# U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES CENTERS FOR DISEASE CONTROL

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# NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY AND HEALTH

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# ADVISORY BOARD ON RADIATION AND WORKER HEALTH

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### 64th MEETING

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TUESDAY
SEPTEMBER 8, 2009

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The meeting convened by teleconference at 11:00 a.m., Paul L. Ziemer, Chairman, presiding.

#### PRESENT:

PAUL L. ZIEMER, Chairman
JOSIE M. BEACH, Member
BRADLEY P. CLAWSON, Member
MICHAEL H. GIBSON, Member
MARK GRIFFON, Member
WANDA I. MUNN, Member
ROBERT W. PRESLEY, Member
GENEVIEVE S. ROESSLER, Member
PHILLIP SCHOFIELD, Member

THEODORE M. KATZ, Acting Designated Federal Official

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#### ALSO PRESENT:

ADAMS, NANCY, NIOSH Contractor
AL-NABULSI, ISAF, DOE
BARRIE, TERRIE, ANWAG
FITZGERALD, JOE, SC&A
HOWELL, EMILY, HHS
KOTSCH, JEFFREY, DOL
LAUFER, LARA, GAO
RUTHERFORD, LAVON, NIOSH OCAS
MAURO, JOHN, SC&A
NETON, JIM, NIOSH OCAS
OSTROW, STEVE, SC&A
ROBERTSON-DEMERS, KATHRYN, SC&A
RUBINS, SUZANNE, GAO

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1	P-R-O-C-E-E-D-I-N-G-S
2	11:02 a.m.
3	MR. KATZ: Welcome, everybody.
4	This is the Advisory Board on Radiation and
5	Worker Health conference call. And as usual,
6	we're going to begin with roll call, beginning
7	with Board members and with the Chair. To
8	make things easy, let me just run down the
9	list and, people, let me know if you're here.
10	Dr. Ziemer is here.
11	CHAIRMAN ZIEMER: Yes.
12	MR. KATZ: All right. Then, Mr.
13	Schofield?
14	MEMBER SCHOFIELD: Here.
15	MR. KATZ: Dr. Roessler?
16	(No response.)
17	MR. KATZ: Mr. Presley?
18	MEMBER PRESLEY: Here.
19	MR. KATZ: Dr. Poston?
20	(No response.)
21	MR. KATZ: Okay. Ms. Munn?
22	MEMBER MUNN: Here.

1	MR. KATZ: And, Jim Melius, I'll
2	let you know, he has a press conference that
3	was scheduled very recently that's going to
4	maybe keep him away for the whole meeting.
5	Dr. Lockey?
б	CHAIRMAN ZIEMER: But he will join
7	us if we're still in session.
8	MR. KATZ: That's right: when he's
9	through.
10	CHAIRMAN ZIEMER: When he's
11	through.
12	MR. KATZ: But he thinks he may
13	not be through until 12:30, 1:00 or later.
14	And I'm not sure what the length of this
15	meeting will be.
16	CHAIRMAN ZIEMER: Yes. Okay.
17	MR. KATZ: And, you know, he has
18	an agenda item, but I think he's communicated
19	with Mark so that Mark can carry some of that
20	water at least.
21	CHAIRMAN ZIEMER: Yes.

MR. KATZ: Dr. Lockey?

1	(No response.)
2	MR. KATZ: Actually, you know, I
3	think I recall that Dr. Lockey can't make
4	this.
5	CHAIRMAN ZIEMER: Yes.
6	MR. KATZ: So Mr. Griffon? Mark?
7	(No response.)
8	MR. KATZ: Okay. I know he's
9	intending to attend.
10	Mr. Gibson?
11	MEMBER GIBSON: Yes. I'm here,
12	Ted.
13	MR. KATZ: And, Mr. Clawson?
14	MEMBER CLAWSON: I'm here.
15	MR. KATZ: And, Ms. Beach, you
16	still with us?
17	MEMBER BEACH: I'm here.
18	MR. KATZ: Okay. Let me just
19	check back through the folks that didn't
20	respond.
21	Dr. Roessler?
22	MEMBER ROESSLER: I just tuned in.

1	MR. KATZ: Great. Welcome.
2	Dr. Poston?
3	(No response.)
4	MR. KATZ: Okay. I have no notice
5	from Dr. Poston, I don't think.
6	Again, Dr. Lockey probably not to
7	be with us.
8	Mr. Griffon?
9	MEMBER GRIFFON: Yes, I'm here,
10	Ted, now.
11	MR. KATZ: Oh, great. Okay.
12	CHAIRMAN ZIEMER: So we have a
13	quorum.
14	MR. KATZ: We have a quorum. And
15	then let me just also check and see for other
16	federal attendants, first OCAS and ORAU team.
17	DR. NETON: Jim Neton.
18	MR. RUTHERFORD: LaVon Rutherford
19	with OCAS.
20	MR. KATZ: Welcome. More with
21	OCAS?
22	(No response.)

1	MR. KATZ: How about the ORAU
2	team?
3	(No response.)
4	MR. KATZ: Okay. How about SC&A?
5	DR. MAURO: John Mauro, SC&A.
6	Good morning, everyone.
7	CHAIRMAN ZIEMER: Good morning,
8	John.
9	MR. KATZ: Good morning, John.
10	DR. OSTROW: Steve Ostrow, SC&A.
11	MR. KATZ: Good morning, Steve.
12	DR. OSTROW: Good morning.
13	MS. ROBERTSON-DeMERS: Kathy
14	Robertson- DeMers, SC&A.
15	MR. KATZ: Hi, Kathy.
16	MR. FITZGERALD: Joe Fitzgerald,
17	SC&A.
18	MR. KATZ: All right, then. How
19	about members of the public or staff of
20	congressional offices?
21	CHAIRMAN ZIEMER: Who want to be
22	identified.

1	MS. BARRIE: This is Terrie
2	Barrie, with ANWAG.
3	MR. KATZ: Welcome, Terrie.
4	MS. BARRIE: Good morning.
5	MR. KATZ: Okay. And finally,
6	other federal employees and contractors.
7	MS. HOWELL: Emily Howell, HHS.
8	MS. ADAMS: Nancy Adams, NIOSH
9	contractor.
10	MS. AL-NABULSI: Isaf Al-Nabulsi,
11	DOE.
12	MR. KOTSCH: Jeff Kotsch,
13	Department of Labor.
14	MS. RUBINS: Suzanne Rubins,
15	R-U-B-I-N-S, U.S. GAO.
16	MS. LAUFER: Lara Laufer, GAO.
17	MR. KATZ: Great. Welcome.
18	Welcome, all of you. And then let me just
19	remind everyone on the line to please mute
20	your phones except when you're addressing the
21	group. And if you don't have a mute button,
22	the *6 will work. And then to come back, to

1	be able to speak again, you just press *6
2	again. And if you have to leave this call at
3	any time, please don't put it on hold. Just
4	hang up and call back in, because the hold
5	will interrupt the call for everyone else.
6	And, Dr. Ziemer, it's yours.
7	MEMBER PRESLEY: Hey, Ted?
8	MR. KATZ: Yes?
9	MEMBER PRESLEY: This is Bob
10	Presley. Has anybody else got a bad
11	connection besides me?
12	MEMBER CLAWSON: Bob, this is
13	Brad. It's coming in clear to me and
14	CHAIRMAN ZIEMER: Yes, I'm real
15	clear.
16	MEMBER PRESLEY: I'm going to hang
17	
	up and try again, because I can't hardly hear
18	up and try again, because I can't hardly hear anybody.
18 19	
	anybody.
19	anybody.  MR. KATZ: Okay, Bob.

here in just a second, but we still have a quorum.

So let me officially call the meeting to order and welcome everybody.

Appreciate your taking time to participate in the meeting today.

The agenda for today's meeting has been posted on the website, and Board members should have also received copies of the agenda by email.

Any Board members who don't have copies of the agenda?

(No response.)

CHAIRMAN ZIEMER: Very good. Then I'm going to proceed down through the agenda with one exception in terms of order. You'll notice -- and the agenda doesn't have numbers, but bullet points -- the Blockson item, which is the fourth bullet point. I'm going to defer that to the end of the agenda in order to provide a possibility for Dr. Melius to participate, if in fact, he's able to join us

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1	by the time his meeting is over, or before our
2	meeting is over, whichever occurs.
3	And, Mark, were you asking a
4	question there? Or somebody
5	MEMBER GRIFFON: No, it wasn't me.
6	CHAIRMAN ZIEMER: Oh, okay.
7	MEMBER PRESLEY: Hey, Paul, this
8	is Bob Presley.
9	CHAIRMAN ZIEMER: Oh, Bob is back.
10	MEMBER PRESLEY: I'm on. I can
11	hear now.
12	CHAIRMAN ZIEMER: You're back on.
13	Thank you.
14	So with that exception to the
15	order, we'll just proceed through the agenda
16	as given.
17	I want to point out for all the
18	participants that are on the conference calls
19	of this type, we mainly are doing updates and
20	gathering information that we wanted to have
21	prior to our face-to-face meeting. In
22	general, we do not conduct actions that have

significance, such as voting on SECs or that sort of thing conference calls. on So primarily what will do today will be we updates on particular items and informational I do have one sort of what I might items. classify as not a major action item. That has to do with the transcript review policy where I may ask for a motion to approve the policy, but otherwise talking about we're informational items primarily.

So with that, let's proceed on the The first item we have is the update on the voting for the SECs for Lake Ontario Ordnance Works, Baker-Perkins and Norton. All three of those were action items at our last meeting. All three of those items were recommended for SEC class by the Board by majority vote. However, at the time of the Board meeting we did not have all of the votes recorded.

So, Ted, if you'll give us an update.

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MR. KATZ: Thank you, Dr. Ziemer.

I need to slightly amend what you said,

though. But Lake Ontario -
CHAIRMAN ZIEMER: Oh, right. They

were not all recommended for SEC. We took

MR. KATZ: Exactly.

action on all three.

CHAIRMAN ZIEMER: Right.

Exactly. MR. KATZ: And Melius had to miss the second day of the Board meeting, so I had collected votes from Dr. Melius on all three action items. August 24th he voted with the Board on Lake Ontario Ordnance Works, and that was for the addition of that class. And he also at that time abstained from the Norton SEC vote of the Board, which was for the addition of a class And on August 28th he voted in at Norton. support of the Board's position that doses can be reconstructed at Baker-Perkins for the five- day period that was evaluated by OCAS.

CHAIRMAN ZIEMER: Right. And that

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1	action was to not recommend the class.
2	MR. KATZ: Exactly.
3	CHAIRMAN ZIEMER: So that was the
4	correction in my original statement.
5	MR. KATZ: Not add a class for
6	Baker- Perkins.
7	CHAIRMAN ZIEMER: But, so all of
8	those votes now are officially on the record.
9	The letters have been prepared as required
10	and transmitted to the Secretary. So those
11	actions are complete as far as the Board's
12	work is concerned at the moment.
13	Are there any questions on those
14	actions?
15	(No response.)
16	CHAIRMAN ZIEMER: If not, we will
17	proceed. The next item is the status of
18	Department of Labor considerations of the OCAS
19	review of the Ruttenber data. The Ruttenber
20	data, you recall, is the data that was
21	utilized, and there was some question on the

utilization for the Rocky Flats SEC Petition.

1	I should point out that in the time since our
2	meeting, you should have received a
3	transmission from Dr. Ulsh at OCAS that the
4	Ruttenber file information is on the O: drive
5	and that they have provided details on the
6	screening and analysis that OCAS did for the
7	claimants for whom the Ruttenber study
8	assigned neutron dose prior to '67.
9	So, I think at this point, I'll
10	ask Jeff Kotsch of DOL to give any remarks he
11	can relative to the Ruttenber information.
12	MR. KOTSCH: Okay. Good morning.
13	This is Jeff Kotsch. This will be very
14	brief.
15	DOL has completed a preliminary
16	review of both the NIOSH report and the
17	Ruttenber database and are discussing what
18	additional steps to take, if any, with NIOSH
19	based on results of that review. Hopefully,
20	we'll have some determination prior to the
21	October Board meeting.

ZIEMER:

CHAIRMAN

22

So,

Okay.

1 basically simply reporting that you hope to 2 have something specific by the time we meet 3 face- to-face. Let me ask the Chair of the Rocky 4 Flats Work Group, Mark Griffon. Mark, do you 5 6 have any additional comments or questions at 7 this time, or any of the Board members -well, let me let Mark first ask and then open 8 it up here. 9 10 MEMBER GRIFFON: This is Mark 11 Griffon. I guess there's nowhere to question 12 It seems like any question I would ask 13 of Jeff may be premature since they they're still finishing their analysis. 14 15 CHAIRMAN ZIEMER: Right. 16 MEMBER GRIFFON: So, but we really do look forward to that, because we would like 17 to know if that's going to change your all's 18 19 approach in defining the cohort. So I guess I 20 have no questions to ask, really. CHAIRMAN ZIEMER: Other Board 21

members, any questions or comments?

