

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

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ADVISORY BOARD ON RADIATION AND
WORKER HEALTH

+ + + + +

SUBCOMMITTEE ON DOSE RECONSTRUCTION REVIEWS

+ + + + +

TUESDAY
APRIL 1, 2014

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The Subcommittee convened telephonically, at 10:30 a.m., Eastern Daylight Time, David Kotelchuck, Chairman, presiding.

PRESENT:

DAVID KOTELCHUCK, Chairman
BRADLEY P. CLAWSON, Member
WANDA I. MUNN, Member
DAVID B. RICHARDSON, Member

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ALSO PRESENT:

TED KATZ, Designated Federal Official
BOB BARTON, SC&A
HANS BEHLING, SC&A
KATHY BEHLING, SC&A
RON BUCHANAN, SC&A
ZAIDA BURGOS, NIOSH
GRADY CALHOUN, DCAS
DOUG FARVER, SC&A
ROSE GOGLIOTTI, SC&A
DeKEELY HARTSFIELD, HHS
STEVE MARSCHKE, SC&A
BETH ROLFES, DCAS
MUTTY SHARFI, ORAU Team
SCOTT SIEBERT, ORAU Team
MATT SMITH, ORAU Team
JOHN STIVER, SC&A

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2 10:36 a.m.

3 MR. KATZ: So let's begin with roll
4 call first. And because it's complicated with
5 so many sites with dose reconstructions, I'm
6 just going to run through myself the recusals
7 for Board Members that are on the line. And
8 then if Mark joins us, I'll cover his at that
9 point, too, rather than you having to remember
10 your recusals.

11 So just roll call. I know who's on
12 the line now. I'll just run down your names.

13 (Roll call.)

14 MR. KATZ: So that covers that.
15 Let me just also note that some of the materials
16 related today that can be posted or are posted
17 on the web site under today's meeting date of
18 the Subcommittee. All of the Board Members and
19 staff should have all of the materials, I
20 believe, that we're discussing today because
21 they've been distributed by multiple parties in
22 many cases, myself sort of duplicating other

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1 people's distributions to some extent.

2 And that's it for me. The agenda is
3 also posted on the web site. Dave, it's your
4 agenda, and off we go.

5 CHAIRMAN KOTELCHUCK: Well, okay.
6 Welcome, folks. This is, as I noted before, an
7 unusual two-day meeting because we had to
8 postpone our last meeting for lack of a quorum.
9 So thank you all very much for being on the line
10 and for being here for the two days. I hope
11 this is a rare back-to-back meeting.

12 So the first item on the agenda is
13 the dose reconstruction method for
14 Westinghouse Nuclear Fuels. I don't know who
15 wants to start on that. John, perhaps you?

16 MR. STIVER: Yes. Hans had
17 prepared the memo to Drs. Lemen and Field after
18 the one-on-one when this case came up. And I
19 believe Hans is on the line now.

20 DR. H. BEHLING: Yes, I am.

21 MR. STIVER: And so, Hans, if you
22 would like to - I'll go ahead and bring up that

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1 memo, and if you would like to --

2 DR. H. BEHLING: Yes. Just a quick
3 - I'm not sure if Ted Katz should have asked for
4 a roll call because no one has been asked to
5 identify themselves.

6 MR. KATZ: Oh, I'm sorry.

7 DR. H. BEHLING: We didn't do the
8 roll call.

9 MR. KATZ: I did only the Board
10 Members, and we jumped right into it. That's
11 my fault. Sorry.

12 (Roll call.)

13 MR. KATZ: Okay. Very good.
14 Sorry for having omitted this, Jim. You don't
15 have to transcribe this attendance, but on we
16 go again. Thank you.

17 MR. STIVER: Hans?

18 DR. H. BEHLING: Okay. Just to
19 recap what has already been stated by John
20 Stiver, this whole issue centered around a dose
21 reconstruction case that I reviewed involving
22 a person who was working for the Westinghouse

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1 Nuclear Fuel Division and is really part of an
2 18th set. So I assume we're not going to be
3 talking about this particular dose
4 reconstruction, other than the issue that
5 prompted this memo.

