

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

BLOCKSON CHEMICAL

The verbatim transcript of the Working
Group Meeting of the Advisory Board on Radiation and
Worker Health held telephonically on
November 19, 2007.

*STEVEN RAY GREEN AND ASSOCIATES
NATIONALLY CERTIFIED COURT REPORTING
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November 19, 2007

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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.

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-- "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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TOMES, TOM, NIOSH

NOVEMBER 19, 2007

P R O C E E D I N G S

(11:00 a.m.)

WELCOME AND OPENING COMMENTS

1
2
3 **DR. BRANCHE:** We're going to proceed now with
4 the meeting of the Blockson working group. Dr.
5 Wanda -- Ms. Wanda Munn is the chair. Wanda,
6 you're on the line?

7 **MS. MUNN:** I am.

8 **DR. BRANCHE:** Gen Roessler, have you joined?
9 (no response)

10 **DR. BRANCHE:** Dr. Jim Melius?

11 **DR. MELIUS:** Yeah, I'm here.

12 **DR. BRANCHE:** Okay. Michael Gibson?

13 **MR. GIBSON:** Yes, I'm here.

14 **DR. BRANCHE:** Brad Clawson?

15 **MR. CLAWSON:** I'm here.

16 **DR. BRANCHE:** I'm Dr. Christine Branche. I
17 didn't introduce myself; I apologize.

18 Other staff from NIOSH, would you please
19 state your name.

20 **UNIDENTIFIED:** Hello?

21 **DR. BRANCHE:** Yes?

22 **MS. ZEAMER*:** My name is Margaret Zeamer (ph).

23 **DR. BRANCHE:** Are you a member of the public,

1 Ms. Beamer (sic)?

2 **MS. ZEAMER:** Am I what?

3 **DR. BRANCHE:** A member of the public?

4 **MS. ZEAMER:** Yes.

5 **DR. BRANCHE:** Well thank you for joining the
6 call. Anyone else who would like to introduce
7 themselves?

8 **DR. NETON:** Hi, this is NIOSH in Cincinnati.
9 You've got Jim Neton here and Tom Tomes.

10 **DR. BRANCHE:** Thank you very much.

11 **MR. MCGOLERICK:** And Robert McGolerick with
12 HHS.

13 **MR. BROEHM:** Jason Broehm with the CDC
14 Washington office.

15 **MR. KOTSCH:** Jeff Kotsch with Labor.

16 **DR. BRANCHE:** Anyone else who is not with --
17 any other federal agencies or anyone else who
18 would like to state their name? Ms. Beamer, we
19 already have you. Thank you.

20 **MS. ZEAMER:** Thank you.

21 **DR. MAKHIJANI:** This is Arjun Makhijani, of
22 SC&A.

23 **DR. BRANCHE:** Would any of you who have a
24 conflict with the Blockson site please state
25 that?

1 have my comments, very brief comments from my
2 e-mail yesterday, as to the order that we're
3 going to address?

4 **DR. NETON:** Yes, we do.

5 **MS. MUNN:** We all have the two documents that
6 we had in reference to the question that's been
7 raised as to...

8 **DR. NETON:** Yes.

9 **THE BLOCKSON WHITE PAPERS**

10 **MS. MUNN:** We're going to address the white
11 papers that were issued since those were the
12 outstanding issues from our original charge.

13 John Mauro?

14 **DR. MAURO:** Yes, I'm here.

15 **MS. MUNN:** Did you get the opportunity to look
16 at these things and -- Tom, I'm assuming you've
17 had an opportunity now to see the responses
18 that SC&A's made. I trust there have been some
19 communications off-line in the meantime about
20 some of the finer points. Jim, would you like
21 to take the lead on this, or would you like Tom
22 to?

23 **DR. MAURO:** I'm sorry, Wanda, did you ask Jim
24 that question or me?

25 **MS. MUNN:** I asked Jim that question.

1 **DR. MAURO:** Okay.

2 **DR. NETON:** Yeah, Wanda this is Jim. I think
3 I'll turn it over to Tom Tomes if you'd like us
4 to summarize our -- you know what we prepared
5 for the white paper that was issued on November
6 13th.

7 **MS. MUNN:** If Tom would do that very briefly so
8 that John could then go on to SC&A's review of
9 that.

10 **DR. NETON:** Okay, we'll do that. Tom's got the
11 speaker.

12 **MR. TOMES:** Okay, I'll just summarize the
13 (unintelligible) white paper that we prepared
14 in response to the Thorium-230 issue.