(No response.)

CHAIRMAN ZIEMER: I gather there are none.

Jeff, thank you for that report, brief though it was.

MR. KOTSCH: More later, then.

CHAIRMAN ZIEMER: Okay. Thank

you.

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Then let's move on to the next item. And this item, it's called Coordination of OCAS and SC&A Board This item has arisen as a result of some questions asked by Board Member Brad Clawson, and I'll let Brad sort of detail the concerns. But let me, as a preliminary thing, indicate that Brad had indicated to Ted Katz and to me that the data captured by OCAS, which is available to the Board on the O: drive, is very difficult to identify in terms of document identities, that in many cases you can only determine what the documents are by actually opening them. So you can't simply

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apparently scan the list of documents as they appear on the O: drive files and determine what documents are really there. There's some additional concerns about the ability to coordinate our document searches, since DOE apparently doesn't keep a log, as it were, of what documents have been retrieved by OCAS, and OCAS simply refers one to the O: drive.

In any event, Brad, if you would take a few minutes and outline the concern and the sort of problems you've faced. And here, we're talking about documents particularly that have been involved in the classified materials.

MEMBER CLAWSON: Well, yes, it's kind of two-fold of what I said. When NIOSH implemented Proc-10, you know, it served very good up front. But where I'm seeing a kind of lack is there's an inconsistency of how things are portrayed to us, I guess. What I'm kind of seeing, the on-site coordination still is inconsistent in access to NIOSH-collected

documents. And when I say this, I'm not giving this a blanket statement, because what is, from sites the have seen some information that is portrayed back to us is very clear of what they've captured, where it's at in the O: drive, and so forth like And I think it comes back a lot to the point of contact and so forth.

But what I'm kind of looking for is then, when we get into the classified sites, it's even harder to determine what has been captured, you know, where it's at, how it is and so forth. You know, when I've raised questions of, well now, where have we got this document or so forth, they just say the O: drive. And to go through the O: drive, you've got to go through about every file to be able to find out about it.

So what I'm trying to get to is a consistency that SC&A or the Board goes onto one of these sites and we know what has been captured. It was my understanding in some of

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the phone calls that we had had and also in because I questioned Albuquerque -about this this that the means documentation that you guys have retrieved, the data retrieval plan, that you will let SC&A and the Board know what has been captured. And the comment was yes, this is so that we will not be duplicating -- having DOE have to duplicate a lot of this information and so forth. It was a reduction of that. And I'm not seeing that yet.

Now as I said earlier, some of the sites are doing very good on it. But several of them, we don't know what has been captured.

I'll just give an example, one of them that I just came from, Savannah River, we don't know what has been captured or not. There's no kind of a record of what has already been taken or anything else like that. And kind of what I'd like to be able to see is that — in our procedure, when we went into our 10 and 11 or 11 and 12, we laid out that SC&A, and I

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might say here too, is SC&A does it. We've got a few areas that we can improve on, too, of letting NIOSH know what we have collected and so forth, because I still see communications back and forth from some of the NIOSH POCs, or site people, of what has SC&A reviewed and where is it at and so forth.

This Proc-10 has improved, but I'd like be able to see the communication to improved of what has actually been recovered from these sites and how is it put on the O: Because the O: drive, still it's very drive. but also how it's put the vast, into documentation. Sometimes it may say bioassay, but it's got a lot of other stuff with it, or searching back and forth. And I was just wondering if there's some way that communicate this a little bit better, because thought when started into these we procedures that it was to save copying and so forth like that, or duplication.

And one of the areas that I really

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concern to me personally especially with classified sites, I know that can't have data retrieval list we а whatever else like that because these things are classified. But there should be something left with the site that lets us know what documents have already been retrieved. I'm seeing so forth, there isn't anything like that and I'm just wondering if there's somehow that we can improve a little bit on this data capture.

CHAIRMAN ZIEMER: And, thank you, Brad, for that, as kind of introductory remarks to it, and this may not be an issue we can solve today, but maybe we could get some comments first of all from NIOSH. I don't know if that would be LaVon or perhaps LaVon can start.

And then also from SC&A, and I don't know if Kathy might want to comment, Kathy Robertson- DeMers or Joe Fitzgerald.

And then also I think Isaf from

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the DOE group is on the phone. And this may be not something, Isaf, that you were aware we were discussing, but you might have some comments as well.

So could I ask each of those or someone from those groups to comment, NIOSH, SC&A and DOE?

MR. RUTHERFORD: Dr. Ziemer, this is LaVon Rutherford. I'll start. Jim may want to add something; I'm not sure.

But I totally agree with you, Brad. You know, this is something that we have talked about doing and something that we committed to doing, was trying to make sure we weren't duplicating efforts. And I believe that information is prepared, for the most part, from ORAU when we do the data captures. Now, there may be documents and things that are on the O: drive that have been on the O: drive for some time that haven't been broke down and -- you know, into the separate files that they should be -- but I think for the

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most now they should have a pretty good trail and a pretty good list of the documents when we do capture them so we don't duplicate efforts. So, I'm actually kind of surprised that's not happening, to be honest.

MEMBER CLAWSON: Well, LaVon, and understand I'm not criticizing in any way or anything else. When this Proc-10 and 11 came out, this was so that both sides kind of knew what each other had. When we talked about this in Albuquerque, one of the comments was, that there going to be like was was data-capture plan when NIOSH or OCAS went into these sites of everything that they captured, and that was going to be portrayed to the point of contact for the site, you know, the work group chair and SC&A. And I can't say that it's all sites, because it kind of depends on who the point of contact is of how this gets back to us. Because some sites I've seen are very good. But I thought that we were going to kind of have an outline of,

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this is everything we've pulled from this site. And so, you know, you can find it on the O: drive here. But some sites, I have not been seeing that.

And I'm not trying to put a blanket statement over it, because, LaVon, some of these sites have been very good with it and that's kind of what I was looking for. That's where I see an inconsistency.

DR. NETON: Brad, this is Larry Elliott, unfortunately, can't Neton. join us today; I'm sure he'd have maybe some more input on this issue. But it sounds to me like where you're having some issues are where there are data captures are going on in real time. And, you know, it may be. I'm not making excuses for anyone, but it may be that these data sets or these captured documents have not yet been sufficiently digested, you internally by OCAS to give them, you know, some sort of a structured format that could be retrievable.

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MEMBER CLAWSON: Well, yes, it's also so that we know, and all I can talk about is the sites that I have been involved in.

And I'll bring one of them up, and that is Savannah River.

DR. NETON: Savannah River is very active in collecting documents at this point, I'm aware of that.

MEMBER CLAWSON: Oh, okay. Well, and now I understand what your point is, but

I quess let me start DR. NETON: back a little bit, you know, in all of the documents that we issue that are official write-ups like the evaluation report or the site profile, to great lengths we go reference the site research database number so one can actually go right to the database and look up those documents. But those are that been retrieved documents have and assimilated into the system, you know, over some period of time.

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The new ones -- and Tim Taulbee I know is the one involved with Savannah River, is going out capturing documents real time. We collect them and then they may be just indexed by some very generic numbers until such time as we can go through them and make some sense of them. So part of that I think is this real-time issue that's maybe driving this. I don't know.

Well, and that MEMBER CLAWSON: could be, Jim. All I'm doing is I'm bringing up that I'm seeing an area where we could improve a little bit. But also too, as I saw in our last visit there, we had no idea what actual documents had been retrieved at all. As a matter of fact, we went to the point of Savannah River's document asking control people if they actually had a list of what had already been captured, because we were opening up binders and going through and all of a sudden we'd come across a tab that OCAS had copied part of this or whatever else like

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that. And so kind of where I'm seeing is, it's true when it gets onto the O: drive that's part of an issue, but at the site we don't know what has actually been captured as of yet. And it could be the real time before they process through it and so forth.

DR. NETON: Ι hear you. Ι understand the issue now. And I can bring that back. And I guess I suggest that maybe you could work a little closer with the POCs in maybe defining what the issues are. But I'll take that from our end to work with the POCs and make sure that we are following what we said we were going to do in Proc-10.

MEMBER CLAWSON: Okay. Because at another site, and this is Pantex, I know that we've requested this information and we haven't received anything, and we've proceeded ahead. And what it's actually doing, I think, sometimes is we're requiring DOE to duplicate a lot of information, or possibly -- but see, we don't know and that's where I'm hoping that

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we can get a little bit better communication with one another so that we're not duplicating it, we're not putting an added burden onto DOE or the document retrieval people and so forth like that.

But when I speak of this, I'm just speaking from what I have personally seen. Now SC&A may have other things to be able to say, but this is what I've personally seen. And I thought that when we went into these procedures, we were going to try to stop the duplication and so forth. And I know that we've had a great effort for that, but I believe that we can make a few improvements on both sides.

MS. ROBERTSON-DeMERS: This is Kathy Robertson-DeMers. I can kind of tell you what's going on from our side and where I haven't been receiving information from NIOSH.

Let me define the data as current data captures, meaning data captures that are ongoing right now, and then we have data that

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is legacy data from previous reviews.

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For the current data captures, at this point, I develop a data capture plan. And I took the model actually from the ORAU Hanford data capture plan. Hanford is a site where I am receiving the data capture plan, so I know what their plans are as far as visits and what they're going to look at, keywords they're searching and so The only other site I have received these data capture plans from is Lawrence Livermore National Lab. Even if they come after the fact, they are helpful to me in planning my visits.

When I go to plan a visit and I'm making my keyword search terms and author search terms, I will actually go to the NIOSH POC and ask him or her if they want to add to that. There's a lot of preliminary interaction between the POC and DOE and myself even before a data capture plan is put together. Before the trip occurs, a data

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capture plan from what we're doing on-site is sent to Ted and to the NIOSH POC so that NIOSH knows what we're doing. If the time allows, I also give NIOSH the opportunity to review this plan and say, hey, we've already collected that data so I can take it off my list.

When I am ready to pull records, I will cross-reference to the O: drive. Now one of the difficulties in the cross-referencing that the DOE document is not identical to what name that is given on the O: drive. So there's still some occurring because of the inconsistent naming of documents.

With respect to the legacy material, we are actually compiling a list of documentation t.hat. we. do have in our This is taking a while because possession. there is a lot of it. And this will be provided to NIOSH.

With the current data capture effort we are trying to, first of all, ask DOE

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to, if possible, provide a duplicate copy of any imaged documents that they might send. If that doesn't occur, then when I receive it, I will send it on.

With hard copies, we are trying to provide hard copy data to one of the ORAU contractors. Actually the last batch that we delivered was for Lawrence Berkeley and Sandia National Lab, Livermore to Art at DMA so that they can do scanning. If the document is small enough, I will do the scanning and forward it to NIOSH. If the documents are very large, then I tend to give them in hard copy to NIOSH.

With respect to the current sites that we're working on, NIOSH and ORAU should have the data that we have. Part of this list that we're compiling is obviously the legacy records, and if we have provided the records to NIOSH, there's a note in the database that we have provided it. We have to go through and identify the gaps in what records we have

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1	and what records we've already given NIOSH and
2	provide NIOSH with the difference. So this is
3	not going to be an overnight task.
4	CHAIRMAN ZIEMER: Thank you,
5	Kathy. Am I correct, then, in concluding that
6	you're having a little less difficulty with
7	this issue than Brad might have encountered?
8	MS. ROBERTSON-DeMERS: I think
9	there are some events going on at a lower
10	level that are occurring.
11	CHAIRMAN ZIEMER: Yes.
12	MS. ROBERTSON-DeMERS: I am not
13	receiving data capture plans for other sites,
14	other than Hanford and Lawrence Livermore
15	National Lab.
16	CHAIRMAN ZIEMER: Okay. And also
17	the issue of the naming of the files and
18	matching with the DOE names is also presenting
19	some difficulty, as I understand it.
20	MS. ROBERTSON-DeMERS: Yes.
21	CHAIRMAN ZIEMER: Okay. Thank
22	you.