6 As part of a one-on-one that was
7 done back in January, this past January here,
8 we identified a couple of findings that made it
9 to a document that was never identified to SC&A,
10 and it's really not a Site Profile. But it was
11 included in my assessment of this particular
12 dose as part of Appendix B. And it is a
13 document that's entitled "A Dose
14 Reconstruction Methodology for Westinghouse
15 Nuclear Fuels Division, Cheswick,
16 Pennsylvania". It's a very short document but
17 it identifies certain aspects for dose
18 reconstruction involving people who may have
19 been working at the Westinghouse facility
20 during the time of operation of '71 - '72 and
21 for the residual period, that is several years.

22 And part of my review, as always, we

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1 look at the dose reconstruction, and the first
2 thing we do is try to duplicate any number that
3 is identified for either external exposure or
4 for internal exposure. We agree that the
5 number is almost immaterial, but our first
6 effort is always to simply try to reproduce the
7 numbers that NIOSH has introduced in the dose
8 reconstruction report for that individual.

9 And one of the things that I did was
10 to look at really the internal exposure values
11 that were cited on behalf of this particular
12 case as just as a way of trying to get everyone
13 on board here. And I'm going to ask John Stiver
14 to perhaps identify a page of the report that
15 might also be helpful for the people who are
16 online here. John, are you in a position to
17 provide us with that?

18 MR. STIVER: Hans, you're kind of
19 breaking up there. I didn't quite hear you.

20 DR. H. BEHLING: I was hoping that
21 you can identify a couple of pages that will
22 help me explain what this issue was that came

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1 to light as a result of a one-on-one. And what
2 I was hoping that you can do is to identify pages
3 on that particular report that I had enclosed
4 as part of my dose reconstruction that was part
5 of Appendix B and is in the "A Dose
6 Reconstruction Methodology for Westinghouse
7 Nuclear Fuel Division, Cheswick,
8 Pennsylvania." Can you pull up that document?
9 I believe it starts on page 139.

10 MR. STIVER: Okay. Let me see if I
11 can get that here.

12 DR. H. BEHLING: If you can't, I
13 will try -- it would just make it so much simpler
14 to identify a few things.

15 MR. STIVER: Okay. I've got it.
16 Let me go ahead and share it here.

17 DR. H. BEHLING: Okay. Can you
18 perhaps - let's see here -- pull up page --

19 MR. STIVER: Okay. Do you see it
20 now?

21 DR. H. BEHLING: Yes. Can you
22 perhaps pull up page 141?

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1 MR. STIVER: Is this what you need
2 right here?

3 DR. H. BEHLING: Yes. And just as
4 a summary for review here, the people in that
5 facility were potentially exposed to three
6 different types of radionuclides. And on page
7 141, you will see one of three options that
8 would be permissible in a reconstruction of
9 internal dose for an individual during that
10 time period.

11 The first one is on page 141, a 2
12 percent enrichment cycle uranium ratio. And
13 you'll see on the far left side the radionuclide
14 mix that is part of that 2 percent ratio, 2
15 percent enriched uranium ratio. And on the
16 next page, page 142, you see two others: the 12
17 percent ten-year-old fuel-grade plutonium
18 ratios and the last, the third one is the
19 natural thorium series. And using those three
20 options, I guess the dose reconstruction makes
21 the decision as to which one will give you the
22 highest potential exposure and the highest PoC.

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1 And in this particular case, the choice was the
2 second one, the 12 percent ten-year-old fuel
3 grade plutonium ratios.

4 And one of the things that -- this
5 is just a sideline issue -- in looking at that
6 table, you'll realize there are a total of four
7 different radionuclides that are identified.
8 The first one is Pu-238, the second is Pu-239,
9 Pu-241, and americium-241. One of
10 the first things I did sort of have to question
11 is what is the point of identifying
12 plutonium-241 as an alpha emitter? Because it's
13 not. And, of course, it's very important
14 because it turns out that has the highest value
15 here. When you look at the right-hand side,
16 it's 14.201.

