

This transcript of the Advisory Board on Radiation and Worker Health, Surrogate Data 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 Surrogate Data 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

+ + + + +

ADVISORY BOARD ON RADIATION AND
WORKER HEALTH

+ + + + +

WORK GROUP ON USE OF SURROGATE DATA

+ + + + +

FRIDAY
NOVEMBER 5, 2010

+ + + + +

The Work Group convened telephonically at 1:00 p.m., James M. Melius, Chairman, presiding.

PRESENT:

JAMES M. MELIUS, Chairman
JOSIE BEACH, Member
WANDA I. MUNN, Member
PAUL L. ZIEMER, Member

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ALSO PRESENT:

TED KATZ, Designated Federal Official
ISAF AL-NABULSI, DOE
JEFFREY KOTSCH, DOL
JENNY LIN, HHS
JOHN MAURO, SC&A
DAN McKEEL, Texas City Petitioner
JIM NETON, DCAS
MICHAEL RAFKY, HHS
TOM TOMES, DCAS
BILL THURBER, SC&A

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C-O-N-T-E-N-T-S

Welcome/ participants roll call.....	4
Revised NIOSH Texas City Chemicals SEC Petition Evaluation Report Tom Tomes (NIOSH).....	7
Board questions and comments.....	14
Questions and comments from petitioners...	37
Work Group Recommendations to Board.....	49
Adjournment.....	59

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

2 1:02 p.m.

3 MR. KATZ: All right. Let's get
4 started. This is the Advisory Board on
5 Radiation and Worker Health, the Surrogate
6 Data Work Group.

7 And let us begin with roll call.
8 Since we're talking about a specific site,
9 please speak to conflict of interest, and
10 we'll begin roll call with Board Members.

11 CHAIRMAN MELIUS: Jim Melius. No
12 conflict.

13 MEMBER MUNN: Wanda Munn. No
14 conflict.

15 MEMBER ZIEMER: Paul Ziemer. No
16 conflict.

17 MEMBER BEACH: Josie Beach. No
18 conflict.

19 MR. KATZ: Okay. No Jim Lockey.
20 Okay. And let's go to the ORAU Team.

21 DR. NETON: ORAU Team? I don't

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1 think there's anyone from ORAU on the phone.

2 MR. KATZ: NIOSH.

3 DR. NETON: Oh, NIOSH. I didn't
4 hear the NIOSH part. This is Jim Neton,
5 NIOSH. No conflicts.

6 MR. TOMES: Tom Tomes, NIOSH. I
7 have no conflict.

8 MR. KATZ: SC&A Team.

9 DR. MAURO: John Mauro, SC&A. No
10 conflict.

11 MR. THURBER: Bill Thurber, SC&A.
12 No conflicts.

13 MR. KATZ: Okay. Federal
14 officials or contractors to the feds.

15 MS. LIN: This is Jenny with HHS.

16 MR. RAFKY: This is Michael Rafky
17 with HHS. No conflicts.

18 MR. KOTSCH: Jeff Kotsch --

19 MS. AL-NABULSI: Isaf Al-Nabulsi
20 with DOE.

21 MR. KOTSCH: Jeff Kotsch with the

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1 Department of Labor.

2 MR. KATZ: Welcome, colleagues.

3 How about members of the public?

4 DR. McKEEL: This is Dan McKeel.

5 I'm the Texas City co-petitioner.

6 MR. KATZ: Dan, were you expecting
7 your other petitioner to join us or --

8 DR. McKEEL: I'm not sure. She's
9 not been very well recently, so probably not.

10 MR. KATZ: Okay. Very good. And
11 this is Ted Katz. I'm the Designated Federal
12 Official for the Advisory Board.

13 Let me then just remind everyone
14 who is not addressing the group to mute your
15 phone when you're not. *6 if you don't have a
16 mute button. And then *6 again to take your
17 phone off of mute.

18 And, Jim, it's your agenda.

19 CHAIRMAN MELIUS: Okay. Thanks
20 everybody for joining us. This is the Texas
21 City petition, 00088, so by the number you can

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1 tell it's been around for a while.

2 As I recall, back in -- I believe
3 in 2008 it was when NIOSH issued their first
4 Evaluation Report, and actually SC&A then,
5 later in 2008, wrote a critique of that, or
6 review of that report, which they submitted to
7 us.

8 But then we've been on sort of
9 hold for a period of time, you know, pending
10 resolution of issues related to some of the
11 other sites, particularly the Blockson site,
12 and radon issue and so forth.

13 So -- and then, within the last
14 few weeks NIOSH has issued an updated
15 Evaluation Report. So what I thought we would
16 do is start the meeting with either Jim Neton
17 or Tom, if you could sort of briefly present
18 the updated report, I guess, sort of focusing
19 on sort of what's changed and what your
20 findings have been relative to the earlier
21 report, since the conclusion has changed also.

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1 So. Jim or Tom.

2 DR. NETON: Okay. I'll turn this
3 -- this is Jim Neton. I'll turn it over to
4 Tom Tomes.

5 MR. TOMES: This is Tom. As Dr.
6 Melius mentioned, we approved the initial
7 Evaluation Report, SEC Petition in January
8 2008, and that report was reviewed by SC&A and
9 NIOSH received their comments on it.

10 In responding to those comments
11 and to a revised report, as Dr. Melius
12 mentioned, it was delayed due to
13 considerations, mainly for radon.

14 And in addition to the radon
15 issue, NIOSH considered additional information
16 on AEC activities. This information was
17 previously not available. And I was just
18 going to mention briefly what those are.

19 We received an AEC report on Texas
20 City from a 1955 AEC visit. That report
21 provided details on the activities at the

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1 plant that we previously did not know.

2 We also received two AEC progress
3 reports. These reports were written by Texas
4 City Chemicals that specified all the work
5 done under the development contract.
6 Previously we did not know the nature of the
7 development contract. We only knew that it
8 was dealing with phosphates.

9 And we also received some court
10 records. This is records from a suit between
11 the current and former owners of the property,
12 and those court records did contain some
13 information that we eventually used concerning
14 radon during the residual period.