15 (Telephonic interference) provide a
16 detailed evaluation of the Thorium-230
17 concentration and exposures from raffinate of a
18 certain stream, that being the (telephonic
19 interference) filtering operations. And there
20 was analytical data in some Blockson documents
21 that we have, and so we've taken that data and
22 analyzed that and came up with a Thorium-230
23 concentration in that particular residue. And
24 that data seems to be pretty strong and the
25 results. And that's the way we can actually

1 calculate a -- some distributions to see if it
2 makes sense. And the data's pretty consistent.

3 And so we've got this Thorium-230
4 concentration in this raffinate that we can
5 quantify, which is about 500 picocuries per
6 gram. So we've taken that concentration and
7 applied it to the screening analysis that SC&A
8 provided to us in their paper dated November
9 the 4th, I believe it was. This provides just
10 a screening tool to see if it was plausible
11 that the intakes of Thorium-230 could have been
12 higher than what the TBD proposes.

13 So I've taken the data and I've taken
14 off their evaluation and our data and
15 transferred it to an hourly intake so I can do
16 a direct comparison to (unintelligible) person
17 was at the drumming station being exposed to a
18 dry uranium or being exposed to the filter
19 raffinate for our -- see which is the highest
20 intake. And basically what I've concluded is
21 that the drum will always be higher. Worst
22 case scenario: If 100 percent of Thorium-230
23 ends up in raffinate, which is really not
24 plausible, but at worst case, then it would
25 take an average of 10 milligrams per cubic

1 meter of total dust in the air from that
2 filtering operation to equal the intakes we're
3 assigning from the uranium drum in the drumming
4 operation. So we have concluded that for a wet
5 operation it's not really feasible for a wet
6 filtering operation to average 10
7 (unintelligible) per cubic meter. And for
8 example if the Thorium-230, you apply the more
9 realistic concentration, that means the air
10 would have to be even higher than that.

11 So to summarize, we just concluded that
12 that fact alone to us indicates that we have
13 provided bounding intake. There are some other
14 data (unintelligible) white paper which derives
15 more details, but that's really the bottom line
16 which we believe supports what we're doing.

17 **MS. MUNN:** John?

18 **DR. MAURO:** Yes, we, SC&A, did perform a
19 detailed review of the paper, and we actually
20 did it independently. Arjun Makhijani, myself
21 and Bob Anigstein reviewed the paper
22 separately, did our own calculations looking
23 into the supporting arguments, and in addition
24 in order to make sure we did understand fully
25 the paper, I did speak to Jim Neton just to

1 confirm that we understood the points that were
2 being made by Hans Holmes* in the write-up, and
3 we did. We did understand them correctly.

4 Bottom line is we all agree that the
5 exposures as derived in this November 13th does
6 -- it would take about 10 milligrams per cubic
7 meter of dust loading in the what they call the
8 filter press area, step one, before you could
9 have an intake of thorium that could exceed the
10 intake associated with I would say the 55
11 gallon drum area. So we also believe that it
12 is highly unlikely that you would ever get a
13 dust loading of that magnitude in a chronic
14 situation in an area such as the filter press
15 area, so we are coming down in favor of NIOSH's
16 position that they've taken regarding the
17 intake of Thorium-230 at the Blockson facility.
18 And we do concur that the method that they've
19 currently adopted is in fact bounding and
20 scientifically sound and claimant favorable.

21 The one area that Tom had not mentioned
22 had to do with the chemical form. And that may
23 be the second item; that is, what chemical form
24 is appropriately to be assumed, once you agree
25 that the intake is bounding, and we do agree,

1 that the intake that they've described is
2 bounding, we also concur that using, and I
3 believe that this is the position that they've
4 taken, is that they will use either Type S or
5 Type M thorium, depending on the particular
6 cancer that's of concern. So they're going to
7 use a more limiting assumption. Tom, is that a
8 correct interpretation of your write-up?

9 **MR. TOMES:** Yes.

10 **DR. MAURO:** And we concur with that. We think
11 that is the prudent path to take.

12 **MR. TOMES:** A close review and look at that
13 issue, I believe we need to make revisions to
14 TBD to specify that.

15 **DR. MAURO:** There was a third item related to
16 this, and that has to do with I believe that
17 your position is that the default intake that
18 you're adopting, 41 picocuries per day, for
19 Thorium-230, would be applied not only to
20 workers in Building 55. Is it also correct
21 that you would apply that to all workers,
22 including workers that might be working in
23 Building 40?