Let's see, Joe, did you have any 1 2 additional comments? Joe Fitzgerald? 3 Really MR. FITZGERALD: just an elaboration on Brad's comment on Pantex. 4 Ι 5 think we've sort of hit a new wrinkle that we 6 haven't hit at some other sites, which is, you 7 know, how to extend the data capture listing classified documents. And this 8 something I think we're working with Mark 9 10 Rolfes and the site to figure out, because, 11 you know, before we make a request of, you 12 know, classified documents, of course we would 13 want to know if they were, you know, retrieved or redacted by NIOSH. So we're trying to 14 15 cross-reference that. But that's a slightly 16 different issue, but one that we're going to have to resolve so we don't have a site like 17 Pantex going after the same documents for us. 18 19 CHAIRMAN ZIEMER: Right. Right. So that's just a 20 MR. FITZGERALD: new wrinkle and I think we didn't address that 21

per se in the procedures.

1	CHAIRMAN ZIEMER: Right. Let's
2	see, Isaf, are you on the line?
3	MS. AL-NABULSI: Yes.
4	CHAIRMAN ZIEMER: Did you have any
5	comments from
6	MS. AL-NABULSI: No.
7	CHAIRMAN ZIEMER: I'm sorry. Did
8	you say no?
9	MS. AL-NABULSI: Yes. No. No
LO	comment.
11	CHAIRMAN ZIEMER: No comments,
12	okay.
13	It appears to me that, at the
14	moment, we probably aren't in a position to
15	take any formal action, but simply we've aired
16	the issue. The parties involved: the Board,
L7	NIOSH, OCAS, ORAU, SC&A and DOE, will need to
18	be cognizant of the issue as it's been
19	described and see if we need to formalize
20	anything further, or it's just a matter of
21	being more prudent on working with the points

of contact and making an effort to achieve

better coordination.

Brad, I'm wondering if you had any specific recommendations now, if you would report back to the Board, for example, maybe again in October and then we need to monitor this and at some point, if formal action is needed or some additional changes in procedures are needed, we can formalize that.

MEMBER CLAWSON: Well, what I was wanting to do, Paul, was I wanted to bring forth the information that I was seeing and that I saw some weaknesses. And when I say weaknesses, I say weaknesses on both sides that we may be able to improve this data capture and so forth.

But one of the points that I wanted to bring forth to NIOSH, and also to OCAS and so forth, was that these data capture plans are important for us in the sense of knowing what has already been captured.

CHAIRMAN ZIEMER: Right.

MEMBER CLAWSON: And I saw

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weakness in that. And I know that the Proc-10 and 11 were kind of mirror images of one another and so forth like that. But what I was wanting to bring forth to the Board, and also to NIOSH and everyone, is that I saw that there was a weakness there and that we need to see how we could improve these. And all I was doing was just bringing forth the information that I was seeing and just seeing if we could do something to improve a little bit.

CHAIRMAN ZIEMER: Right. Well, I think as a first step, the awareness and the concerns expressed having been aired, that has sensitized everyone to the issue. Jim Neton has indicated that NIOSH is in a position here perhaps to look at this further and see what might taken of the steps be in terms coordinating issue. And as I said, Brad, if you would continue to report back to us in whether terms of the coordination or not improves as people become more aware of the issues or whether or not we need to formalize

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something, that would be good.

MEMBER CLAWSON: That would be fine. I just figured on this Board call, this would be a good opportunity to be able to just be able to air this and let also NIOSH, so that they understand that we're seeing this, and, you know, we can maybe follow up with this at the full Board meeting and so forth.

CHAIRMAN ZIEMER: Right.

MEMBER CLAWSON: And be able to address a few of the things even more.

CHAIRMAN ZIEMER: Very good. Let me also ask if any of the other Board members have either questions or comments relating to this issue.

MEMBER SCHOFIELD: This is Phil.

I've had some of the same problems that Brad has that, when you're doing a document search, a lot of times it's really difficult to find all the documents they have, because some of them are by number rather than by name. So, I mean, if they can make it a little simpler for

like, the O: drive or 1 we go on, 2 something to collate the documents we want, 3 that would really be a great help. 4 CHAIRMAN ZIEMER: Right. So, part of it's that naming issue, as Kathy indicated 5 6 earlier, and then it appears to me that good coordination with the points of contact is 7 going to be very, very crucial as well. 8 Paul, this is John 9 DR. MAURO: 10 Mauro. CHAIRMAN ZIEMER: Yes, John? 11 Yes, I'm listening and 12 DR. MAURO: 13 it sounds like we may have, like, a challenge in terms of -- I'm envisioning going through 14 15 this baseline process. And let's say NIOSH 16 has downloaded 10,000 documents at a site. don't know if it's even that large, or 1,000 17 documents. 18 19 CHAIRMAN ZIEMER: Whatever. Whatever the documents 20 DR. MAURO: And SC&A and everyone is, in good 21 are. 22 intentions, okay, let's baseline. We'll come

in and we'll work with the POC at NIOSH.
Let's see what you've got. And the reality is
for a practical matter, checking what you have
is maybe a little naive on my part to think
that we can just go in and see what they've
got and make sure we don't duplicate. Maybe
it can't be done that way; that is, the nature
of the way the bibliographic database is
complied, at least initially, and loaded up
onto an O: drive or wherever it is located.
It's not a very simple matter to see what is
there already so that we don't ask for a
duplicate. Perhaps the solution is simply
when that document is downloaded from DOE
there is some notation in the DOE database
that, yes, this has already been captured.
Maybe that's the only solution, that all we
will ever really know is whether or not this
particular document that we may try to
capture, let's say during our word searches
even if we coordinate our word searches and
our data capture searches, in the end, the

question is going to be very difficult to determine whether this particular document has in fact already been downloaded, cleared and is now sitting on the O: drive and available for SC&A to review. So it may just be a simple matter that mechanistically this is not easy to do.

CHAIRMAN ZIEMER: Okay. Thanks for that comment, John.

And those of us on the Board who haven't been involved with this particular process may not have a good feel for it, but it appears to me from the comments I've heard that there are cases where you don't know until you've actually pulled something that the document or a part of the document has already been retrieved by another group.

I think what you're suggesting is that there be some way to flag it in advance so you don't even have to, for example, download it or capture it to find out that it's already been looked at.

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1 DR. MAURO: Yes, that may be just 2 one way to come at the problem, I'm not sure. 3 It sounds like this is probably a classic problem, bibliographic records 4 management, 5 that many, many -- this a challenge to many 6 folks. 7 CHAIRMAN ZIEMER: Maybe this problem has 8 DR. MAURO: been solved in the past through software. 9 Well, I 10 CHAIRMAN ZIEMER: Yes. think those in our group from all of the 11 12 different agencies that are involved in this 13 process, as we proceed, will have a better idea of what might be done to improve both the 14 15 coordination and the capture process and avoid 16 redundancy and duplication. So, as we proceed and get feedback on this, then we will be in a 17 better position, if necessary, to formalize 18 19 something. 20 Paul, this MEMBER CLAWSON:

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CHAIRMAN ZIEMER:

Yes, Brad.

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Brad again.

MEMBER CLAWSON: I guess one of the main reasons why I threw this out is because actually the people out in the field that are actually doing this, they may have something in the back of their mind that, you know, this would make this a lot easier for us to communicate what we have. And I guess this is why I wanted to throw this out, is to make sure that all parties, if there are some areas that we may be able to improve and so forth like that, I hope that we'd have the ability to be able to bring that up.

CHAIRMAN ZIEMER: Right. Right.

MEMBER CLAWSON: That's one of the things. Because the people out in the field are one of the ones that really know what it is. And I would suggest to any of the other Board members, this has been very educational to me. You know, when we ask them for a document, what it actually takes to get some of this documentation. Actually, I've been treated just like any other person. I mean,

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1	they gave me boxes of files to go through and
2	it was very educational to me.
3	CHAIRMAN ZIEMER: Okay. Very
4	good.
5	Any further comments or questions?
6	(No response.)
7	CHAIRMAN ZIEMER: Okay. Thank you
8	very much.
9	Let's proceed to the next item,
10	which is updates on SEC petitions. And LaVon
11	Rutherford is just going to give us an update,
12	sort of what's planned, particularly for the
13	October Board meeting, what's going to be on
14	the agenda there. I know at our last meeting
15	the status of some of these evaluation reports
16	and so on were not finalized.
17	But, LaVon, are you ready to give
18	us an update for what's coming down the pike
19	here?
20	MR. RUTHERFORD: Sure, Dr. Ziemer.
21	Again this is LaVon Rutherford.
22	It's going to be a pretty busy

Board meeting. We have plans to present eight evaluation reports at the October Board Of those eight, six of those are meeting. 83.13 petitions, which is the standard petition that was submitted by a petitioner. And then two of them will be 83.14s. Of the 83.13s we have, Brookhaven National Lab will be presented, United Nuclear, Piqua Organic Moderated Reactor, Electro Met, Bliss Laughlin and University of Rochester.

The United Nuclear; you probably received a hard copy over the weekend.

CHAIRMAN ZIEMER: Yes.

MR. RUTHERFORD: And you'll receive an electronic version of that. Should be out today. Electro Met and Bliss & Laughlin you should have already received as well. Piqua Organic Moderated Reactor will be to the Board and to the petitioners within the next couple of weeks. Brookhaven National Lab and University of Rochester by the end of the month will be with the Board.

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1	We have two 83.14s we're working
2	on. Hanford and Metals and Controls. Metals
3	and Controls is just finishing DOE review and
4	should be to the Board this week. And then
5	Hanford is in its final stages. And I would
6	expect that report to be to the Board within
7	the next two weeks or so.
8	Also, just some additional
9	information. Recently we did qualify a couple
10	of petitions for Weldon Spring, so that
11	evaluation process will begin, and Hangar 481
12	as well. So, that's pretty much it.
13	CHAIRMAN ZIEMER: Okay. Board
14	members, any questions?
15	(No response.)
16	CHAIRMAN ZIEMER: Okay. So a
17	total of eight evaluation reports for our
18	consideration at the October meeting.
19	And at that point, Board members,
20	
20	we will have to make a determination as to

or whether we will need additional information

1	and review by work groups or with the help of
2	our contractor.
3	So, how far in advance did you say
4	we would get the evaluation reports on these
5	six, particularly?
6	MR. RUTHERFORD: Dr. Ziemer, you
7	have Bliss & Laughlin.
8	CHAIRMAN ZIEMER: I have United
9	Nuclear. I think we have Bliss & Laughlin,
10	don't we, already?
11	MR. RUTHERFORD: Yes, you do. You
12	should have Electro Met as well, I believe.
13	CHAIRMAN ZIEMER: Okay.
14	MR. RUTHERFORD: And then the
15	other three, the Piqua Organic Moderated
16	Reactor should be with you within the next
17	couple weeks.
18	CHAIRMAN ZIEMER: Okay.
19	MR. RUTHERFORD: And then the
20	University of Rochester and Brookhaven
21	National Lab by the end of the month.
22	CHAIRMAN ZIEMER: Okay. So we'll

1 have some lead time to review those. 2 good. 3 Any questions or comments, Board members? 4 5 (No response.) 6 CHAIRMAN ZIEMER: Okay. Updates 7 from work groups and subcommittees. asked that we only hear from work groups and 8 subcommittees that have specific actions or 9 10 items they need to share with us, not simply 11 reports such as the work group has not met, or 12 something like that. 13 Before we go down the list, Ted, 14 if you would remind us which work groups have 15 meetings scheduled between now and 16 upcoming full Board meeting. I know there are at least four, I believe, scheduled. 17 Let me check that, Dr. 18 MR. KATZ: 19 Ziemer. Let's see, between now and the Board

We have Oak Ridge Hospital on October

We also have the Procedures Work Group

meeting, we have Worker Outreach on September

7th.

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1	on the 6th. Procedures Subcommittee. And
2	again, I have the Procedures Subcommittee
3	showing for the 15th. I'm not sure that
4	that's correct.
5	MEMBER MUNN: The 15th is the
6	correct one.
7	MR. KATZ: Okay. So, I have that.
8	MEMBER MUNN: Right. We replaced
9	
10	CHAIRMAN ZIEMER: Yes, we
11	replaced, yes.
12	MR. KATZ: And I think, you know,
13	someone correct me, but I think that's all.
14	CHAIRMAN ZIEMER: Actually, we
15	have
16	MR. KATZ: Oh, and then we have
17	also
18	CHAIRMAN ZIEMER: We have the
19	6000/6001 Work Group scheduled for October
20	14th. And I thought we had Mound scheduled as
21	well.
22	MEMBER BEACH: Yes. This is

1	Josie. We do have a Mound Work Group
2	scheduled for October 13th as well.
3	CHAIRMAN ZIEMER: October 13th is
4	Mound. October 14th is TBD-6000/6001.
5	October 15th is Procedures. So those work
6	group meetings are coming up.
7	Now, let's go back and pick up,
8	first of all, subcommittee reports. Do we
9	have anything to report from the Dose
10	Reconstruction Subcommittee, Mark?
11	MEMBER GRIFFON: Yes, a brief
12	report for the Dose Reconstruction
13	Subcommittee. We just had a meeting last
14	week, I think. It was last week, and we
15	continued our regular work. One thing we did
16	was the
17	MEMBER MUNN: Mark, this is Wanda.
18	I'm not hearing you because there's some kind
19	of a
20	CHAIRMAN ZIEMER: There's some
21	kind of an echo.
22	MEMBER GRIFFON: Yes, I was

getting some kind of an echo, too, so took it off speaker. Is that better?