15 And NIOSH also did additional
16 research in the ensuing period and we found
17 some publications on the internet on details
18 of 1950 activities -- 1955/56 activities at
19 the site. Specifically, that information was
20 on the nature of the phosphate plant
21 operation, the closing of the plant due to

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1 bankruptcy and the reopening of the plant in
2 1956.

3 All that information was
4 eventually incorporated into this revised ER
5 that we issued a couple of weeks ago. And the
6 main difference to the -- the biggest
7 difference to the report is that NIOSH now
8 recommends an SEC class during the AWE-covered
9 periods.

10 We believe that we do not have
11 sufficient information on process activities
12 at the phosphate plants to accurately model
13 the radon exposures. Although we feel like we
14 can model those exposures, we do not believe
15 that details of the plant are sufficient to do
16 so.

17 We don't know the size of the
18 plants, we don't know some of the details of
19 intermittent operations that was going on
20 during this period of time.

21 As I mentioned, some of the

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1 information that became available on the site
2 led to a review of the covered period. This
3 was also commented on by SC&A during their
4 review.

5 Information that we received
6 indicates that the plant -- that the uranium
7 extraction plant at Texas City Chemicals was
8 never fully operational and was shut down
9 permanently by March of 1954.

10 Previously the covered period at
11 Texas City Chemicals was listed as 1952
12 through 1956, and this information along with
13 the information on the development contract
14 work was forwarded to the Department of Labor.

15 They reviewed that information and
16 eventually changed the covered period to be
17 October 5th, 1953 through September 1955.
18 September 1955 was the expiration date of the
19 development contract work with the AEC. That
20 development work was basically laboratory
21 scale testing of small samples of phosphates.

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1 We now believe that worker
2 exposures at Texas City Chemicals after the
3 main plant was shut down can be bounded by
4 exposure in the phosphate plant.

5 Previously our Evaluation Report
6 recommended assigning uranium exposure
7 throughout the AWE period. That was based on
8 inconclusive information on this later period
9 of time when the development work was going
10 on.

11 Since we now know that the uranium
12 plant was shut down, and we know the nature of
13 the development work, we feel that exposure to
14 phosphates is the bounding dose to the
15 facility during that period of time.

16 And the -- although we do not feel
17 that we can reconstruct radon during the
18 operational period, we were able to do so
19 during the residual period. We -- simply the
20 data that we got from the lawsuit records --
21 had radon got in there during the residual

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1 period and we were able to evaluate that data,
2 along with data -- radon data from other
3 phosphate plants and we can actually
4 reconstruct doses of radon from the residual
5 period.

6 I would also like to mention, just
7 point out the surrogate data is used in this
8 -- in these evaluations.

9 The internal doses from the
10 uranium operations are based on bounding air
11 concentrations at AWE facilities that
12 processed uranium concentrates.

13 The uranium concentrates were the
14 end product of the uranium extraction
15 operations at Texas City Chemicals, and we
16 have used evaluation of multiple facilities
17 that handled that for the AEC to provide a
18 bounding dust concentration at Texas City
19 Chemicals.

20 We've also used phosphate plant
21 exposure evaluations from other phosphate --

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1 to estimate Texas City Chemicals's dose from
2 the phosphate plant operations, specifically
3 the HPAREH reports from the 1998 report that's
4 referenced in the SC&A review. It's been
5 thoroughly reviewed and incorporated, as well
6 as additional phosphate plant data that we've
7 used.

8 And so that's basically the
9 changes that were made. There was additional
10 evaluations in there, but it all -- all to
11 support these changes. And that's about all I
12 have on the summary.

13 CHAIRMAN MELIUS: Okay. Thank
14 you. Now I thought it was a thorough report
15 and you've sort of documented your changes
16 very well. It's relatively straightforward to
17 read and understand. So it's appreciated so -
18 - to that.

19 Do any Board Members have any
20 questions or comments on the report?

21 MEMBER ZIEMER: This is Ziemer. I

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1 have a question.

2 CHAIRMAN MELIUS: Yes.

3 MEMBER ZIEMER: It appears to me
4 that you have a fairly good handle on the
5 source-terms. Is that not correct? I'm
6 trying to get sort of a more comfortable
7 feeling on reconstructing the radon dose or
8 the inability to during the operational
9 period.

10 And it appears to me that the
11 limiting factor was room size or building
12 sizes. Was I -- did I understand that
13 correctly?

14 DR. NETON: Yes. This is Jim, Dr.
15 Ziemer. The size of the building is not known
16 with any degree of confidence but, in addition
17 to that, we don't know much at all about the
18 partitioning of the rooms within the building.

19 For example, at Blockson, we felt
20 we knew that it was a fairly open-structured
21 building --

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1 MEMBER ZIEMER: Right.

2 DR. NETON: -- and, you know, did
3 not allow itself for partitioning. In this
4 particular plant we really don't know if there
5 were a series of smaller rooms versus, you
6 know, one open area.

7 MEMBER ZIEMER: Right. Well, what
8 I was wondering, with that sort of thing in
9 mind, at least conceptually, would it not be
10 feasible to take a look at what the upper
11 limits would have been had there been smaller
12 rooms?

13 And I guess you could put some
14 bounds on that in terms of the size of the
15 equipment that might have been there. But
16 suppose you had a -- I don't know, a few
17 hundred square foot room or something that
18 was, you know, that -- okay.

19 Let's suppose that this source-
20 term was all in that sort of smaller area, and
21 use a simple diffusion model and see what kind

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1 of concentrations could be generated.

2 Did anybody look at anything like
3 that? I mean, it would seem, in principle,
4 given the fairly good information about what
5 source-terms were there, one might at least --

6 DR. NETON: Yes, in principle,
7 you're right. That could be done. And, in
8 fact, Tom Tomes did some of the -- some
9 analyses to that. And, for example, we
10 originally considered ratioing the size of the
11 building based on the production rate, and we
12 knew that -- I think it was Texas City,
13 produced about a third amount of phosphate
14 material as did Blockson.