17 And it's very difficult to really
18 understand what's going on here, so it took me
19 quite a long time. And what it really comes
20 down to is something that I will explain. If
21 you go to page 143, the next page, John, that
22 particular page shows three tables, and that is

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1 really based on dose, I mean on air sampling
2 data that were accumulated, general air
3 sampling data that would have corresponded to
4 intakes of gross alpha emitters. And if you
5 were, for instance, an operator, a general
6 laborer, you would have obviously been eligible
7 for the consideration of the inhalation
8 quantity that you see on the top of the page that
9 involves, during the operational years of '71
10 - '72, an intake of 965.121 dpm per day.

11 If you were, on the other hand,
12 someone who was less likely to be exposed to
13 such values, it would qualify for the
14 supervisor. And in this case, the claimant was
15 identified as likely to have been in that
16 category.

17 And the important number here is to
18 identify the 482.561 dpm per day, and that is
19 gross alpha. Now, obviously, since you have
20 three options for radionuclide mixes, and these
21 are strictly the values, the 482.561 as alpha
22 intakes per day, and now you have to assume what

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1 is the mix of those alpha emitters based on
2 which of the three. In this case, as I said,
3 it's the 12 percent ten-year-old fuel-grade
4 plutonium that was identified in the previous
5 page, on page --

6 MEMBER MUNN: Hans, can you wait
7 just a moment, please?

8 DR. H. BEHLING: Okay.

9 MEMBER MUNN: I'm hearing Hans in
10 sound waves that are very difficult to
11 understand. Is it my telephone system?

12 CHAIRMAN KOTELCHUCK: You know,
13 I'm hearing the same thing. I was thinking,
14 although I'm chairing, I'm thinking let's see
15 if we can just switch off while he's talking.

16 DR. H. BEHLING: Let me do one thing
17 more. I just disconnected my headphone, which
18 may be a problem.

19 MR. KATZ: Actually, your voice
20 itself is, I think, pretty, I don't know, from
21 here, it's very clear, Hans. But I think
22 everyone else, following Dave's lead, needs to

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1 just mute your phone because there's a lot of
2 background noise. So *6 to mute your phone if
3 you don't have a mute button. There you go.

4 MEMBER CLAWSON: Hey, Ted, just to
5 let you know, too, when it comes to questions,
6 I still don't have my computer back. So I'm not
7 able to see most of this stuff, so if there's
8 some oddball questions that come from me,
9 besides my normal ones, it's because I don't
10 have my computer. So I may need a little bit
11 more information, okay?

12 MR. KATZ: Okay. Thanks, Brad.

13 DR. H. BEHLING: Okay. For those
14 who may not have access to the computer, as Brad
15 does [not], just bear with me because, in the
16 end, what we're going to do is come full circle,
17 so this issue will be resolved. I just wanted
18 to explain what the genesis of this was and how
19 I came to that conclusion as to the fact that
20 it might be a generic mistake that may not only
21 impact this particular dose reconstruction but
22 all others that involve the Westinghouse

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1 facility. And I think this is what prompted
2 this whole issue becoming an issue that was
3 obviously put in the forefront for discussion.

4 Anyway, let's go back here. And as
5 I just said before, when you start out with the
6 assumption that this claimant was a supervisor,
7 he was exposed to 482 dpm per day of alpha, dose
8 alpha. Then you have to now decide what
9 contributions were the different radionuclides
10 that were part of the particular mix that we're
11 talking about, the 12-percent ten-year-old
12 fuel-grade plutonium. And as I said, there are
13 only three alpha emitters: Pu-238, 239, and
14 americium. And now you have to decide how
15 you're going to separate those out in terms of
16 what fraction of the 482 dpm per day was
17 contributed by each of those three alpha
18 emitters, Pu-238, 239, and [americium-]241.
19 And you can obviously do that by a quick
20 calculation by multiplying the 0.117, which is
21 Pu-238, times 482 dpm per day, and understand
22 what fraction of that total gross alpha was

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1 contributed by each of those.