CHAIRMAN ZIEMER: Yes, that's better. Yes.

MEMBER GRIFFON: Okay. Yes, the Board had authorized the Subcommittee to complete the case selection for the twelfth set of cases, if you recall the last Board meeting.

CHAIRMAN ZIEMER: Yes.

And we did do MEMBER GRIFFON: We actually picked 48 cases with the hope that there will be approximately 42, I the number that John needed to think is complete the contract obligation, anyway, for the year. And 48 we selected on the assumption usually this happens that cases are either in appeal or under PER review or something. We lose a few after this final We did identify those and NIOSH has those and is checking on those right now for availability for SC&A, and SC&A should get

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those cases in the very near future.

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The only other update I have is, full the last Board meeting at we had discussed the First 100 Cases Report which we submitted to the Secretary. And I guess we, in our discussions at the full Board, we had asked the subcommittee if the subcommittee could explore the summary findings more and recommendation out of generate some In other words, what kinds summary findings. of deficiencies are we finding. Also, on the, you know, sort of the more positive side, you know, what has NIOSH done since these findings to improve the process, improve the program? So we started a discussion of that. going to internally circulate a draft before the next Subcommittee meeting and we would hope to have that to the full Board, not at the October meeting, but probably at the next full Board meeting for discussion by the full Board.

CHAIRMAN ZIEMER: Well, Mark, this

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1 is Ziemer. I want to ask a question on that. 2 We did submit to the Secretary a report on 3 the first 100 cases. MEMBER GRIFFON: 4 Yes. 5 CHAIRMAN ZIEMER: So you're 6 talking about an additional sort of summary statement that would summarize or make some 7 conclusions based on that report? 8 I guess the MEMBER GRIFFON: 9 Yes. 10 discussion at the Board, if you recall, Paul, was that, you know, this was fine, but we 11 12 still had some -- you know, what's the bottom 13 line. Right. The 14 CHAIRMAN ZIEMER: 15 bottom line relative to the idea of, what can 16 we say about the scientific validity and so on of the dose reconstruction process. 17 18 MEMBER GRIFFON: Exactly. 19 started to explore that a little more. Larry was at the meeting and had some good 20 input from NIOSH's perspective on that. 21

so we have some points that I'm going to take

1	an initial draft at.
2	CHAIRMAN ZIEMER: Very good.
3	MEMBER GRIFFON: And then bring
4	them back to the Subcommittee and we're
5	working on that.
6	CHAIRMAN ZIEMER: Very good.
7	MEMBER GRIFFON: Yes.
8	CHAIRMAN ZIEMER: Any questions
9	for Mark, Board members? Comments?
10	(No response.)
11	CHAIRMAN ZIEMER: Okay. How about
12	the Procedures Review Subcommittee? Wanda,
13	did you have anything to report?
14	MEMBER MUNN: I don't have
15	anything concrete to report.
16	CHAIRMAN ZIEMER: Okay.
17	MEMBER MUNN: We're continuing our
18	actions with respect to the outstanding issues
19	that we have. The one thing that we do have
20	coming up, which all the Board members will be
21	privy to, is our expectation that we will

produce a second report to the Secretary with

regard to the progress that we have made and what our observations are with respect to how the findings and the various procedures should be handled. That is happening behind the scenes and we'll have a draft circulating among the Subcommittee members prior to the next Board meeting. We hope to be able to provide, at least a preliminary draft for Board review prior to that time.

CHAIRMAN ZIEMER: Very good. And I'll just remind the Board that the Procedures Subcommittee did submit a report to the Secretary about one year ago.

MEMBER MUNN: Yes.

CHAIRMAN ZIEMER: And this was more of a status report on what the Procedures Subcommittee was doing. Because at that point they did not have enough information to reach conclusions on the extent to which the shall I procedures -- what say, procedure support, and properly provide a basis for the scientific validity of dose reconstructions

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and related activities. So, hopefully this 1 2 second report will be one where more specific 3 conclusions can be reached. MEMBER MUNN: We anticipate more 4 concrete information in this one. 5 6 CHAIRMAN ZIEMER: Right. 7 MEMBER MUNN: Not a great deal of it, but better specifics on numerical data. 8 also had quite issue with 9 We've an the 10 change-over, the improvement of the electronic 11 systems the change from one mode and 12 it made operation to another. And so 13 difficult for those of us who operate with this particular database all the time. 14 15 CHAIRMAN ZIEMER: Right. 16 MEMBER MUNN: That seems to be pretty well smoothed out now. 17 18 CHAIRMAN ZIEMER: Okay. We also 19 have the new, I guess I'll just call it the new subcommittee, which is Mike Gibson's. 20 we officially in subcommittee status, Mike, on 21

your worker outreach group?

1	MR. KATZ: Paul, just to remind
2	you, it is not a subcommittee yet.
3	CHAIRMAN ZIEMER: That's right.
4	We're still in process working on
5	MR. KATZ: Well, we're not even in
6	the process of turning it into a subcommittee
7	at this point, because really it hasn't gone
8	through
9	CHAIRMAN ZIEMER: That's right.
10	We had finished the charge. I think we agreed
11	we would operate for while as a work group
12	until we
12 13	until we MR. KATZ: Right.
13	MR. KATZ: Right.
13 14	MR. KATZ: Right.  CHAIRMAN ZIEMER: Right. So let's
13 14 15	MR. KATZ: Right.  CHAIRMAN ZIEMER: Right. So let's move on. Any work groups that have items that
13 14 15 16	MR. KATZ: Right.  CHAIRMAN ZIEMER: Right. So let's move on. Any work groups that have items that they need to report? Speak up if you're a
13 14 15 16 17	MR. KATZ: Right.  CHAIRMAN ZIEMER: Right. So let's move on. Any work groups that have items that they need to report? Speak up if you're a work group chair and want me to report an
13 14 15 16 17	MR. KATZ: Right.  CHAIRMAN ZIEMER: Right. So let's move on. Any work groups that have items that they need to report? Speak up if you're a work group chair and want me to report an anything.
13 14 15 16 17 18 19	MR. KATZ: Right.  CHAIRMAN ZIEMER: Right. So let's move on. Any work groups that have items that they need to report? Speak up if you're a work group chair and want me to report an anything.  MEMBER ROESSLER: Paul, this is

made 1 MEMBER ROESSLER: We have 2 progress with the Linde Work Group, and I'd 3 like to make a brief report. CHAIRMAN ZIEMER: 4 Yes. 5 ROESSLER: held MEMBER We the 6 first meeting of our reestablished work group 7 last week on September 2nd. Our responsibility now is to review the 8 SEC petition and things associated with it. 9 10 This petition, just to remind everyone, covers the Linde residual period, 11 12 which is January 1st, 1954 through July 31st, 2008. 13 At our meeting last week we were 14 to have [identifying information 15 fortunate 16 redacted], the petitioner's representative, present at our meeting, and I think that was 17 very productive. 18 19 also had а very productive We have three action items for OCAS 20 meeting. They are associated with NIOSH to complete. 21

handling bounding on radon exposures at Linde,

1	some inhalation exposures of uranium, radium
2	and thorium. And the third item is giving
3	more attention to exposures during the
4	renovation period.
5	They expect that they'll have this
6	completed so that the work group can meet
7	again. We're trying to set up a meeting time
8	for sometime in hopefully early November or
9	sometime in November. So that's where we are
10	on that.
11	CHAIRMAN ZIEMER: Okay. Thank
12	you.
13	Other work groups?
14	MEMBER PRESLEY: Hey, Paul, this
15	is Bob Presley from NTS.
16	CHAIRMAN ZIEMER: Yes, Bob? Okay.
17	MEMBER PRESLEY: We got in some
18	new data about a month ago. OCAS is going
19	through it, and we expect a very good report
20	at our next face-to-face meeting in October.
21 22	CHAIRMAN ZIEMER: Okay. So you'll
44	be reporting on that in October?

1 MEMBER PRESLEY: Hopefully. 2 Hopefully. 3 CHAIRMAN ZIEMER: Okay. Thank 4 you. 5 Others? 6 (No response.) I will take it 7 CHAIRMAN ZIEMER: by the silence that none of the other work 8 groups have specific items to report today. 9 10 Okay. Then we'll move on to the next item on the agenda, which is Board work 11 group transcript review policy. And I might 12 edit that agenda item a little bit and call it 13 Board subcommittee and work group transcript 14 15 review policy. And you may recall at the last 16 meeting we talked briefly about a procedure for reviewing the technical 17 content and quality of transcripts. 18 19 Sometimes transcripts, although they pretty accurately reflect what is said, 20 transcriber sometimes the understands 21

particularly technical terms to be different

words than are actually spoken, and sometimes there are simply edits that are needed in terms of perhaps symbols of elements or whatever it may be. So in addition to the Privacy Act review that has been done by NIOSH and CDC, we have seen a need for review of the technical content of the transcripts prior to posting them on the site as well, on the website.

As far as the full Board transcripts are concerned, I have been doing those reviews and then recommending corrections as needed and then certifying those as being approved for putting on the website.

I think we need something similar for the subcommittee and work group transcripts, a review process to make sure that the information technically is correct or if there are other edits needed. What I'm suggesting is that we formalize the process, if the Board is in agreement, and actually I

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think we can formalize it just so 1 2 for both the full concurrence Board 3 transcripts as well as the subcommittee and 4 work group transcripts. 5 And here is what I'm proposing, 6 and I'll ask someone then make a motion. 7 MR. KATZ: Paul? CHAIRMAN ZIEMER: 8 MR. KATZ: Can I give a little bit 9 more information for you? 10 11 CHAIRMAN ZIEMER: Oh, yes. Yes, please do, Ted. 12 13 MR. KATZ: A couple things that might affect your proposed motion. 14 15 one, the subcommittees But are 16 treated as the full Board transcripts for example, Mark Griffon 17 already. So, 18 reviews the Dose Reconstruction transcripts, 19 and Wanda receives the Procedures 20 Subcommittee. So that's already actually handled the same way as the Board is, and it 21

law.

The work group

has to be

by

different situation. Those transcripts aren't even required by law to exist whatsoever. So there's no requirement in terms of their review by the chair.

But the one other thing I would just note for your consideration is my concern about work group transcripts, about putting them through a review process, technical review process before they're posted for the work groups, is the work groups, you know, meet more often in general than the full Board and there's a timeliness issue. and so on, The work group members draft can get transcript prior, but for the public, particularly those members of the public that involved with a specific work group, are there's a timeliness issue. And I would say that there is the technical matters to review about, you know, correct spelling and technical terms, but there's also other sort that οf types of errors are sort of challenging to review, too, including sort of

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correct attribution of statements to individuals and so on. But it's quite a bit of work to review these.

And I guess my pitch would be, I like very much the idea of the work groups taking a role in ensuring the quality of the content of these transcripts, but I'm a bit concerned about them doing that in advance of posting these. I guess I would argue for posting these and then posting, you know, a final version after they've been through such a review.

CHAIRMAN ZIEMER: Well, thank you,
Ted, for that comment because we can certainly
have a policy that allows early posting of the
transcript. I think it still has to go
through Privacy Act review before going on the
website. That would be required by law in any
event, right?

MR. KATZ: That's correct.

CHAIRMAN ZIEMER: But what you're suggesting, and I think this can certainly be

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part of the policy, would be to allow posting of the unedited version on the website, and I would suggest if that were done, that it be so indicated that it has not been reviewed for technical accuracy at that point. And then once the chair has been able to review for technical accuracy, then the appropriate changes can be made and a final version could be posted.

On technical accuracy, for example, I know there has been recent Board meeting minutes that talked about radon-226 decaying. And clearly whoever the speaker saying radium-226, the was, was but transcriber heard it as radon-226. They sound similar. But, you know, there is radon-226. So that kind of technical correction has to be made sometimes in the transcript so that what would appear as unedited version might have those kind technical errors and that would have to be understood by whoever is reading them from the

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website that those kind of errors have not been addressed.

