposure scenario occurred.

10 **DR. MAURO:** Let me just pose a question. Is
11 this something that pos-- are -- are you all
12 through all your interviews and doing all your
13 doses -- in other words, as part of the CATI
14 process is there a possibility that a question
15 like this could be posed, or is that behind us
16 now?

17 **DR. NETON:** You know, I really don't know.
18 We're almost never finished with --

19 **MR. HINNEFELD:** I think really the stat--
20 sorry, this is Stu Hinnefeld -- the status of
21 CATI progress would be, you know, dependent
22 upon receipt of the -- the claim. So if the
23 claim was received some time ago, those CATIs
24 would have been completed, but if -- we could
25 conceivably still be receiving claims today

1 from the site and so the CATIs would not be
2 done for those site-- for those --

3 **DR. MAURO:** Would you think it unreasonable to
4 -- to have that as part of the process for --
5 for -- and to see if it -- to start to build a
6 record that says that this is part of the --
7 for CATIs that have not been performed and
8 explore wha-- what others might feel about --
9 'cause right now we have this one worker.

10 **DR. NETON:** Yeah, we have to be careful with
11 that. I mean --

12 **DR. MAURO:** I -- I (unintelligible) --

13 **DR. NETON:** -- there are OMB issues with these
14 interviews, as -- as we've gone through early
15 on in the program, that require us to use
16 standard --

17 **DR. MAURO:** I understand.

18 **DR. NETON:** -- scripted interviews that are
19 covered under the Paperwork Reduction Act, and
20 there's all kinds of legal issues with having
21 custom interviews for -- for people. That's
22 why they're so generic. Or -- they're
23 specific, but generic at the same time.

24 **DR. MAURO:** I understand.

25 **DR. NETON:** There is a section where people are

1 encouraged to offer whatever other information
2 they might have. Now how that word gets around
3 -- but you also have to be careful you don't
4 sort of lead people into a --

5 **DR. MAURO:** I got -- I know.

6 **DR. NETON:** -- conclusion. I'm not accusing
7 anybody of anything, but once -- once one knows
8 that piece of information, and who knows what
9 happens with it. So the answer's I guess I
10 don't know if we could do that.

11 **DR. ROESSLER:** So all we need now from you,
12 John, is to say you're in agreement with --

13 **DR. MAURO:** I'm in agreement with Jim.

14 **DR. ROESSLER:** Then it seems to me we have
15 completed this one last issue and that we have
16 addressed whether the site profile is adequate.
17 If there's no comment on that, then I think it
18 would be appropriate for the workgroup to -- I
19 -- I don't know that we've reached this point
20 before, but I think we're -- we should say that
21 we have this information and we recommend that
22 the site profile be accepted.

23 **DR. NETON:** I'm not clear where we are with
24 that. Are there modifica-- you know, I --

25 **DR. MAURO:** Well, let me ask you, do you -- do

1 you think it's appropriate to add in this
2 scenario and leave it up to the dose
3 reconstructor, based on his process, to make
4 the judgment on a case-by-case basis whether
5 this should be added or not?

6 **DR. NETON:** Let me ask Joe and Chris on the
7 phone, does that sound reasonable?

8 **MR. CRAWFORD:** Well, it seems to me we're --
9 this is Chris -- that we're concentrating on
10 this one worker's statement on one possible
11 scenario, perhaps to the exclusion of
12 remembering that we're trying to cover all
13 workers, and the existing TBD allows for a
14 fairly hefty dose during this non-production
15 period already --

16 **DR. NETON:** Right.

17 **MR. CRAWFORD:** -- based on the mere presence at
18 the site. And many of the people who will be
19 filing didn't actually work in Building 30 for
20 long periods during the -- you know, the
21 relevant time frame anyway.

22 **DR. NETON:** Right.

23 **MR. CRAWFORD:** So all I'm saying is this is one
24 scenario. There are, however, probably many
25 other kinds of scenarios.

1 **DR. NETON:** Right.

2 **MR. CRAWFORD:** If somebody cleaned the attic,
3 for instance, maybe they got a higher dose than
4 somebody who didn't.