24 **MR. TOMES:** Yes, the intention of that in the
25 TBD was to use whichever scenario provides the

1 highest dose to the organ of interest, and
2 quite frankly I have not calculated the
3 possibilities for all the organs because
4 there's other isotopes and ratios that impact
5 the final dose numbers, so it relates to
6 whichever intake results in the highest dose.

7 **DR. MAURO:** So on that basis and with that
8 clarification, yes, across the board regarding
9 the Thorium-230 issue that we've raised
10 originally, we believe they've all been
11 satisfactorily resolved.

12 **MS. MUNN:** This is the last item that I had on
13 my list for resolution. Does anyone else have
14 any outstanding items with respect to Blockson
15 Chemical Company?

16 **ACTION ITEMS**

17 All right. I have only one item on my
18 Action List, and that is revision of the TBD to
19 be done by NIOSH. Any other outstanding action
20 item?

21 **DR. MELIUS:** Yes, this is Jim Melius. I had an
22 action item goes back about two meetings that
23 John Mauro... It was a question I raised at
24 one of the other work group meetings regarding
25 the sort of how robust the basic monitoring

1 database was, and John had a like a verbal
2 report but said he was going to give me a
3 written report on that?

4 **DR. MAURO:** We did not give you the written
5 report and I have to say that we've been
6 focusing on the thorium but Chick Phillips is
7 on the line and he did look at the robustness
8 of the bioassay data question. 'Cause
9 ultimately the question was okay, since
10 everything related to intake is based on
11 bioassay data collected from the workers
12 involved with the uranium production activities
13 in Building 55, yes, I did ask Chick Phillips
14 to look into that, and that goes back a ways.
15 That goes before two meetings ago.

16 Chick, are you on the line?

17 **MR. PHILLIPS:** I am, John.

18 **DR. MAURO:** Are you in a position at this time
19 to provide any information regarding that?

20 **MR. PHILLIPS:** I think your assessment is
21 correct. I've looked at the bioassay data and
22 concluded that based on the laboratory that
23 analyzed that, to the best of our ability we
24 believe that data is sufficient to do the
25 analysis that were provided for it. That's the

1 short version.

2 **MS. MUNN:** Jim, would you like a one-paragraph
3 written response from SC&A, outlining that for
4 you?

5 **DR. MELIUS:** I would like a report. John said
6 he was -- it was back three meetings I've been
7 waiting for my report. I want a report.

8 **DR. MAURO:** We'll take care of it. I think
9 that we have now addressed the full spectrum of
10 issues, and we are in a position now,
11 especially since the latest report from Tom
12 Tomes came in on November 13th, I think we can
13 probably write a report, address all the issues
14 -- Yes, Jim, we probably could have given you a
15 report on the data reliability question for the
16 bioassay data sooner. We hadn't; we've sort of
17 been holding off until we had a chance to talk
18 about this last round of issues, but we will
19 certainly take care of that at this time.

20 **DR. MELIUS:** Okay, thanks.

21 **MS. MUNN:** So what I'm hearing is, you have two
22 action items. One is the TBD revision that
23 NIOSH will do. Second is a final written
24 report from SC&A, being that the concerns have
25 been met and including a robustness report

1 specifically addressing that issue that was
2 raised from Dr. Melius. Is that a correct
3 statement?

4 **DR. MAURO:** Yes, this is John. Yes, we will
5 prepare that report.

6 **DR. NETON:** And sounds correct to us from the
7 NIOSH perspective.

8 **MS. MUNN:** Good.

9 **DR. NETON:** I think the only revision we're
10 making to the TBD, as I understand it, is to
11 acknowledge that we would either use Type S or
12 M for the thorium intakes, whichever creates
13 the highest organ dose. I think that's all
14 we...

15 **MS. MUNN:** Am I being overly optimistic that
16 these two action items are sufficiently and
17 already, that they could be completed prior to
18 the conference call, the full Board call, on
19 the 27th? Is that too optimistic, given
20 holidays here? Are they essentially ready to
21 go?

22 **DR. NETON:** Ours is not ready to go, Wanda.
23 This is Jim. But I think we can have it by the
24 27th. It would be essentially a page-change
25 notice, revision.

1 **MS. MUNN:** Good.

2 **DR. MAURO:** I guess, we should be able to -- we
3 will be able to deliver our report. Should
4 this report go to the working group, or should
5 this be for the full distribution to the entire
6 Board?

7 **MS. MUNN:** I think in this case it should go to
8 the Board.

9 **DR. MAURO:** Okay.

10 **MS. MUNN:** Because it is one of the items I
11 would like to be able to make sure the agenda
12 for the 27th meeting...