In any event, with that in mind, and the gist of it would be that we would for transcripts, agree that work group following the PA review by NIOSH OCAS, or NIOSH CDC I guess we would say, that the chair of the work group would be responsible for reviewing the transcript for technical accuracy and would make editorial corrections as appropriate. That would be the policy that I would recommend. And we might add to that that, until such corrections are made, the unedited transcript may be posted the on website and identified as not being reviewed for technical accuracy.

But let me suggest that if the Board is willing to do that by phone, that we have a motion to that effect and then we can discuss it. This would be for work group transcripts.

MEMBER CLAWSON: Paul, this is

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Brad. I kind of liked the first one when you 1 2 said it was just the chair. I thought you 3 were going to take it all over. But I think this would be a very good --4 5 CHAIRMAN ZIEMER: No, no. I don't 6 think Ι want to review transcripts for 7 meetings that I didn't attend. Well, 8 MEMBER CLAWSON: Ι understand that. 9 10 CHAIRMAN ZIEMER: Yes. 11 MEMBER CLAWSON: I quess as a work 12 group chair for one of them, I understand why 13 we need to do this, and I'm in full agreement with it. But I'm wondering if also along with 14 15 this, because just as what you said, 16 radium and radon, I'm sorry, but I probably would not pick that up. 17 Well, 18 CHAIRMAN ZIEMER: I think 19 the chair always has the option of checking with others for technical 20 accuracy particular things. For example, on one of the 21

recent Board meetings, I think it might have

even been the Blockson discussion on the radon model, we asked Mark and Jim Neton to review that discussion that they had to make sure that it had been captured correctly.

MEMBER CLAWSON: Well, and I guess this is the only thing that I'd be saying is, you know, I'd like to be able to have the ability to be able to call, you know, like LaVon or somebody like that, because some of these questions would be above my head.

Well, and that's CHAIRMAN ZIEMER: fine. And the other part of it is that, as Ted mentioned, when I say technical accuracy, part of that also is attribution; who really said that? I've seen some where it's clear that the attribution was to the wrong person, somehow in the flow of the conversation either the wrong person was identified, because the transcribers sometimes have to recognize voices and that doesn't always occur.

MEMBER BEACH: Paul, this is Josie. I'd like to go ahead and make that

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CHAIRMAN ZIEMER: Okay. The motion is, approve a policy that gives group chair the responsibility work for transcript for technical reviewing the accuracy and making appropriate editorial And I think with the understanding changes. that the unedited version may go on website available after as soon as PAclearance with an appropriate notation that it has not been reviewed for technical accuracy.

MEMBER CLAWSON: I'd second that, Paul. This is Brad.

CHAIRMAN ZIEMER: Okay.

Discussion on that?

As a practical matter, and maybe,
Ted, you can help us out there, for example,
currently if I have a list of corrections to
make, I typically transmit them to Nancy
Adams, who's serving as kind of a coordinator
for the Board transcripts.

But, Nancy, are you handling the

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1	work group transcripts as well?
2	MR. KATZ: Paul, this is Ted.
3	Yes, I mean, Nancy is helping me out with sort
4	of spot- checking a number of work groups, but
5	not all, not comprehensively for work group
6	transcripts, as well as the Board and
7	subcommittees. But really, she's taking on a
8	handful to help me with this quality assurance
9	effort.
10	CHAIRMAN ZIEMER: Well, all I'm
11	asking is who does the person communicate
12	with? With you, Ted?
13	MR. KATZ: Anyway, I would be the
14	one to receive
15	CHAIRMAN ZIEMER: Okay.
16	MR. KATZ: I would like to receive
17	them from the work group chairs. I would be
18	the one who would send them the transcript at
19	the point it's ready to be sent to them, and
20	then I would receive their changes.
21	CHAIRMAN ZIEMER: Okay. So as
22	part of the motion, as a friendly amendment,

1	we could indicate that the recommended changes
2	should be transmitted by the chairs to the
3	designated federal official who will assure
4	that the corrections are made or otherwise
5	resolved. Sometimes what I think should be
6	correct is actually incorrect, and sometimes
7	it's a matter of resolving either what was
8	said or what transpired, who really said what.
9	MEMBER CLAWSON: Hey, Paul, this
10	is Brad. I was just wondering, will these
11	transcripts come to us in a paper form or
12	electronically?
13	CHAIRMAN ZIEMER: I've always
14	gotten them electronically.
15	MEMBER CLAWSON: Okay. I was just
16	wondering so that we could be able to put in
17	little comments and so forth like that and
18	then send them back to Ted.
19	CHAIRMAN ZIEMER: Yes, I think
20	they're available both in PDF, where you can't
21	make a correction, and Word files. Is that
22	correct, Ted?

1	MR. KATZ: That's correct. But I
2	would be sending them to you as Word files.
3	CHAIRMAN ZIEMER: So you could
4	insert.
5	MEMBER CLAWSON: Okay. I just
6	wanted to make sure how we could make that
7	more clear for Ted and so forth.
8	MEMBER PRESLEY: This is Bob
9	Presley.
10	CHAIRMAN ZIEMER: Yes, Bob?
11	MEMBER PRESLEY: Are these things
12	going to be checked for classification before
13	we release them, or
14	MR. KATZ: Bob, this is Ted again.
15	The transcripts don't include classified
16	information because it's only discussions that
17	we've had publicly already.
18	MEMBER PRESLEY: Okay.
19	CHAIRMAN ZIEMER: Currently our
20	transcripts don't go to DOE, do they?
21	MR. KATZ: No, they do not.
22	CHAIRMAN ZIEMER: Any of them.

Because they've all been at public meetings.

MR. KATZ: Right, and a lot of care is taken to be certain that there's no discussion in public of matters that are sensitive.

MEMBER MUNN: This is Wanda. It's easy to see the wisdom in the suggestion. concern from the outset has been that, unlike many popular television characters, memory function is not always as sharp as I would like it to be. Trying to recall some of problem the exactness creates for а individual who does not, for example, have the tape itself to listen to.

I can understand how, especially when in work groups we sometimes have a tendency to talk over each other, and the transcriber would have such a hard time trying to sort out the voices and what's being said.

I'm always surprised that it comes out as well as it does, actually. But there are times clearly when even people who were there

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cannot be absolutely certain exactly what was being said at a precise time.

I guess it would be a comfort factor for me; I don't know about other work group chairs, but if we have the kind of disclaimer which makes it clear that we -- certainly prior to the time the chair looks at it, it would be very helpful for that release on the web to carry a fairly strong disclaimer that it has not been yet -- what is the appropriate word: certified, authorized, reviewed by the chair?

CHAIRMAN ZIEMER: Oh, yes. Yes, that would be part of it.

As we are proceeding here, I'm thinking that we might be better served, since this is sounding a little more complex, to actually defer the action on this, which won't cause us a problem, until our face-to-face when you can have in writing exactly what the motion is. And you may have some further time to think about the details. I would point

out, because I've reviewed a lot of transcripts, and the reporters do a remarkable job when there's multiple people talking of putting that all together. And in fact, the transcript sometimes reflects the kind of confusion that occurs when multiple people talk because you have all these partial comments and sentences sort of superimposed on each other.

Also, on a transcript, I'd never try to edit it for grammatical correctness. We don't always talk in full sentences and with proper grammar. So that's not the kind of editorial, I -- you know, it's okay if there's a dangling participle because that's what was there.

MEMBER BEACH: Yes, and as a matter of fact --

CHAIRMAN ZIEMER: So I'm not talking about putting the transcripts in a form that are proper grammar and that sort of thing. We're only talking about things like

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correct attribution. You know, if it says Wanda said this and it's very clear that it was Jim Melius, we need to correct that. Ιf there's something in the technical content; I mentioned the radon-226 when it should have been radium, those are fine. And I would not claim as the reader that Ι have everything, but at least I have gone through it, and if I have a particular question, I can call somebody and say, was that you that said I thought it was so-and-so. this. Brad has suggested, if there's some complex thing and you have some reason to think that it wasn't captured correctly -- and think unless you have reason to there's something wrong with it, you would accept it, Brad, you know, even though it's -because all of us have --

MEMBER CLAWSON: I was just making the comment that, you know, I would not have caught something like that because it's not something that I deal with or anything else

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1 like that. 2 ZIEMER: No, but for CHAIRMAN 3 example you know in the discussion of classified stuff, I had this question. 4 5 looking at the transcripts and it said Brad 6 was talking about sigma something and I said 7 that doesn't make any sense to me and I raised it. I think you must have been talking about 8 something else. That's the wrong term. 9 10 they checked with you, right? Do you remember that? 11 12 Yes, they did. MEMBER CLAWSON: 13 CHAIRMAN ZIEMER: And see, and there was a term I wasn't familiar with and we 14 15 got it. And it was sigma, something used in 16 CLAWSON: So is 17 MEMBER Wanda wanting to have an old-age disclaimer on this? 18 19 MEMBER MUNN: Yes. 20 CHAIRMAN ZIEMER: No, no. you're okay, Wanda. In fact, the transcripts 21

will remind you of what did happen.

1 MEMBER CLAWSON: Because Ι 2 going to say I need that, too. 3 CHAIRMAN ZIEMER: Yes. You know, I think 4 MEMBER CLAWSON: 5 in the review of this -- this is Brad again, I 6 think the basis of what -- the gist that 7 you're wanting to do is, to the best of our ability and knowledge that these things are 8 correct. 9 10 CHAIRMAN ZIEMER: Right. Right. 11 MEMBER CLAWSON: We're not going 12 to catch everything. 13 CHAIRMAN ZIEMER: You can't quarantee that every minor thing in there is 14 15 absolutely right, but at least you've looked 16 it. And if there's something that's at glaringly incorrect, you've at least reviewed 17 it. And we have had occasions where outside 18 19 members of the public have seen things in the 20 transcripts and they've said, what's this. doesn't make sense. And we found that the 21

transcript actually was in error. So we do

1	need to have sort of this quality control
2	process.
3	But let me ask Board members,
4	shall we go ahead and defer this to the
5	October meeting and have some formal words
6	before you for action?
7	MEMBER PRESLEY: This is Bob
8	Presley. I think we ought to.
9	CHAIRMAN ZIEMER: Then let me just
10	ask for a motion to defer to the October
11	meeting.
12	MEMBER PRESLEY: I'll make the
13	motion.
14	MEMBER CLAWSON: I second it.
15	This is Brad.
16	CHAIRMAN ZIEMER: Okay. And
17	basically, this is equivalent to a motion to
18	table. Are there any Board members opposed?
19	(No response.)
20	CHAIRMAN ZIEMER: Any abstaining?
21	(No response.)
22	CHAIRMAN ZIEMER: Then I'm going

to take it that all those remainders are ayes and the motion to defer carries. Okay?

MR. KATZ: Very good. Dr. Ziemer?
CHAIRMAN ZIEMER: Yes.

This is Ted. MR. KATZ: I just want myself to be clear on this. So since this motion is deferred until October, action needs to be taken in terms of sending these transcripts to work group chairs prior to that. But I would offer up that if we've had some work group meetings and will have some more, if there's a general feeling that people would like to sort of start getting a handle on this, of course we can do this without an official motion.

CHAIRMAN ZIEMER: Oh, yes. I just want to formalize the policy, but I think, work group chairs, you certainly want the transcripts of your work group to be correct in that regard. And you may want to go back and if you want to review older ones, I think that would be good. We don't necessarily need

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1	to go all the way back to the day one on all
2	previous transcripts.
3	MR. KATZ: Well, Dr. Ziemer, and I
4	was really just suggesting that they would
5	send the current ones for the recent meetings
6	to those chairs.
7	CHAIRMAN ZIEMER: I think it would
8	be useful to do this, if nobody objects.
9	MS. ADAMS: Dr. Ziemer, this is
10	Nancy Adams. The other issue is if somebody
11	finds something in the transcript in that
12	they're really having trouble with, we can go
13	back to the transcriber and have them
14	re-listen to that part of the transcript to
15	clarify any questions that they may have as
16	well.
17	CHAIRMAN ZIEMER: Yes. Yes. And
18	we've done that certainly on occasion already,
18 19	we've done that certainly on occasion already, too, and can do that on any of these work

Ted, put this on the agenda

Okay.