15 So, you know, one might argue or
16 consider the fact that while maybe the
17 building would be a third of the size, and
18 that would directly increase the radon
19 concentration by a factor of three.

20 So, it would -- it took it up to
21 somewhere, I think, in the 30, 40 picocuries

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1 per liter, just by reducing the building to a
2 third.

3 If you put all of the concentrates
4 into a very small room like you suggested, a
5 couple hundred square-foot room, you would end
6 up with some very high radon levels that --
7 that, at least in our opinion, are not
8 sufficiently -- or, you know, not likely to be
9 plausible, you would end up in the hundreds of
10 picocuries per liter at a phosphate plant
11 where it just doesn't seem plausible it would
12 be that high.

13 CHAIRMAN MELIUS: But it would be
14 -- excuse me. This is Jim Melius. It would
15 be plausible if that was the size of the room?

16 I'm trying to --

17 DR. NETON: Well, yes. I mean --

18 MEMBER ZIEMER: Well, you know,
19 I'm trying to -- yes. That's my point, I
20 think. It might not seem plausible in the
21 fact that they really worked in rooms that

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1 small, but could it be bounding, that's sort
2 of where I'm moving on this.

3 DR. NETON: Well, yes, I guess
4 it's sort of a -- it's an interesting issue.
5 I mean, is it implausibly -- is it plausible
6 if the room size were really a couple hundred
7 square feet, is it plausible that all of the
8 source material were in there, you know,
9 processed through there at one time?

10 We don't know the work shifts. At
11 Blockson, for example, we felt we knew pretty
12 well the fact that they work 24/7 shifts. We
13 don't know what the shift schedule was. It
14 was such an intermittent operation there.
15 There's a lot of unknowns.

16 MEMBER MUNN: Although we don't
17 have a great deal of documentation with
18 respect to the building, we certainly don't
19 know its size and don't have a footprint or a
20 floor plan, if one places any credence on the
21 commentary from the workers themselves during

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1 the workers' meetings, one has the impression
2 of a very large building, and primarily a lot
3 of open space.

4 That was the impression that one
5 got from the people who reported to have been
6 there. One -- if there was any mention made
7 of segregation areas for a specific material,
8 it was made during meetings where I wasn't
9 present.

10 And, of course, I didn't go down
11 for all of them, but I did go down for one
12 where there was a large number of workers and
13 the impression that was left was always a very
14 large, open operating area.

15 DR. NETON: Well, I'm not sure I
16 recall it exactly that way, Wanda. That was
17 true at Blockson. I'm not sure we got that
18 type of information from workers at Texas
19 City.

20 MEMBER MUNN: No. They were very
21 vague.

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1 DR. NETON: Yes.

2 MEMBER MUNN: Everything was
3 vague, but my --

4 DR. NETON: Yes.

5 MEMBER MUNN: -- point -- the
6 point I was trying to make is, there was no --
7 no reference made to segregated areas.

8 DR. NETON: I think that is true.

9 MEMBER MUNN: You know, for
10 specialized operations or for specialized
11 materials.

12 MEMBER ZIEMER: Well, the way I
13 was thinking of it was sort of the following,
14 that take the type of equipment that was being
15 used, and I don't have a good feel for what
16 that would have been dimensionally, but say,
17 okay, we'll put some reasonable walls around
18 that and see what size room that gives us, and
19 then -- and then generate -- you know, again,
20 I was looking for a reasonable way to bound
21 this.

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1 I understand the dilemma that you
2 don't have room dimensions, but nonetheless, I
3 think your reasonable assumptions are
4 certainly allowable.

5 MEMBER MUNN: Well, there can
6 certainly be maximum and minimum assertions
7 made that would be more than reasonable.

8 CHAIRMAN MELIUS: This is Jim
9 Melius. Since I'm a building model skeptic, I
10 guess -- I've had trouble when we don't have
11 information on the building, as we don't have
12 in this case, that -- you know, that anything
13 -- yes, you can make some assumptions and then
14 come up with what would be plausible for that
15 assumption, but how do you know that those
16 assumptions -- you have no information to
17 really base, you know, whether that assumption
18 is plausible and, you know, it doesn't take
19 much in terms of ventilation or change in room
20 size or whatever, to have a very significant
21 impact on what you would, you know, model to

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1 be the high end of exposure there. So --

2 MEMBER ZIEMER: Well, that's very
3 true and what one would do, of course, would
4 be to take the low end of the turnover rates,
5 for example -- and we certainly thought about
6 doing that in other situations where you said
7 -- you would say, for example, if the turnover
8 rate was, you know, one room change per so
9 many hours, pick out something that's on the
10 very low end and specify a room size that was
11 at least big enough for people to work in, it
12 seemed to me, in principle, you could find an
13 upper bound.

14 That was the point I was making.

15 CHAIRMAN MELIUS: But is it --

16 MEMBER ZIEMER: It's
17 understandable that, you know, you could
18 increase the turnover rate. Now, that would
19 cut it down. You could specify no turnover,
20 which is almost impossible in a --

21 CHAIRMAN MELIUS: But is that a

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1 plausible upper bound -- we're going to get
2 caught up here with too many plausibles,
3 different meanings of plausible. But is that
4 a plausible upper bound?

5 Yes, you can calculate the upper
6 bound, but is it a plausible upper bond, given
7 that you have so little information. And
8 then, if you do, as Jim mentioned it, that Tom
9 did, if you took a relatively small room and
10 then you come up with -- you do a calculation,
11 you make some -- do a -- and then you come up
12 with an upper bound that appears to you to be
13 implausibly high, you know, given what's been
14 found at other phosphate plants.

15 Is that -- do you reject that? Do
16 you -- I mean, that's the problem is, with any
17 of these models is, we need something to
18 anchor them on and, without information it's
19 -- on the building and the various factors, it
20 seems to me it gets hard to do that.

21 MEMBER MUNN: But, you know, we do

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1 know that the building was big, old and
2 rickety, and we do know that the process rate
3 was not high, nor did it last long, and given
4 the information that we do have, one can
5 certainly make some logical and quite
6 plausible determinations with respect to what
7 we can expect as a maximum.