5 **DR. NETON:** Yeah. But what I'm suggesting,
6 Chris, though, is would it be -- it wouldn't --
7 didn't -- wouldn't seem to be that hard,
8 though, to -- almost with like a page change of
9 the site profile, to include a computation that
10 would be -- it could be a paragraph or less
11 that would indicate what type of doses could
12 have been received if that scenario were
13 determined to have credibility to it. I mean I
14 don't think that's -- it wouldn't be
15 instructing the dose reconstructor to do
16 anything with it other than to alert them to
17 the fact that that scenario, you know, has been
18 asserted, at least at one point. We right now
19 find, the general case, no credible evidence
20 for that to have happened, but it's there, sort
21 of in -- in there just in case we need it, so
22 we're acknowledging that, you know, we could
23 reconstruct it, if necessary. I -- I don't --
24 we're not committing to doing these gen-- in a
25 general case. They're all...

1 **MR. CRAWFORD:** Right. Jim, I'll -- I'll defer
2 to you on that. We haven't heard yet from Joe,
3 if you have any input.

4 **MR. GUIDO:** Yeah, I don't -- I mean whether
5 this scenario is in the TBD or not -- I mean
6 the -- if -- if a dose reconstructor found this
7 to -- you know, found any, you know, situation
8 to be credible, it would be evaluated. And if
9 that evaluation would involve these kind of
10 calculations, they would be performed. So --

11 **DR. NETON:** Right.

12 **MR. GUIDO:** -- I -- whe-- you know, whether
13 it's in the TBD or not, to me, doesn't -- you
14 know, I don't -- I don't think it has to be in
15 the TBD to make sure it gets done. However, we
16 did spend a whole lot of money --

17 **DR. NETON:** Well, that's my point --

18 **MR. GUIDO:** -- coming to -- coming to this
19 point.

20 **MS. BEACH:** And time.

21 **DR. ROESSLER:** And a whole lot of time.

22 **MR. GUIDO:** And so, you know, I guess with that
23 in mind, I'm not against using the work that
24 we've -- where we've gotten to. I'm just
25 saying that, you know, I don't -- I think we

1 should focus -- keep focused on the point that,
2 you know, if we -- if we didn't put this in
3 that it wouldn't have ha-- you know, we -- I
4 don't think that's the way we do the dose
5 reconstruction. We -- we would do what we feel
6 is credible and -- and required.

7 **DR. NETON:** Yeah.

8 **MR. GUIDO:** So --

9 **DR. MAURO:** And I -- and I think it's important
10 that, you know, we didn't just dismiss this
11 cla-- this person's affidavit. We took it very
12 seriously and gave it a lot of attention, so I
13 don't -- I -- I think that this is --

14 **DR. NETON:** Well, and I think in some ways that
15 -- that could be reflected in this -- this
16 modification of the site profile, that this was
17 discussed, that it had gone through some sort
18 of rigorous review process, and it was the
19 conclusion, even in the SC&A report, that this
20 scenario did not seem likely. However,
21 calculations are here -- you know, that sort of
22 thing. I think that's -- that's fine by me.

23 **DR. MAURO:** I think that's reasonable.

24 **DR. ANIGSTEIN:** So they would be there for use
25 at the discretion of the --

1 **DR. NETON:** Right, but I think they're --

2 **DR. ANIGSTEIN:** -- dose reconstructor.

3 **DR. NETON:** -- more I think about what Joe
4 said, there could be a little preamble to that,
5 though, saying that --

6 **DR. MAURO:** Yeah, sure.

7 **DR. NETON:** -- we have gone through this and it
8 does not appear credible. However, here is the
9 doses that would have resulted --

10 **DR. ANIGSTEIN:** That seems reasonable.

11 **DR. NETON:** -- you know, they're not trivial
12 doses, let's put it that way. We've determined
13 that they're not trivial and they could be X.

14 **DR. ANIGSTEIN:** To -- I don't know if I should
15 be opening up another dimension, but would it
16 be appropriate -- I mean would -- would -- no,
17 I'm just saying if NIOSH would be interested in
18 seeing our MCNP input files and spreadsheet,
19 you know, so you could do your own calculations
20 to verify ours.

21 **DR. NETON:** Yeah, I -- I could (unintelligible)
22 the technical folks who worked on it, but we
23 could -- we could make that decision at a later
24 point.