1 the October meeting and formalize 2 policy at that point. 3 MR. KATZ: I'll do so. And I'll 4 also be then sending the transcripts 5 everything that we received since, you know, 6 maybe a month ago to the work group chairs. 7 CHAIRMAN ZIEMER: Thank you. Now let me ask if Dr. Melius, by 8 chance, is on the line yet. 9 10 (No response.) 11 CHAIRMAN ZIEMER: Okay. 12 Apparently not, but I think we're ready to deal with the Blockson Chemical Radon Model 13 Validation issue. 14 15 Board members, you may recall that 16 there were questions raised I think primarily by Mark Griffon on stratification of radon; 17 that is, the possibility that radon levels in 18 19 different parts of the facility might have 20 varied more than the model would predict. so we were talking about how one would go 21

about validating the model. We asked SC&A to

1 give some thought as well to how one might 2 approach validation, task not а 3 validation, but to give us some ideas of how one might go about that. And I think Mark has 4 had a chance to think about this further, too. 5 6 So, Mark, let's start with you on the Blockson Radon Model Validation. 7 have some initial comments? And then I think 8 I will ask John Mauro also to report for SC&A 9 10 on some ideas that they have had. MEMBER GRIFFON: Yes, this is Mark 11 12 And I was actually this morning just Griffon. 13 going over some of John's recommendations, so it would be good to hear from John as well. 14 15 mean, this point Ι at Ι was 16 thinking of looking at a couple thing from our last Board meeting to now. One was, you know, 17 possibilities for validation. 18 19 And one notion I was thinking of was the other phosphate facilities during this 20 And, you know, the thing I time period. 21

haven't evaluated is the efficacy of a lot of

these options, but I'm just throwing some of possibilities, these here out as phosphate facilities that would in fact have radon measurement data so that you could test the model sort of. And that's the sticking point, I think, is that if they existed, NIOSH likely would have already brought So Ι don't know forward. that those facilities exist that would allow us that.

The other possibility is those lines, and this may be a little more of a stretch, and I think that to some extent NIOSH has used this in their arguments for sort of an upper bound, was whether they could use the Mallinckrodt facility in any way -- in regards. One is to look at the two measurement data, but also the secondary would be, okay, let's use a similar approach that we did for this model being proposed Let's use this model and test it at Blockson. the Blockson facility.

Now there's obviously a lot of,

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you know, potential heartache there. you know, I'm not sure that the data needed to model that from source term up exists. I know they have a fair amount of radon measurement data, but I'm not sure on the other end that it would be something that could be achieved, or whether it would, you know, entail such uncertainty that, you know, it would really be a good tool to validate. For example, one thing I'm concerned about there is, you know, I know that over the years Mallinckrodt had several different sources of uranium coming into the plant and so then obviously you have a different source term changing over time. And I'm not sure all that is cleanly defined.

it was during the same time period, guess you could argue so I that practices, similar work similar sorts ventilation may have existed. And that would be really the usefulness of that site, maybe they have real measurement data compare against the model, whereas we don't

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have that at most of these other sites we're talking about. So that's one thing that I was kicking around.

The other items that I have, and these aren't necessarily, what was the title of this session, you know, suggestions for ways to validate, but rather just the ongoing concerns, I guess.

The second item I had was concerns about the source term definition for Blockson. And I went back to the site profile and looked up some of this. In the last Board meeting I mentioned the fact that I thought some of the original numbers such as the 6,000 tons per week had come from one memo, an AEC memo, or a Blockson to AEC maybe, I forget. And it actually is confirmed that this was a memo that was written and it. pre-operational memo also which notes 6,000 tons of phosphate rock per week. then I think it says out of that they would expect or anticipate about 50,000 pounds.

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forgetting. Anyway, they were projecting some
output or amount of product from that amount
of phosphate rock coming into the plant, and
that number was noted. So they had some sort
of uranium recovery efficiency established.
And in the site profile, they also have
several reports indicating in later years
where they actually have production numbers
for the uranium, for the output or the
product. But nowhere do they mention the
input. So you're left to assume that this
efficiency was achieved, the original
projected efficiency or recovery rate was
achieved. And, you know, there's some numbers
that sort of lead you to believe that was the
case, but there are some gaps. They also note
that from, I think it was from 1955 through
'62, they don't have any uranium production
numbers. So that's one part of my concern
about the source term

The other part, I guess, would be these all look like uranium product numbers

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for the AEC, these AEC reports. clear to me. I thought that during this time period they were also doing commercial work. And if both were going on at the same time during the covered period, I believe we have to account for that exposure. And that would potentially be, you know, more throughput coming into the system. And that was not very clear to me reading the site profile. Maybe I'm missing something, or maybe it's not in there, but someone knows the answer to that, as to whether there was other production going on there within the building that would have added to the amount processed per week, or per year, or whatever.

MEMBER MUNN: Excuse me, Mark, I don't mean to interrupt you. This is Wanda. I just wanted to be very clear what you mean when you say "production." We know of course that Blockson was fully engaged in commercial activities to produce a product that was not uranium. When you say

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1	"production figures," are you inferring that
2	Blockson was also involved in producing
3	uranium for the commercial market? Is that
4	your inference?
5	MEMBER GRIFFON: Well, I was
6	inferring that any phosphate rock that they're
7	processing you would end up getting residual
8	radon exposures from.
9	MEMBER MUNN: Ah, yes. Okay.
10	MEMBER GRIFFON: So, right.
11	MEMBER MUNN: Okay.
12	MEMBER GRIFFON: So even if it
13	wasn't for the uranium.
14	MEMBER MUNN: Just wanted to
15	verify that.
16	MEMBER GRIFFON: Yes, yes, yes.
17	All right. And I wasn't clear, you know,
18	again this 6,000 tons per week, I was assuming
19	it was only for the AEC operations and if
20	there was other stuff going on, it would have
21	to be accounted for, I would think.

And then the last thing, and this

maybe perhaps overlaps with John's option 3 in the SC&A paper that John sent out to us. But, you know, I was noting, and I thought I mentioned in the last Board meeting, although I didn't recall finding it in the transcripts, so I must not have mentioned it.

But the question of the gradients and, you know, I know at some meeting along the line I've mentioned my concern about the instantaneous mixing, the uniform instantaneous mixing and, you know, I would like to point people back to the original data that we've looked at all the time and one is this Florida study, the FIPR reference. And I think it's useful to notice, you know, if you really believe this was uniform instantaneous mixing, you would expect your results to be the same, or at least very close, you know, wherever you measure within the building.

And in fact, that's not the case.

You have variations of, I believe, up to a
factor of 10 or 20 in measurements throughout

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these different plants, or throughout plant. And then I was having a little trouble looking at these numbers because I think in some cases they are reporting averages and in some cases it was multiple years, so I wasn't sure if Ι comparing, you know, was measurements taken on the same day. So that little difficult to make this made it а conclusion, but at least it appears to that, you know, there's quite a bit variation from these studies, albeit all these levels, as Jim Neton has pointed out many times, you know, most of these levels are far lower than the proposed model. But I was looking at it from the terms of variation of values.

Other interesting things to note in that are that a lot of time the highest levels will appear in the most unlikely places, like the auto repair -- I forget what exactly that area it was called, but, you know, it wasn't at the digester tank or

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something like that. So I guess that that's my last point about the gradients.

And then, you know, so I guess the I'd only thing throw out in terms of validation was that first idea, to either similar phosphates plants during the time period, which Ι don't think exists measurement data anyway. And then possibility of Mallinckrodt orother facilities that do have radon measurement data that you could then use as a model and compare model predictions. measurement data versus And I guess I'll leave it there for now.

MEMBER MUNN: This is Wanda. Before I spoke, Jim, maybe our NIOSH folks are going to address that. I believe we've had quite a discussion about the fact that we don't have any data from other plants that are similar in their type of operation. I thought we had discussed that fairly lengthily, but perhaps I'm incorrect. I'll leave that to Jim and others to address, but I believe we've

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1 looked at that. Have we not? 2 Are you asking me, DR. NETON: This is Jim. 3 Wanda? 4 MEMBER MUNN: Yes. Yes, Ι am 5 asking you. 6 DR. NETON: Yes, we've gone to 7 great lengths to try to find some measurements from the 1950s. And Mark's correct, outside 8 of Mallinckrodt, which was technically not a 9 10 phosphate production plant, but did some of the processing, we don't have any data. 11 12 had provided a number of measurements. The 13 earliest measurements we can find are in the 14 1970s, '80s continue and we to compile 15 measurements at existing facilities where the 16 values are typically a factor of five to an order of magnitude lower 95th 17 than the percentile we're proposing. 18 That's where we 19 are with that. 20 Related to the source term, think there is some additional data that's not 21 22 in the site profile we have. Pretty much, at least in our opinion, believe the conclusion that the production rate was probably less than 6,000 tons per week based on the uranium production rates. We've got some better data on that that we can provide if necessary.

Related to Mark's comment on additional commercial work, I don't think that there was any additional commercial work. fact, all of the phosphate processing commercial work. It was merely the uranium that was sort of siphoned off in the other building, building 15, or whatever, as they produced commercial product. So I'm not aware of any additional commercial phosphate that was at the plant that was not covered, that was not used to make uranium.

And then the comment on gradients. We've kind of been down that path before. I still, I guess, believe that the main driver outside of the source term -- the main driver in the radon concentrations is the building ventilation rates, of which we have a range of

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values. The lower range of values tends to drive the 95th percentile value, so I would submit that there may be higher concentrations in pockets in that building, but those would be encompassed by the range of ventilation rates that we chose in the model. I guess that's about all I can say right now.

CHAIRMAN ZIEMER: Thanks, Jim.

And this is Ziemer again. Let me add one comment.

don't believe Mark, Ι that mixing, which instantaneous model а implies that there's uniform assume, concentrations throughout a location. You could still have gradients. It's just simply sort of a smoothing process for the model, even if there is a gradient. But that's just a side comment. There are other issues on that smoothing process in terms of people moving around and so on. But I think we need to hear from John Mauro.

John, are you prepared to give us

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some comments on the idea of validating the model that we were talking about before, and also stratification?

DR. MAURO: Yes, I'd be glad to.

At the request of the Board, I did prepare some thoughts, really a think piece dated August 19th. You should have all received a copy of it. It identifies five strategies, strategies 1 through 5, for trying to come at this question of stratification, which I believe it's 1 through 4 strategies, and then strategy No. 5 is model validation, which is really a different subject.

I'd like to preface this. It's very easy to lose sight of what we're doing. We're trying to figure out the average annual concentration people might that have experienced inside this building over course of a year. There's absolutely no doubt time-to-time from from and location-to-location one would expect considerable variability in the concentration

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of radon in the building in a given location and a given point in time. The question we're trying to ask ourselves is what do we believe to be a claimant-favorable estimate of what the average annual concentration is or was in that building. And of course we both came up with our models and our assumptions.

Now, the challenge here was, is it possible that there could have been locations within the building where the concentration over the course of a year could have been substantially higher than the upper 95th percentile average concentration that we calculated for the overall building? Turns out that NIOSH came up with one number, which was about -- for the 95th percentile of that estimate, SC&A earlier came up with its own. Because we used different distributions, it differed by a factor of two.

So the question then becomes how do we determine, you know, that stratification could not have resulted in a given location in

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the building where the average annual
concentration at that location could have been
substantially higher than the values that we
both independently derived, and ways of coming
at the problem. And I'm not going to go into
each one of these five areas, but there are
ways in which one could sort of create what I
would call a weight of evidence. That is, if
you were to run down any one of them
actually is done, mainly. What is the
variability of the average annual
concentration of radon in residences? And we
know that the average annual concentration
does vary in a residence by about a factor of
two to three, depending on what level in the
home you look at. So, for example, in your
home, if you take a radon measurement in your
basement, over the course of a year you'll get
the concentration. If you take it on the
first floor or second floor over the course of
a year, the concentration will probably be two
or three times higher.

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How useful is that information?

CHAIRMAN ZIEMER: Lower on the upper floors.

DR. MAURO: On the upper floors.

I'm sorry. On the upper floors. And you'll see that you get factors of two or three differences.

Now how applicable that is to our situation, one could say, well, in one respect you would expect a lesser degree, because there are floors separating the source of the radon in the basement and then of course then you have the ceiling of the basement and the ceiling of the first floor, et cetera, you've sort of isolated the source, namely the basement. You know, that's the source of all radon in homes for all intents t.he purposes. But anyway, that was one strategy that in effect is done. You know, we know it's about a factor of two or three, being the difference in the average annual.

But the other strategies are one

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more of exploring other ways of coming at the
problem. And the question becomes, you know,
let's say NIOSH or the Board would like to run
down some of these others, and, you know,
where do they come out? We've seen that
average annual concentrations, and if you run
down each strategy, you know, vary by a factor
of two, a factor of three, I don't know the
answer to this, but at least, you know, the
sense I'm getting is before moving forward a
little bit more confidence, you know, on the
stratification issue, you know, how big a
difference could there be? Could it be
substantial? That's stratification. That was
strategies 1 through 4. And, you know, you
could certainly read them and you could get an
idea of how they would work. They're all very
different, by the way, in how they would work.
And so in that regard they could

And so in that regard they could be useful because if you actually went down each one and they all came up with about the same answer, that is, well, we're seeing, you

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know, average annual variability's within buildings, different parts of buildings that vary by a factor of two, three, four and they all sort of came around to the same place, it creates a weight of evidence. But it's not going to be proof. It's just going to be another source of -- a basis upon which a decision could be made.