8 You know what came in, you know
9 went out and you know what can have transpired
10 in the meantime. That gives you all kinds of
11 good information over and above the question
12 of is it in a bread box or is it in the whole
13 room.

14 The probability of it's being in a
15 bread box certainly in an old factory like
16 that, which was turned over from other owners,
17 is not going to be -- you're not going to have
18 a snug operation there.

19 CHAIRMAN MELIUS: Yes, but having
20 been through lots of industrial operations,
21 you know, visiting them, not necessarily of

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1 this type, it's, you know, there are buildings
2 used for other things, you know, who knows how
3 the setup is? And it's not uncommon to have
4 smaller areas that are walled off and then
5 have very limited ventilation.

6 And I just, you know, don't know
7 how you distinguish that --

8 MEMBER BEACH: Well -- this is
9 Josie -- oh, sorry.

10 CHAIRMAN MELIUS: -- between one
11 and the other? I think that's the dilemma we
12 run into in these situations if you don't have
13 that -- enough information going back and
14 there's no way of sort of recreating it.

15 MEMBER ZIEMER: Now could you
16 remind us again, in the previous version of
17 the Evaluation Report, what were you proposing
18 for the radon approach?

19 MR. TOMES: This is Tom Tomes. We
20 had a value in there of, I believe it was 2.33
21 picocuries per liter, if my memory is correct.

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1 It's something about that -- that value, based
2 on the 95th percentile of some separate data.

3 DR. NETON: It's the Florida --

4 CHAIRMAN MELIUS: It was the
5 Florida data, I think.

6 MEMBER ZIEMER: Yes. In other
7 words, just using -- and that was truly
8 surrogate because --

9 DR. NETON: Correct.

10 CHAIRMAN MELIUS: Yes.

11 MEMBER ZIEMER: -- it was the
12 issue of how well does it apply. Well, I
13 guess, NIOSH, what you're telling us is you
14 don't have any confidence that you can apply
15 either the surrogate data or defining the
16 operational sort of configuration in a way
17 that allows you to make reasonable assumptions
18 on these -- on the generation of radon and its
19 concentrations. Is that --

20 DR. NETON: I think that's a fair
21 --

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1 MEMBER ZIEMER: -- sort of the
2 bottom line?

3 DR. NETON: -- that's a fair
4 characterization

5 DR. MAURO: This is John. At the
6 risk of saying something that probably we've
7 talked about before, but maybe it's time to
8 revisit it again.

9 Radon is a very special problem in
10 terms of understanding its concentrations. If
11 there's any place where one would say all
12 petitioners with lung cancer are the ones that
13 should be granted.

14 I don't -- I understand that this
15 has been -- this is very early in the program.

16 We have now encountered radon on so many
17 occasions where it has been, I guess, an
18 obstacle to be able to come to grips with
19 either modeling or by surrogate measurements,
20 and clearly without any boundary, it's a
21 respiratory tract problem.

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1 I realize that this is something
2 that transcends -- it's a perhaps statutory or
3 regulatory, I'm not sure, but, boy, if there's
4 any place where it makes sense to grant
5 everyone with lung cancer or respiratory
6 cancer, it's a case like this.

7 MEMBER MUNN: Well --

8 DR. MAURO: I apologize for
9 throwing that on the table, but I just had to.

10 MEMBER MUNN: Yes. It's -- I
11 understand what you're saying, John, but if
12 that's the assertion that one is going to
13 make, then one has to -- has to accept the
14 fact that what we are going to say is in any
15 case where we do not have all of the specifics
16 that we need to make the accurate calculations
17 that we would like to have, then we will, in
18 fact, make the assumption then that we can't
19 prove a negative and, therefore, all the cases
20 will be granted.

21 And that's -- if that's what we're

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1 going to do, then I think we ought to save
2 ourselves a great deal of time and just say
3 that's what we're going to do.

4 CHAIRMAN MELIUS: Yes, but --
5 Wanda, this is Jim. I think what John was
6 actually proposing was -- was what NIOSH
7 originally proposed for their SEC regulations
8 which were cancer-site-specific SECs.

9 And I think what John was saying,
10 that -- essentially, that this would only
11 apply to lung cancer.

12 DR. MAURO: Yes. Radon and lung
13 cancer.

14 CHAIRMAN MELIUS: Radon and lung
15 cancer.

16 DR. MAURO: Very, very focused.

17 CHAIRMAN MELIUS: And without --
18 because it's been a long time and I don't want
19 to sort of relive the argument. And I think
20 the issue was there. I don't know if we
21 always -- we used radon as an example when the

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1 Board discussed it, but the question then
2 becomes a sort of, where do you -- how do you
3 choose which cancer sites to include and not
4 to include for various radionuclides and
5 materials, and it's -- it's just tricky,
6 because -- difficult.

7 And we were also, you know, told
8 at the time that that was not the intent of
9 Congress when they wrote up the, you know, the
10 original EEOICPA law and included the Special
11 Exposure Cohort list.

12 But, so, I mean, it would involve
13 having to change the regulations which --

14 MEMBER ZIEMER: Yes. It's not an
15 option we have before us.

16 CHAIRMAN MELIUS: Yes.

17 DR. MAURO: Yes. Okay.

18 CHAIRMAN MELIUS: That's that, but
19 -- do that, and --

20 MEMBER ZIEMER: Yes, because, in
21 essence, we would be saying that there's a

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1 whole lot of other cancers being caused by the
2 radon, and that's never been demonstrated
3 scientifically, you know.

4 CHAIRMAN MELIUS: No, but -- no, I
5 agree, and it's -- well, then, how far -- how
6 far do you carry it with other, you know,
7 material? That's --

8 MEMBER ZIEMER: Understood.

9 CHAIRMAN MELIUS: -- where it gets
10 trickier and so forth and, you know, is it
11 saying that radon doesn't make -- or anything
12 doesn't make a very small contribution to --
13 you know, in addition to other radiation
14 exposure somebody has that wouldn't make a
15 very small contribution, might not show up in
16 epidemiological studies -- you know, it's a
17 long, convoluted, difficult argument. I
18 shouldn't say convoluted. It's difficult.