13 **DR. MAURO:** I suspect it will be sent out
14 electronically on the 26th.

15 **MS. MUNN:** Was that all right with the other
16 members of the Board? That's certainly
17 sufficient with me.

18 That all right with you, Jim?

19 **DR. NETON:** Yes, it is.

20 **MS. MUNN:** Brad?

21 **MR. CLAWSON:** Yeah.

22 **MS. MUNN:** Mike?

23 (no response)

24 **DR. MELIUS:** This is Jim Melius. What are we
25 going to do on the Board call on the 27th?

1 **MS. MUNN:** It's my expectation to report to
2 them that all of SC&A's findings have been
3 identified and they have all reached resolution
4 at the change in the TBD and the incorporation
5 of the white papers that have been generated
6 during our deliberations will make it possible
7 for us -- the Blockson Chemical Company
8 recommendations of NIOSH to the Board at our
9 next full meeting.

10 **DR. MELIUS:** So you're talking about the
11 January meeting?

12 **MS. MUNN:** Yes.

13 **DR. MELIUS:** Oh, okay.

14 **MS. MUNN:** That's when we had originally
15 planned to have the vote take place.

16 **MR. CLAWSON:** Wanda, this is Brad. I just have
17 one question. On this change to the TBD, I
18 heard that it's just going to be a small minor
19 change and they're going to be trying to figure
20 out -- I guess I just wanted to make sure I
21 just want to be able to see that or so forth.

22 **MS. MUNN:** Would you be able to clarify that
23 for Brad, Jim?

24 **DR. NETON:** I'm sorry, you mean in the TBD or
25 right now?

1 **MR. CLAWSON:** No, I was just wondering, that's
2 the only change we're going to be doing to the
3 TBD?

4 **DR. NETON:** Well, the only change as a result
5 of our deliberations right now is the change to
6 Thorium-230 intakes to allow for either Type S
7 or M, whichever creates the highest organ dose
8 for the cancer under investigation.

9 I was talking off-line with Tom Tomes.
10 There are a few minor edits we need to fix
11 while we're doing this, but they're really not
12 substantive. We can prepare a summary of all
13 the changes and provide it to the working
14 group.

15 **MR. CLAWSON:** I just, I guess I'm just having
16 trouble with all these different work groups of
17 trying to keep the changes that we are doing
18 what changes to which TBD.

19 **DR. NETON:** This is the Blockson Chemical TBD
20 only.

21 **MR. CLAWSON:** Right, I understand that. I'm a
22 lot like you; I have a lot of them running in
23 together. I just wanted to make sure we've got
24 that, that we saw what it was.

25 **MS. MUNN:** I think a listing of those changes,

1 Jim, would be very helpful.

2 **DR. NETON:** And we'll try to be careful. Every
3 revision there's a record of revision table in
4 those documents. We try to be pretty specific
5 in there as to what changes, so people will be,
6 be easy to tell. Sometimes we get a little
7 sloppy with that and don't get real specific,
8 but this time we'll try to be very careful.
9 And we'll let the working group know as well as
10 to what changes were made.

11 **MS. MUNN:** Are you comfortable with that, Brad?

12 **MR. CLAWSON:** Yes.

13 **MS. MUNN:** All right. Very good. Anything
14 else for the good of the order?

15 **DR. BRANCHE:** So Wanda, this is Christine,
16 again. I just want to make sure that you are
17 going to provide, you're going to take time on
18 the agenda during the work group updates to
19 give an update on what's proceeding with
20 Blockson?

21 **MS. MUNN:** It's my expectation, yes.

22 **DR. BRANCHE:** Okay, all right.

23 **MS. MUNN:** We'll look forward to receiving
24 information from both of you on the 26th and
25 hope everyone has an absolutely delightful

1 Thanksgiving.

2 **DR. BRANCHE:** Wanda, this is Christine, again.
3 I would like to ask all of the people on the
4 call, when you are sending out documents, if
5 you're going to send it to Dr. Wade, if you
6 could please include me as well. I've been
7 dropped off of several messages, and it makes
8 it difficult for us to keep our logues here.
9 Branche is like on a tree, with an E on the
10 end.

11 **MS. MUNN:** And does everyone have that on their
12 e-mail list?

13 **MR. CLAWSON:** I do.

14 **MS. MUNN:** Good.

15 **DR. BRANCHE:** Thank you.

16 **MS. MUNN:** We're good to go. Thank you all
17 very much.

18 **DR. WADE:** Thank you all.

19 (Whereupon, the meeting concluded at 11:25
20 a.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 November 19, 2007; 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 19th day of November, 2007.

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