And finally, we have the subject I call strategy 5, which is called validation. This is new information that we were able to obtain from one of our associates who's involved in validating these models, not for the purpose of radon, but for the purpose of Homeland Security. That is, you know, can we predict the behavior of some aerosol inside in a structure mainly from a Homeland Security point of view. So there are models. the email I sent you'll see two links that you could go to and find out a little bit more about some of the advanced work that's being done I think under the auspices of Homeland

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Security looking into modeling the behavior of aerosols within buildings and, you know, how they come at the problem. So that would be more along the lines of model validation and what other people are doing in the federal government to try to come to grips with understanding how aerosols behave.

So all SC&A really did was try our best to come up with some creative strategies for helping to achieve closure to this problem.

CHAIRMAN ZIEMER: Okay. Thank you, John, for those comments. I'll ask for feedback here in a moment. I just wanted to point out in your August 19th paper called, "Strategies for Validating the Blockson Radon Model," in the middle of paragraph 2 you say, "In a related matter the Board expressed concern that stratification was not explicitly taken into consideration in the model." don't believe the Board took any official action on work stratification. It might be

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1	more correct to say that some members of the
2	Board expressed concern.
3	DR. MAURO: My apologies. You're
4	absolutely right.
5	CHAIRMAN ZIEMER: I don't think we
6	have an official position on stratification,
7	just that the concern was expressed. I wanted
8	to make sure that this doesn't say more than
9	actually occurred.
10	DR. MAURO: Yes, I'd be glad to
11	edit this and reissue it, or is this
12	sufficient
13	CHAIRMAN ZIEMER: Well, I just
14	wanted to make sure everybody understands
15	that. I think you did not identify this as an
16	official SC&A deliverable. It's just a think
17	piece for us to think about this issue.
18	DR. MAURO: And that's correct,
19	Paul.
20	CHAIRMAN ZIEMER: Now, let's get
21	other comments or questions from Board
22	members, if any.

1	MEMBER GRIFFON: Paul, this is
2	Mark.
3	CHAIRMAN ZIEMER: Yes, Mark?
4	MEMBER GRIFFON: I had the mute
5	button on when you called for comments.
6	I guess at this point all I would
7	maybe recommend is there any way that we could
8	I don't know if NIOSH has looked at SC&A's
9	thoughts, and I'm not sure that the
10	Mallinckrodt is even a good, you know,
11	candidate, but you know, this idea that I
12	brought up today and whether they could
13	consider these, you know, SC&A options 1
14	through 5 is it, John, or whatever?
15	DR. MAURO: That's correct.
16	Strategies 1 through 5.
L7	MEMBER GRIFFON: Yes, strategies 1
18	through 5. And, I mean, I would like to mull
19	those over a little more as well. And I
20	think, you know, I'm not ready to go much
21	farther with the discussion today. But maybe

in the October meeting we can --

Yes, I think we CHAIRMAN ZIEMER: going to take official agreed we weren't action on the Blockson matter today. This was simply going to be input that would give us think ideas about prior some to face-to-face meeting. So what you have here is some ideas from our contractor as to how we might think about both model validation and stratification. And this gives both Board members and also NIOSH, if they wish, opportunities to give thought to what has been suggested, as well as your comments, Mark. And then come to the Board meeting in October prepared hopefully to try to bring closure on the radon issue and then in turn to come to closure the Blockson issue, the on on petition.

MEMBER GRIFFON: Well, yes. And I was just going to say, you know, I'm not sure whether NIOSH had had an opportunity to consider any of these strategies and whether any of them make sense. I looked at a few and

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1	had some reservations about a few of them, but
2	some others seem to have more promise. And I
3	don't know if Jim or others at NIOSH have an
4	opinion on that now or whether we can, you
5	know, maybe ask for them to consider that and
6	maybe give us a report, you know, at the
7	October meeting.
8	MEMBER MUNN: Mark, this is Wanda.
9	Could you clarify for us why you feel that
10	Mallinckrodt is a valid surrogate for
11	potential exploration in regard to this radon
12	exposure?
13	MEMBER GRIFFON: Yes.
14	MEMBER MUNN: It's not clear to me
15	from what you've said why you would feel that
16	that, in my mind, unrelated
17	MEMBER GRIFFON: No, I know
18	MEMBER MUNN: facility would
19	have any bearing on what transpired at this
20	phosphate plant.
21	MEMBER GRIFFON: Yes, and that's
22	exactly why I hesitated to even bring it up.

It is not, and I never used the word
"surrogate" --

MEMBER MUNN: No, that was my word.

MEMBER GRIFFON: -- and shouldn't have. If I implied that, I misspoke.

MEMBER MUNN: All I was saying is that this is one example where you have a fairly robust set of monitoring data and potentially -- and this is a big if, you know, you have source term information and you could compare actual measured data with what this model that was created for the Blockson site, you know, you could put in your parameters for Mallinckrodt using the same Monte modeling approach and see what you got and compare it with the actual results that you have over time. So that was the usefulness, utility it would have, I guess, not as a surrogate model. And we've heard Jim argue this many times, and I don't disagree with this, the ore used there, you know, had

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much greater radium content and therefore much higher radon levels. So it would at least say, okay, we took this model and it does work, you know, reasonably well at Mallinckrodt and, you know, therefore expect it would also work. So the reason was more to test this model rather than to use it as a surrogate.

CHAIRMAN ZIEMER: One concern, Mark -- this is Ziemer again. One concern I would have about doing that is that unless we agreed in advance that it was sort reasonable, and I'll use the word "surrogate" here -- if you found that they did agree, then it seems to me if I was NIOSH, I'd say, well, that sort of bolsters our case. But if you found that they don't agree, the main thing that's going to happen is they're going to point out why it isn't a good surrogate, why the source terms, not in terms of a model, but how it's generated and how it's distributed and so on, why it's not a good surrogate.

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MEMBER GRIFFON: Well, we already know that it's not. I mean, I would argue I know it's not a good surrogate set of data.

CHAIRMAN ZIEMER: Yes.

MEMBER GRIFFON: But I mean, I can think of several concerns about using this approach. I'm just throwing it out there as a possibility.

CHAIRMAN ZIEMER: Yes, but once you get the answer --

MEMBER GRIFFON: But one thing is that if have, know, you you uncertainty on your source term and your other parameters that you're entering into this -you know, but the one thing I guess I'd be most concerned about was the source because arguably we have a fair amount of uncertainty in the Blockson model, you know, the existing model that we're assessing. one sort of constant or the one, you know, pretty hard piece of data, at least that NIOSH has presented, is the source term information.

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CHAIRMAN ZIEMER: Well, would you be interested in the degree of variation of radon levels at particular locations for given source terms? In other words, how it varies in time and space per unit source term or --

MEMBER GRIFFON: Well, I guess I would look -- honestly, Paul, Ι haven't thought this completely through, but I would consider it in terms of, you know, we're saying, or NIOSH is saying, that this current approach, the 95th percentile will bound, you know, all workers for, you know, all these And we do see some variation in years. sampling throughout the plant. We have variation in Mallinckrodt, too, but if this model also -- you know, the one used at Mallinckrodt ends up being a -- you know, the 95th ends up bounding all potential workers in that sort of situation, then I would say that correctly predicts, you know, consistent with the measured data, that data that we have.

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CHAIRMAN ZIEMER: Yes.

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MEMBER GRIFFON: So that's sort of the utility.

CHAIRMAN ZIEMER: Yes.

MEMBER GRIFFON: Is it a correct predictor or actual concentrations, actual exposure levels in the plant, not to be a surrogate set of data.

CHAIRMAN ZIEMER: Yes.

This is John Mauro. DR. MAURO: I'd like to -- if you don't mind, I think the big question is it's not the absolute value. Whether you work with data collected from Florida phosphate buildings, you work with data on radon measurements in any other buildings, including Mallinckrodt, it's not the absolute value that is of great interest It is the variability of the average annual value in different locations in the same building. See, in the end the real question is, does radon or any other aerosol behave in a way where the average

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concentration in one location in the building is going to be substantially different than the average annual concentration in another location in that building, especially if the buildings don't have any, you know, partitions that are isolating one part of the building from the other where, you know, the source is isolated from one location.

So in my mind the big question is, the variability in the average concentration large small in or structure, not the absolute values themselves. And that was really one of the themes that rang true, the strategies we identified, not to try to find an absolute value of what the upper bound or average annual value would be, but more along the lines of how variable is the average annual value within building.

MEMBER GRIFFON: And, John, along those lines, just to go back to my Mallinckrodt, you know, case here, I mean,

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that's sort of what I was considering, too,
not the absolute values, because I believe
that the Mallinckrodt values, you know, it's a
much more concentrated or with regard to
radium and higher radon levels than we would
expect at any of these phosphate facilities.
But you have a lot more data. So you can look
at that variability a little better. And you
can test it because what I've heard anyway is
that, you know, yes, there is some
variability, there are some gradients in the
Blockson plant. You know, we don't doubt
that. However, using the 95th on this model
would account for that, would cover that. And
that's I think what I was thinking when I
mentioned this is that that could be tested in
the case of Mallinckrodt possibly. I think
there's a lot of potential pitfalls with
regard to defining the source term, as I said.
But, you know, that may be a test case where
you have a it's one of the few places where
we have a lot of measurement data that seemed

to be -- that we could possibly use for validation purposes. That's all I was saying.

MEMBER if MUNN: Even one validated the model, however, you still have the issue of stratification that you expressed concern with. It's hard to imagine how a structure like Mallinckrodt could be in any way relative to the kind of structure, and lack of structure in many cases, that existed at the Blockson plant. Would resolving the source term and 95th percentile issue -- in other words, would validating the model your stratification mind eliminate your concerns? Or are we still talking about two different concerns?

MEMBER GRIFFON: Yes, I don't -no, no, no. You know, the Mallinckrodt
facility, I think you're probably right, is
not just one open, you know -- in my mind, I
don't remember what the Mallinckrodt facility
looked like, but I'm guessing that it was not
this real big high bay facility such as

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Blockson, you know?

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MEMBER MUNN: It was not much --

MEMBER GRIFFON: And it might have been multiple rooms. So, you know, NIOSH may look at this quickly and say, you know what, it's not a good test case and here's the reason. That's all I was saying. least consider this or other places where you have a reasonable set of radon data and a reasonable understanding of the source term. I was trying to say, you know, it may forsake of looking at the model considering whether it adequately addressed variations or gradients, you know, within real life data, we may be able to look outside the phosphate, you know what I mean? That's all I was saying, that there may be other possible sources of data that can be considered. to be surrogate measures, but rather just to And if they did find that right set, and maybe Mallinckrodt's not the right set, but then I think that would satisfy my concern

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1	about the gradients, you know, that we know
2	they exist, but clearly this Monte Carlo
3	approach in this model by using the 95th will
4	bound those. You know, so I would say yes,
5	that would address both concerns.
6	CHAIRMAN ZIEMER: Okay. Further
7	comments or questions?
8	Jim Neton, do you have any
9	comments at this point?
10	DR. NETON: Well, no, I've been
11	listening very attentively to the discussion,
12	and I really don't have any input at this
13	point other than, you know, if I hear
14	something definitive that the Board would like
15	us to do that would help resolve this issue,
16	we'd be happy to consider it.
17	CHAIRMAN ZIEMER: I think the only
18	thing we really have before us today are the
19	ideas brought up by SC&A, and we can get some
20	feedback from the Board. I suspect there
21	would be some desire on the Board members'

part to at least have NIOSH's sort of reaction

to those as to whether you feel any of those are worth pursuing, or to the contrary.

Board members, any other --

This is Wanda again. MEMBER MUNN: We have had this information from SC&A, this commentary on validating the model and the stratification issues. We've had it several weeks now. I haven't heard anyone ask specifically whether they've NIOSH had adequate opportunity to review those and whether they have any comment. I'd like to know if they have already.

CHAIRMAN ZIEMER: Well, number one, I don't think at this point -- it's not an official -- John described it as a thought piece. It's not an official deliverable from SC&A. And I don't believe that NIOSH would automatically respond to that. Would you, Jim?

DR. NETON: No, that's correct. I mean, we certainly have gone through it and thought about some of it, but we're not

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automatically going to respond to what John termed as a thought paper, I guess. Again, we'd be happy hear what the Board's to opinions are on these and would adopt consider approaches that might any be beneficial.