19 MEMBER MUNN: Yes, it is
20 convoluted, and it's difficult and --

21 CHAIRMAN MELIUS: Yes.

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1 MEMBER MUNN: -- I guess I
2 understand what John is saying when he says
3 radon is a special case, and that lung cancers
4 are irretrievably linked to the two.

5 CHAIRMAN MELIUS: Yes.

6 MEMBER MUNN: But by the same
7 token, I have to take a slightly different
8 position, I think, with respect to our just
9 simply saying radon's different. Radon is
10 different in some ways, not so different in
11 others.

12 CHAIRMAN MELIUS: Yes.

13 MEMBER MUNN: And just -- this
14 kind of situation we're looking at here where
15 you have a small plant, small sources, to
16 begin with, not that much production, a short
17 production time, it's very -- it's
18 disheartening and it's discouraging, and for
19 some of those, it's inaccurate to just simply
20 say that these people, since we can't prove
21 that you were not harmed, we're going to tell

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1 you that you were harmed by the radiation in
2 the work that you did.

3 And they may have been harmed in
4 many ways, but it seems inappropriate to
5 assure people that they were injured by
6 radiation when the fact of the matter is all
7 the science that we have surrounding this kind
8 of operation does not support that conclusion.

9 But if that's what we're going to
10 do, then that's what we're going to do.

11 CHAIRMAN MELIUS: Yes. And we --
12 this is Jim again. And we've talked about
13 this in lots of different contexts, but it's
14 really -- the real issue -- it's a little
15 uncomfortable, I don't think -- is with sort
16 of how to accept a model or whatever.

17 It's really with the endangerment
18 issue, and the construct, the legal regulatory
19 construct we have is that -- is that
20 essentially endangerment is based on any
21 exposure that lasts 250 days or more, and so

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1 that's what the concern is.

2 It's, you know, the issue with
3 General Electric, it's an issue with -- in
4 lots of other situations, and I don't disagree
5 with your discomfort on that point.

6 Any other questions from Board
7 Members? Josie, you were starting to say
8 something, I think, a while ago.

9 MEMBER BEACH: Well, I was just
10 interjecting about the ventilation and not
11 knowing -- knowing at all what that was.

12 I also want a little bit more
13 information on the residual period that can be
14 reconstructed. I believe what Tom said was
15 that data was from the court records, or did I
16 hear that wrong?

17 DR. NETON: No. I think -- I
18 think you heard that right, Josie. I'll let
19 Tom speak to how we did that, but one thing I
20 think to keep in mind here is that the
21 residual radon at the plant would only be the

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1 radon that would be there as a result of the
2 manufacture of the three to four hundred
3 pounds of uranium.

4 MEMBER BEACH: Right.

5 DR. NETON: So you're essentially
6 reconstructing the amount of radon from that
7 uranium process in a literal sea of other
8 radon that was there from making phosphates.

9 So, with that caveat, I'll let Tom
10 describe what he did.

11 MEMBER BEACH: Okay. Thanks.

12 MR. TOMES: This is Tom. The
13 radon data that was available in those court
14 records was flux measurements and gas
15 measurements that were taken in, I believe
16 it's 1983 and 1984.

17 I'm not sure of the exact date
18 that's in there, but those flux measurements
19 were -- and gas measurements were reviewed
20 against similar data from the Florida
21 phosphate industry.

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1 They were all consistent with
2 phosphogypsum piles. The radium that was
3 present in the -- in the phosphate rock used
4 to produce the uranium for the AEC, nearly all
5 that would have been deposited in the
6 phosphogypsum stacks.

7 Small concentrations could be
8 elsewhere but would be insignificant compared
9 to what was deposited in the piles. And so we
10 looked at that data, and we actually
11 multiplied the residual -- the data that they
12 had, we multiplied that times five, based on
13 the fact that the -- the radon gas was
14 decreased over time due to the piles being
15 inactive, forms a crust, and the radon gas
16 decreases.

17 So we did that, and we also
18 considered the fact that only a small
19 percentage of the material in that pile was
20 attributable to AEC work. So we adjusted for
21 that -- for that also.

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1 Does that answer your question?

2 MEMBER BEACH: Yes. Thank you. I
3 just wanted to know how you came to that
4 conclusion.

5 CHAIRMAN MELIUS: Do any other
6 Board Members have questions on that or --
7 SC&A, do you have questions?

8 DR. MAURO: No. No, I don't.

9 CHAIRMAN MELIUS: Okay. If no one
10 else on the Board or SC&A have questions, Dan
11 McKeel, do you have any questions or comments?

12 DR. McKEEL: Yes, I do. Can you
13 all hear me okay?

14 MEMBER BEACH: Yes.

15 CHAIRMAN MELIUS: Yes, we can.

16 DR. McKEEL: Okay. Good. I do
17 have a few comments, and I just want to review
18 -- have a few comments, particularly about
19 things just said, but also about the larger
20 picture about Texas City.

21 One is that in the references, I

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1 didn't see any letter from the Department of
2 Labor reference about the change in the
3 covered period, so I wondered why that wasn't
4 there.

5 I did look today at the DOE
6 facility database that was updated August 10th
7 of this year, and it showed that the covered
8 period of TCC extended from October the 5th,
9 1953 to September 1955 and that the residual
10 radiation period was 1957 to 1977.

11 So there is a 15-month gap, at
12 least from the DOE facility description point
13 of view, and that gap is from October 1955
14 through December 31, '56. So that will leave
15 those folks out in the cold.

16 And what that gap resulted from,
17 of course, was that the old covered period
18 extended through 1957. Now it's been
19 shortened. So that's a comment about
20 something that I think needs to be adjusted.

21 DR. NETON: Dr. McKeel, can I

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1 comment on that? This is Jim Neton.

2 DR. McKEEL: Yes. Sure.

3 DR. NETON: We recognize that, and
4 that, of course, as you correctly identified,
5 is an artifact of the way residual periods are
6 defined.