25 **DR. ANIGSTEIN:** Sure.

1 **DR. MAURO:** Yeah, but I think it'd be -- I
2 think the decision has been made. The degree
3 to which you want to see that calculation,
4 that's up to you.

5 **DR. ROESSLER:** So the question that I think
6 remains is once NIOSH adds this to the site
7 profile, then do we need to go back to SC&A to
8 see if it -- or -- or are we done? Are you --
9 say okay, if you in essence add this as he's
10 discussed, then -- then it's okay.

11 **DR. ANIGSTEIN:** It would be a very quick
12 turnaround, you know, if -- for us to have --
13 for us to review it and say -- you know, in one
14 hour say.

15 **DR. ROESSLER:** That would require, I would
16 assume, another meeting?

17 **DR. MAURO:** No.

18 **DR. NETON:** No.

19 **UNIDENTIFIED:** Absolutely not.

20 **DR. ROESSLER:** No? Okay. So then I think it's
21 -- everything is approved, as long as when you
22 see it you say okay.

23 **DR. NETON:** I think a lot of these issues get
24 closed conditionally, sort of -- I might say
25 that --

1 **DR. MAURO:** And this -- on different work--

2 **DR. NETON:** -- (unintelligible).

3 **DR. MAURO:** In different work-- my experience
4 is different workgroups have different --
5 approach for this. Some workgroups don't
6 really close the issue until the document has
7 been revised. For example, in the procedures
8 workgroup, once we achieve -- get to the point
9 we're at, we all agree this is how to fix the
10 problem, and then -- but it's not closed until
11 -- it's at -- until the procedure's actually
12 been revised and we take a look at it and say
13 yeah, it looks good. Or on site profiles, such
14 as this -- I'll give a -- we have in the past
15 agreed in principle, on the white paper, and we
16 never looked again. It was over. 'Cause we --
17 we felt that -- listen, the -- fund--
18 fundamentally we agree. The numbers we're all
19 in agreement on and there's no reason for us to
20 really go back and look at it again because we
21 -- 'cause it's not a complicated -- it's not as
22 if you're going to be implementing some compli-
23 - some -- some enormous calculation, you know,
24 like high-fired plutonium when, after you did
25 your analysis, it was a big effort on our part

1 to review it and -- and to say yeah, it looks
2 good. We're not dealing with something on that
3 scale here. We're dealing with something very
4 simple. So in my opinion, if you would like us
5 to look at it after it comes out, great. But I
6 don't see that it's essential.

7 **DR. ROESSLER:** Okay, so I'm assuming we're
8 going with the latter -- it's approved. Then
9 if the workgroup agrees, based on the
10 conversations today -- and I guess we should
11 take a vote -- then we'll proceed with that.
12 So Dr. Lockey?

13 **DR. LOCKEY:** Yes.

14 **DR. BRANCHE:** And Josie?

15 **MS. BEACH:** Yes.

16 **DR. ROESSLER:** And I vote yes, and that's three
17 out of the four, so I -- I think -- unless
18 somebody has something that we've missed, I
19 think we have completed our assignment of the
20 review of the site profile and, with this small
21 addition, find it's adequate. Okay.

22 **DR. BRANCHE:** Does that conclude your meeting?

23 **DR. ROESSLER:** I think that concludes the
24 meeting.

25 **DR. BRANCHE:** Dr. Roessler believes that we've

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concl-- concluded the business for today, and
so we are adjourning, and thank you very much.
(Whereupon, the meeting was adjourned at 5:23
p.m.)

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CERTIFICATE OF COURT REPORTER**STATE OF GEORGIA****COUNTY OF FULTON**

I, Steven Ray Green, Certified Merit Court Reporter, do hereby certify that I reported the above and foregoing on the day of June 23, 2008; I, Steven Ray Green, then transcribed the proceedings, and it is a true and accurate transcript of the testimony captioned herein.

I further certify that I am neither kin nor counsel to any of the parties herein, nor have any interest in the cause named herein.

WITNESS my hand and official seal this the 7th day of Aug., 2008.

STEVEN RAY GREEN, CCR, CVR-CM, PNSC**CERTIFIED MERIT COURT REPORTER****CERTIFICATE NUMBER: A-2102**