MEMBER MUNN: All right. Thank you, Jim. I didn't anticipate any formal response. I had just thought perhaps you might have some thoughts.

DR. You know, Ι could NETON: comment briefly. You know, I have some of the concerns that Mark raised about some of the they're all related issues, and to stratification. So, I mean, I don't know that any of these -- my general thought is that all these approaches in themselves require of certain assumptions. They're also subject to certain validation requirements. And so I don't know if we're going to go down sort of this infinite regression pathway where, you know, we produce an analysis that has certain

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inherent assumptions again that says well that supports our model. Well, how valid are those assumptions? You know, you keep kind of going on and on down this path. So I'm not sure that this would provide the weight of the evidence that the Board is looking for.

MEMBER MUNN: Thank you, Jim.

CHAIRMAN ZIEMER: Other comments from other Board members?

MEMBER GRIFFON: I mean, other than I would ask if before the next meeting if Jim could possibly give some thought to the Mallinckrodt or other data sets, you know, that I just discussed, whether the utility of using that - - those to sort of test the model.

And then, Jim, I would also take you up on your offer. If you can provide; I'm sure they're in the site research database, but those other references regarding the source term. You mentioned that there was other references.

1	DR. NETON: Right, Tom Tomes I
2	don't think is on the call, but he's since
3	found a number of other documents on that.
4	MEMBER GRIFFON: Okay. If you can
5	just, you know -
6	DR. NETON: Yes, we could
7	certainly do that.
8	MEMBER GRIFFON: Yes, that would
9	be great.
10	CHAIRMAN ZIEMER: Okay. So the
11	action will be, number one, that NIOSH will
12	provide the additional documentation, provide
13	that to Mark particularly to look at and maybe
14	copy the rest of us on that information as
15	well. And I haven't heard from the Board any
16	sort of overwhelming desire to have NIOSH
17	respond to the SC&A ideas.
18	Board members, would you like
19	NIOSH to at least give a preliminary critique
20	of whether they believe any of these things
21	are worth following up? Not that they would

actually do it, but they obviously have looked

1 them. Do you want them to give their 2 thoughts on these at the October meeting? 3 MEMBER MUNN: This is Wanda. Му initial thought is it should not be necessary 4 5 as long as we're meeting the desires that Mark 6 has expressed and that Dr. Melius has 7 expressed in the past. If their desires for further instruction and further examination 8 have been met then there does not appear to be 9 10 any reason to request specific response to all 11 of these issues. I would request that the 12 information would be sent to at least the work 13 group members at the same time, even though the work group has not been functioning in 14 15 recent months. 16 CHAIRMAN ZIEMER: Yes. And Ι suggest that we send it to the whole Board 17 18 because the issue has moved up from the work 19 group level to the Board level in any event. 20 MEMBER MUNN: Correct. ZIEMER: 21 CHAIRMAN So, we're 22 considering this as a full Board at this

1 point. So I think it's appropriate that only 2 the work group be informed but others as well. 3 MEMBER GRIFFON: Paul, this is Mark. 4 5 CHAIRMAN ZIEMER: Yes, Mark? 6 MEMBER GRIFFON: I have a slightly 7 different view on that than Wanda, especially option 3. My concern is that I may have -8 You're talking 9 CHAIRMAN ZIEMER: 10 about strategy 3? 11 GRIFFON: MEMBER I'm sorry, strategy 3, yes. See, that one to me sort of 12 13 possibly dovetails with the whole notion of Mallinckrodt data, really looking 14 at the 15 variability and how the model accounts that variation. But I think it was actually 16 slightly different than that. And I must say 17 18 that, you know, a couple of the strategies I 19 felt, as Jim just said, that, you know, we 20 would be going down a possible path

recreate some of those theoretical thought

pieces there that we'd almost be questioning,

21

1	whether, you know, our assumptions on those
2	were erroneous. But option 3 stood out a
3	little to me that it might have some merit.
4	But I would like to maybe have NIOSH at least
5	I don't know that I'm looking you know,
6	my thought is I don't need a written
7	assessment of these strategies, but rather
8	just, you know, maybe be prepared to give us a
9	quick response on the strategies laid out by
10	SC&A and maybe pay particular attention to
11	number 3. That would be my hope.
12	CHAIRMAN ZIEMER: Other Board
13	members?
14	(No response.)
15	CHAIRMAN ZIEMER: I mean, at this
16	point I think I certainly would support Mark
17	in that.
18	Jim Neton, if NIOSH is able to
19	give a we're not asking in-depth studies,
20	but give their sort of reaction to these
21	ideas, and particularly focus on the third

strategy as to whether that is something that

would be of any help or doable.

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DR. NETON: Yes, this is Jim. Ι have to admit of all the strategies, three was which something Ι think we kind of communicated a little differently to the Board in previous discussions. And that was the fact that, you know, we don't have -- clearly strategy 3 calls for finding data that was We don't have that. contemporary. But we have a lot of data that was taken in phosphate plants later date, and do have at а we distributions available. And on top of that, I think it's as important to look not only at the variability but the relative magnitude of the values. If one consistently sees values that are approaching an order of magnitude lower than what we're assigning at Blockson, even though it's in a different time frame, one has to wonder then could the ventilation rates, which is driving most of this, have been more than an order of magnitude greater to account for those differences? That's sort

1	of where I feel a weight of the evidence
2	argument starts to make sense.
3	CHAIRMAN ZIEMER: Yes.
4	MEMBER GRIFFON: And, Jim, maybe
5	if you could yes, I mean
6	DR. NETON: I'd be happy to put
7	something together like that.
8	MEMBER GRIFFON: That would be
9	good.
10	CHAIRMAN ZIEMER: I think that
11	would be helpful.
12	MEMBER GRIFFON: interested in
13	looking at that both ways.
14	DR. NETON: That I think we've
15	already tried to communicate. Maybe it's not
16	been, you know, succinct in a single document,
17	but that sort of argument. In addition to the
18	fact that Mallinckrodt may not be a good
19	surrogate, but given the source term was maybe
20	1,000 times more concentrated radium, you
21	know, I think that the model would probably

radon concentration

the

22

over predict

Mallinckrodt by a considerable margin. You know, that's something I think that we talked about.

MEMBER GRIFFON: Yes, and that would be supportive, right.

DR. NETON: ORAU, and Ι had mentioned this before, had done a study where they took and did a time-weighted -- I know there's a lot of objection to time weighted studies. but at а time-weighted average exposure to workers at Mallinckrodt between -the very early years, up to 1956, I believe, and the values were not that different than the 95th percentile we're using at Blockson. That, again, to me is sort of a weight of the evidence argument that says, you know, this is a source term much more concentrated and these workers not receiving time are exposures approaching -- or very close to, it may be a factor of two, but in the ballpark, let's say, as what we're assigning it at Blockson.

### **NEAL R. GROSS**

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CHAIRMAN ZIEMER: Thank you, Jim.  Board members, is that agreeable?  Any objections to that as a pass forward? We have two things that NIOSH would do. One is to provide those references that you referred to earlier. And then the other would be to look more closely at strategy 3 and whether or not that can be utilized for addressing the issue of well, mainly the stratification issue, but to some extent has some validation implications as well.  Is that agreeable with everyone?  (No response.)  CHAIRMAN ZIEMER: I hear no objections.  Mark, does that  MEMBER GRIFFON: That sounds fine.  MEMBER SCHOFIELD: Sounds reasonable.	1	So we could put some of that
Board members, is that agreeable?  Any objections to that as a pass forward? We have two things that NIOSH would do. One is to provide those references that you referred to earlier. And then the other would be to look more closely at strategy 3 and whether or not that can be utilized for addressing the issue of well, mainly the stratification issue, but to some extent has some validation implications as well.  Is that agreeable with everyone?  (No response.)  CHAIRMAN ZIEMER: I hear no objections.  Mark, does that  MEMBER GRIFFON: That sounds fine.  MEMBER SCHOFIELD: Sounds reasonable.	2	together, you know, maybe in one place.
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MEMBER SCHOFIELD: Sounds reasonable.	18	Mark, does that
21 reasonable.	19	MEMBER GRIFFON: That sounds fine.
	20	MEMBER SCHOFIELD: Sounds
22 CHAIRMAN ZIEMER: Okav. We'll	21	reasonable.
	22	CHAIRMAN ZIEMER: Okay. We'll

1	proceed on that basis then and have a report.
2	And, Ted, if you'll put this on
3	the agenda for the October meeting as well.
4	MR. KATZ: Absolutely, Dr. Ziemer.
5	CHAIRMAN ZIEMER: Okay.
6	MEMBER GRIFFON: Can I ask one
7	more thing before we get off the topic?
8	CHAIRMAN ZIEMER: You bet.
9	MEMBER GRIFFON: This is to Jim
10	Neton really. If I have questions on the
11	actual crystal ball model, is there anyone I
12	can turn to at NIOSH, or should I go through
13	you, Jim? I'll certainly cc everyone, but
14	DR. NETON: You can start with me.
15	MEMBER GRIFFON: Okay.
16	DR. NETON: I should be able to
17	answer it. If I can't, I'll track down who
18	can.
19	MEMBER GRIFFON: Okay. Okay. All
20	right. Thank you.
21	CHAIRMAN ZIEMER: Okay. I think
22	we're set on that then. Are we?

2 with respect to agenda? 3 MR. KATZ: Yes, Dr. Ziemer, just I think, which is I just would like to 4 try to confirm, although we're missing a 5 6 couple of Board members, but I know it from is interested for 7 one at least, who Brookhaven, to actually see the facility since 8 we have that SEC coming up and so on. And let 9 10 me just run through, to make this quick, the people I think have said yes, but I could be 11 12 wrong on one of these. And then just open it 13 up for someone to correct me on the people I think have said yes, and also to add in for 14 15 others that may want to do it but haven't said 16 so. So I believe I have Gen Roessler, 17 Josie Beach, Phil Schofield, Bob, Brad, Wanda 18 19 and Mark have said yes, I think. Is that 20 correct? PRESLEY: This is 21 MEMBER Bob Presley --22

Ted, you have some final issues

1	MEMBER GRIFFON: No, Ted, I can't
2	do it.
3	MR. KATZ: Okay. Not Mark.
4	Sorry. That's right.
5	MEMBER GRIFFON: That's right, not
6	Mark.
7	MEMBER PRESLEY: Hey Ted?
8	CHAIRMAN ZIEMER: Yes, and this is
9	Ziemer. I indicated to you I have visited
10	Brookhaven a number of times in the past, so I
11	probably won't go.
12	MR. KATZ: Right.
13	MEMBER CLAWSON: This is Brad.
14	That is correct for me.
15	MR. KATZ: Okay. Mike, are you
16	with us on this call?
17	MEMBER GIBSON: Yes, I'm here.
18	MR. KATZ: This tour which would
19	probably be the Monday afternoon before the
20	Board meeting, is this something you're
21	thinking you might attend or -
22	MEMBER GIBSON: I don't think I'll

1	be available.
2	MR. KATZ: Okay. Okay. And I
3	have no other takers then, I believe.
4	MEMBER PRESLEY: Hey, Ted?
5	MR. KATZ: Yes?
6	MEMBER PRESLEY: You might ask the
7	staff.
8	MR. KATZ: No, no, no. That's a
9	separate thing. I just wanted to get the
10	Board here on this call, but absolutely I've
11	opened it. The option is there for the staff
12	to attend, too. And I've already heard from
13	SC&A. I haven't yet heard from OCAS.
14	CHAIRMAN ZIEMER: Okay. And, Ted,
15	any other information needed for the Board
16	meeting agenda for October?
L7	MR. KATZ: I think we're good, but
18	I will certainly be sending out a draft so
19	that you can see what's there and can comment,
20	if necessary. And I'll be doing that fairly
21	soon.

CHAIRMAN ZIEMER: Okay. Thank you

1	very much.
2	MEMBER PRESLEY: There's no
3	problem with us coming in early on our rooms,
4	right?
5	MR. KATZ: There will not be.
6	There may be a problem right this moment, but
7	that will certainly be an option. Otherwise,
8	it of course wouldn't work for particularly
9	folks coming from parts west.
10	MEMBER PRESLEY: Yes, because I'm
11	coming in on Sunday.
12	MR. KATZ: Right.
13	CHAIRMAN ZIEMER: Okay. Thank
14	you. I believe that concludes our agenda for
15	today. Does anyone else have any additional
16	items they want to raise to us?
17	(No response.)
18	CHAIRMAN ZIEMER: If not, then I
19	will declare the meeting adjourned. Thank you
20	all very much.
21	(Whereupon, the above-entitled
22	matter went off the record at 1:22 p.m.)

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