7 NIOSH has the responsibility to
8 inform the Department of Energy what the
9 residual period is, and we do that through a
10 report to Congress. And until a report to
11 Congress gets updated, identifying that
12 change, the DOE website will stay the same.

13 We are working to that end as we
14 speak to provide that information in a letter
15 report to Congress that just updates -- this
16 affects this and other sites, and we're trying
17 to get that changed as quickly as we can.

18 DR. McKEEL: That would be good.
19 That's all I was trying to say needed to be
20 done. And I hoped it could be done by a
21 letter amendment.

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1 The other thing -- another thing I
2 want to point out is that Table 4.1 of the
3 revised Evaluation Report shows that there
4 were only 15 TCC claims that have been
5 referred to NIOSH for dose reconstruction.

6 When I checked the DOL website
7 today, and it's shown this for quite a while,
8 it shows that there are 47 covered claims and
9 30 covered cases filed with 17 cases having
10 been referred to NIOSH for dose
11 reconstruction, and it shows that now there
12 are three -- three of those cases with
13 completed dose reconstructions. Eleven cases
14 are listed as being currently at NIOSH
15 awaiting dose reconstruction, and the
16 statistics show that one person from Texas
17 City has been paid.

18 So the bottom line of this comment
19 is that there's a discrepancy of two between
20 the number of cases referred for dose
21 reconstruction according to NIOSH and this new

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1 report and what the Department of Labor
2 website has said for quite a while.

3 Third comment is that I just want
4 to make sure that we all are aware of the big
5 picture according to Texas City, and that is
6 that, unlike Blockson, for example, where
7 there were some urine bioassay data, there's
8 never been any claim, and it's reiterated in
9 this report on page 55, that there was any
10 personal monitoring film badge or bioassay
11 data for Texas City workers. There's no site-
12 specific appendix to TBD-6001 for Texas City.

13 And I also, just as a historical
14 note that's interesting to me apropos other
15 sites where petitioners have been concerned
16 that why so much work was allowed to take
17 place by NIOSH and SC&A and the Board after
18 an SEC petition was submitted, and there was
19 clearly at that time insufficient data for
20 NIOSH to reconstruct doses.

21 But I was told, when I first

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1 engaged this whole project in 2006, that NIOSH
2 had three TCC documents in their Site Research
3 Database, and I obtained them, finally, and I
4 note that in this Rev 1 of the Evaluation
5 Report, there are 85 references listed with
6 many pertinent ones that I can think of that
7 could have been listed.

8 Those documents include all of my
9 co-petitioner remarks to the Board and the
10 public docket about Texas City. The Texas
11 City worker petition about the handling of the
12 SEC, and my points made during the Surrogate
13 Data Work Group session.

14 And I've noted before that I
15 really do think that the date and so forth of
16 the Department of Labor's notification letter
17 regarding the covered period change in Texas
18 City ought to be referenced in this new
19 report.

20 The fourth point I want to make is
21 that on page five of 64, NIOSH finds that it

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1 is feasible to reconstruct all doses except
2 the radon doses during the revised AEC
3 operational period of 1953 to '55.

4 But I want to comment that this
5 site was selected by the Board specifically as
6 an ideal test site for SC&A to evaluate the
7 draft Board surrogate data criteria. And SC&A
8 did that, and they found that NIOSH had fallen
9 short on two of the four original draft
10 criteria by not sufficiently justifying
11 comparability of the different surrogate sites
12 that are used to construct the feasibility
13 analysis for dose reconstructions that's in
14 this current report.

15 And I just mention that along the
16 way, Board Member Brad Clawson stated on the
17 record that one of those sites in Idaho was
18 not comparable to Texas City based on his
19 personal experience.

20 And there is no new data in this
21 new report that goes -- that addresses the

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1 comparability of sites, really, at all. So to
2 me, those two SC&A findings are still not
3 actually addressed.

4 Another comment that really has
5 two parts. On page 41 of 46, referring to
6 radium-226 at the site, the narrative refers
7 to this, and I quote, "The uranium recovery
8 building, when it was closed in 1954," well,
9 the uranium recovery building at Texas City
10 was not closed in 1954, and several workers
11 have testified at the NIOSH outreach meetings
12 in 2007 that the TCC uranium recovery building
13 was very dusty inside, and it was used after
14 1955, and was even used by site workers
15 through late 1977, January 1978, when it was
16 finally demolished.

17 So that particular statement is
18 just not accurate. The recovery building was
19 used during the `50s, the rest of the `50s,
20 during the `60s, and into the `70s for
21 equipment storage and activities related to

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1 fertilizer production.

2 And, of course, as the workers
3 have also mentioned that going in and out of
4 that building, which was very dusty, they were
5 exposed to whatever residual uranium that
6 might have been there as well. That building,
7 to my knowledge, was never surveyed for
8 uranium content.

9 Referring to the residual period
10 radon, on page 41 of 46, in Table 7.6 on page
11 43, the implication is that dose referable to
12 AEC phosphogypsum can be parceled out when, in
13 fact, it cannot be clearly distinguished
14 physically from non AEC phosphogypsum piles.

15 The Act specifies that all such
16 mixed AEC and non-AEC waste for AWE sites such
17 as Texas City that are used in reconstructing
18 dose, that both types, the non-AEC and the AEC
19 mixed waste must be used during the residual
20 period.

21 And certainly, there's no way --

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1 I've talked to the workers. There is no
2 indication that the AEC phosphogypsum waste
3 that might contain uranium residues were in
4 any way separated physically from the rest of
5 this phosphogypsum.

6 So I don't think you can parcel
7 that out. I mean, you can calculate a
8 fraction that was mixed in with the much
9 larger fraction of non-AEC phosphogypsum, but
10 there's no way one can distinguish where that
11 was. So -- and the workers who worked around
12 those piles worked around all of them.

13 Anyway, just to remind you that
14 this report does comment that by 1970 there
15 were one million tons of phosphogypsum at
16 Texas City.

17 On page -- the seventh point was
18 on page 56 of 64 pages, the following passage
19 appears, and I quote, "Therefore, dose
20 reconstructions for individuals employed at
21 TCC during October the 5th, 1953 through

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1 September the 30th, 1960, but who do not
2 qualify for inclusion in the SEC, may be
3 performed using these data as appropriate."

4 I think that's probably a typo,
5 but anyway, just a reminder that it needs to
6 be corrected if it is, and the DOE facility
7 database lists the end date for the residual
8 contamination period at Texas City as 1977.

9 The other comment about the
10 recovery building was Wanda Munn referred to
11 the building as "big, old and rickety," and at
12 least with respect to the covered operational
13 AEC period, the construction for both the
14 fertilizer plant and the recovery building
15 started about the same time in 1952, and it
16 went on line in 1953. So, actually, the
17 recovery building was a brand new building,
18 and it wasn't old at all. Now that doesn't
19 help determine the size or the partitioning of
20 the building.

21 My understanding from the workers

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1 is that there was like a partial second floor,
2 you know, but I don't know anything about the
3 dimensions. So I think it's a correct
4 statement to say that not enough is known
5 about that building, but it certainly wasn't
6 old and rickety.

7 And I guess that's -- that's the
8 comments. I believe firmly that Texas City,
9 based on having zero monitoring data and all
10 the things that were not known when the SEC
11 was submitted, should have been in line based
12 on what has been done at numerous sites by
13 now, should have been an ideal candidate for
14 an 8314 SEC, and I think that's what should
15 have been done.

16 And I certainly hope now that this
17 has been -- you know, the petition was
18 submitted in February of 2007, and I certainly
19 hope now that we can bring this to a
20 conclusion, and I think the proper conclusion
21 is to support NIOSH's current recommendation

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1 to approve an SEC Class for that site.

2 Thank you very much.

3 CHAIRMAN MELIUS: Thanks, Dan.

4 MEMBER MUNN: Thank you, Dan.

5 This is Wanda. I just wanted to clarify that
6 I did not make any statements with respect to
7 -- to the building itself. I said the
8 impression that I got from what the workers
9 had said, and there's no question in my mind
10 you've studied that issue far better than I.
11 I was just reporting what my impression had
12 been of the comments that had been made by the
13 workers.

14 DR. McKEEL: Okay. Thank you.

15 CHAIRMAN MELIUS: Tom or Jim
16 Neton, do you have any comments or response
17 you want to make at this point?

18 DR. NETON: None other than that
19 we do acknowledge there's a typo from one of
20 Dr. McKeel's comments on the covered date, but
21 I don't think we have anything beyond that.

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1 DR. McKEEL: Okay.

2 CHAIRMAN MELIUS: Good. Any other
3 Board Members have comments or response?

4 (No response.)

5 CHAIRMAN MELIUS: Okay. Hearing
6 none, does anybody have any recommendations on
7 how we should move this forward or do we want
8 to make a recommendation to the Board on
9 accepting or not accepting this report, or do
10 we want to --

11 MEMBER ZIEMER: Well, I'm
12 reluctant, but I think we have to accept it at
13 this point, and I would hope that, during the
14 main meeting, we could have a little more
15 discussion on the issue of -- or the inability
16 to model that, just for the record.

17 CHAIRMAN MELIUS: Okay. Now --

18 MEMBER ZIEMER: But I'll support
19 it.

20 CHAIRMAN MELIUS: That's fine.
21 And I would hope that sometime soon we would

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1 find a -- a site where we can model, so --

2 MEMBER BEACH: Jim, this is Josie.

3 I do support recommending the Class go
4 through for radon, but I do have a question on
5 the rest of the surrogate data. What happens
6 with that? Will we continue discussing that
7 within this group?

8 CHAIRMAN MELIUS: Well, the -- I
9 guess there's two periods of time during the
10 covered period -- the reason this was referred
11 to the Surrogate Data Work Group was the
12 original radon issue during the covered time
13 period. That was the major reason for it.

14 And, you know, NIOSH, you know,
15 based on a lot of discussion that we all went
16 through with -- with -- Blockson decided that
17 the use of the Florida data and so forth was
18 not appropriate for -- for this, given what
19 little information there was on Texas City,
20 and also then considered using the -- I'll
21 call it, for lack of a better name, the

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1 building model approach, and have, you know,
2 found that that was also not adequate.

3 So I think that was the major
4 surrogate data issue that was addressed, and
5 then, you know, once it's -- we've made a
6 finding regarding these people be added --
7 added to the Class, and since the Class would
8 cover all of the employees during the covered
9 time period, I'm not -- you know, it's usually
10 been our practice not to try to spend a lot of
11 effort on -- the other is that where NIOSH has
12 other data that's available or whether it be
13 surrogate or other modeling for doing
14 individual dose reconstructions for people
15 with noncovered cancers, they would -- they
16 would do so.

17 DR. NETON: Dr. Melius.

18 CHAIRMAN MELIUS: Yes.

19 DR. NETON: This is Jim Neton. I
20 would just like to point out that the
21 surrogate data used in this report is

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1 virtually the same as that that was employed
2 in Blockson.

3 CHAIRMAN MELIUS: Yes.

4 DR. NETON: So there -- except for
5 one -- in one -- with one exception, it's the
6 same exact surrogate data.

7 CHAIRMAN MELIUS: Right. And I
8 was also going to go on to that, and I believe
9 for the residual period it's quite similar
10 also. Is that true, Jim?

11 DR. NETON: No. I'm not -- I
12 don't think so.

13 CHAIRMAN MELIUS: Okay.

14 DR. NETON: I think, for the
15 residual period, the radon in particular, we
16 did not have, you know --

17 CHAIRMAN MELIUS: Right.

18 DR. NETON: -- a model radon at
19 Blockson. Was the external the same?

20 Oh, yes. Tom is nodding to me
21 that the external was the same, so --

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1 CHAIRMAN MELIUS: Okay. I did a
2 quick comparison, so --

3 DR. NETON: Okay. Yes. At any
4 rate, there's not much new in here in the
5 realm of surrogate data that the Board hasn't
6 seen before at other sites.

7 CHAIRMAN MELIUS: Yes.

8 DR. McKEEL: Dr. Melius, may I
9 make one comment that I forgot to make?

10 CHAIRMAN MELIUS: Sure. You sure
11 may.

12 DR. McKEEL: Real quickly. The
13 comment was made that the radon measurements
14 from the phosphogypsum piles or stacks were
15 made during the residual period, and that's
16 actually not true. The court records were
17 referable to measurements, I think, made in
18 1983 and '84, and that was six to seven years
19 after the residual period ended.

20 So, again, we're taking
21 measurements at the site, but -- but some

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1 years past when the residual period ended. So
2 there really are no measurements of radon at
3 the site during either the operational or the
4 residual periods, to be accurate about things.
5 And I guess that's it. Thank you.

6 CHAIRMAN MELIUS: Okay. Thanks.

7 So I guess -- these are options,
8 and I'm not making a recommendation, but one
9 would be, you know, we could make some
10 assessment or have SC&A review the residual
11 period, particularly the use of radon, the
12 surrogate data during that time period.

13 We also have another, you know,
14 residual period site. It's a different site,
15 type of site, to some extent but, you know,
16 Dow Madison, that we have a Work Group Meeting
17 on next -- next week, as well as will come up
18 at the Board Meeting the following week.

19 And there's also going to be
20 discussion, I believe, of the radon issue at
21 the Linde site at the Board Meeting. So I

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1 guess we -- we could also make a determination
2 of what to - if we need to do any further work
3 on the residual period at the Board Meeting
4 after discussion of those other sites in
5 addition to what -- see what other Board
6 Members' response is to the --

7 MEMBER MUNN: Well, these other
8 sites are not phosphate plants.

9 CHAIRMAN MELIUS: I know. I know.

10 MEMBER MUNN: Their radon
11 exposures should be markedly different --

12 CHAIRMAN MELIUS: Right.

13 MEMBER MUNN: -- from these
14 particular plants. As best I can see, the
15 only -- the only similarities that we're
16 dealing with here that we're rejecting out of
17 hand are that any of the measurements made at
18 the Texas phosphate plant can be applied
19 anywhere else.

20 And if that's the argument, then -
21 - then it doesn't seem to me that it applies

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1 to the other surrogate data issues.

2 CHAIRMAN MELIUS: Yes.

3 MEMBER MUNN: We're simply talking
4 about Texas Chemical.

5 CHAIRMAN MELIUS: I was talking
6 about in a very general sense, Wanda.

7 MEMBER MUNN: Yes.

8 CHAIRMAN MELIUS: But your point's
9 taken.

10 Any other comments or preferences?

11 (No response.)

12 CHAIRMAN MELIUS: Personally, I'm
13 comfortable with the radon approach used for
14 the residual period.

15 MEMBER MUNN: I don't see any
16 alternative other than to recommend --

17 CHAIRMAN MELIUS: Yes.

18 MEMBER MUNN: -- that we accept
19 the report that -- the revised ER report that
20 NIOSH has provided us. I don't see any
21 alternative to that at all.

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1 CHAIRMAN MELIUS: And Josie?

2 MEMBER BEACH: Yes. Well, I kind
3 of wouldn't mind having SC&A look at the
4 residual period and the records, but that's
5 just my thought, so go with the majority.

6 CHAIRMAN MELIUS: Well, Paul, do
7 you have any --

8 MEMBER ZIEMER: No. I said I
9 would support the general recommendation of
10 NIOSH.

11 CHAIRMAN MELIUS: What about the
12 SC&A for the worker --

13 MEMBER ZIEMER: I am trying to
14 recall the two unresolved issues that go back
15 on this particular one, and Dr. McKeel
16 mentioned it as well. I guess we need to get
17 a feel for whether or not those are issues
18 that are still in play, even if this becomes
19 an SEC site.

20 CHAIRMAN MELIUS: My recollection,
21 and I looked through the SC&A report this

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1 morning, was that the first issue was the --
2 using the Florida phosphate data for radon.
3 So that's been -- that one's been addressed on
4 that.

5 MEMBER ZIEMER: Right.

6 CHAIRMAN MELIUS: John, do you --
7 or, Bill, do you recall the other?

8 DR. MAURO: I don't. Bill, I know
9 --

10 MR. THURBER: This is Bill. One
11 of the things that we talked about at the
12 time, we felt that the approach to modeling
13 the exposure from drums of yellowcake was a
14 bit of over-kill.

15 CHAIRMAN MELIUS: Yes.

16 MR. THURBER: And that has
17 certainly been corrected in the revised
18 Petition Evaluation Report. I don't recall
19 all of the other --

20 CHAIRMAN MELIUS: I'm looking
21 through the executive summary, and I think --

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1 MEMBER BEACH: Jim, you're talking
2 about the nine findings or so?

3 CHAIRMAN MELIUS: Yes.

4 MEMBER BEACH: Yes. I've been
5 looking through that, myself.

6 CHAIRMAN MELIUS: Well, why don't
7 we defer on that. Everybody take another look
8 at it.

9 MEMBER ZIEMER: We can do tasking
10 at the --

11 CHAIRMAN MELIUS: At the meeting
12 if we think it's appropriate.

13 MEMBER ZIEMER: Yes.

14 CHAIRMAN MELIUS: I'll do it that
15 way. That's --

16 MEMBER ZIEMER: Yes.

17 CHAIRMAN MELIUS: -- appropriate.
18 Good. Okay. Any other comments or questions?

19 Ted, do you have any?

20 MR. KATZ: No. No comments.

21 CHAIRMAN MELIUS: You get the

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1 final word. If not, thank everybody. Thank
2 you, Dan and SC&A and Tom and Jim and all the
3 Board Members for your participation, and
4 we'll see you in Santa Fe.

5 MEMBER ZIEMER: Okay.

6 CHAIRMAN MELIUS: Okay. Thanks
7 very much.

8 MR. KATZ: Jim and everybody, bye-
9 bye.

10 (Whereupon, at 2:03 p.m., the
11 above-entitled matter was concluded.)

12

13

14

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