2 And I did all those things. And
3 when I tried to reproduce the number, I came up
4 with a value that was significantly lower than
5 what NIOSH had introduced into the CADW data,
6 which is also included in my review of this
7 case.

8 And as it turns out, my assessment
9 turned out to be considerably lower. So,
10 again, this is an issue here that would probably
11 not cause a major heartburn because we're
12 overestimating. This error turned out to be an
13 overestimate, as opposed to an under. We're
14 always more concerned when we underestimate a
15 claimant's intake of dose.

16 Anyway, so what it comes down to, I
17 came up with the conclusion that for the two
18 years, '71 - '72 as an example, the intake would
19 have corresponded to 2010 becquerels per year.
20 NIOSH, in looking at the CADW data, had
21 estimated 2932 becquerels per year. And I
22 tried to reconcile the difference, and I

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1 realized, only after the fact, that that
2 difference is due to the fact that NIOSH had
3 assigned that daily intake not for 260 days out
4 of the year but for 365 days a year. And that
5 turns out to be an error because, if you look
6 at page -- and I'm going to ask John to turn to
7 page 142. And on that page, the paragraph
8 starting with air monitoring results are
9 reporting both units of microcuries per
10 milliliter of air and dpm per cubic meter. So
11 if you go further down, there is a sentence that
12 starts out with: "A daily weighted average was
13 established based on the breathing rate of 9.6
14 cubic meters per day for 250 working days per
15 year."

16 And on that basis, I realized that
17 the error involved that I identified here was
18 the use of 365 days instead of 250 days. And
19 only this morning, minutes before we went on
20 air, I received NIOSH's response to that
21 particular finding, and I'll just read it to you
22 if you don't have it.

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1 NIOSH's response states that -- and
2 I'll just skip the first couple of -- well, I'll
3 read the whole NIOSH response. "NIOSH
4 believes the values given in the methodology
5 are correct for intake for workdays for a
6 250-day work year. However, when these values
7 were entered into the CADW, the calculation
8 applied these intake values for 365 calendar
9 days per year. The assignment of the intake
10 rate is based on 250 workdays, as a 365 calendar
11 workday-based intake did result in an
12 overestimate of the correct exposure."

13 So I think we've resolved -- NIOSH
14 has accepted the fact that there was some error
15 introduced into CADW. The numbers that I just
16 cited are slightly higher than they should be.
17 And based on what I gather is that this will be
18 corrected. So as far as I'm concerned, this
19 issue has been resolved.

20 And if I have any other comment, I
21 would like to at least draw attention to the
22 fact that, since, again, we're on page 142, when

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1 you have, for instance, the third option of
2 natural uranium, I'm sorry, natural thorium
3 ratios, again, there are two radionuclides in
4 that table: actinium-228 and radium-228. And
5 for each of those, there is the issue of alpha.
6 They're not alpha emitters.

7 The only three alpha emitters on
8 that particular table are thorium-228, 232, and
9 americium. And so they all have to add up to
10 100 percent, and, as you see here, the constant
11 ratios of 0.333 would add to the value of 1.66,
12 which is obviously incorrect. We really want
13 to apportion the intake as defined in that table
14 -- in this case, the 482 dpm per day -- into
15 three equally-divided ratios contributed by
16 thorium-228, 232, and radium-224. And so that
17 should be also corrected in the revision to that
18 particular document. It just leads to
19 misunderstanding, and it's just an easy fix.

20 MEMBER MUNN: This is Wanda. I
21 misunderstood what you just said about that
22 last table we're looking at. I at first

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1 thought you said the two radionuclides of
2 thorium and actinium and then you instead, when
3 you were speaking last, you said the two
4 radionuclides were the two thorium isotopes and
5 radium-224.

6 DR. H. BEHLING: Yes, those are the
7 three alpha emitters that have to be used to
8 estimate the quantity of the - we're dealing
9 with a supervisor. Four hundred eight-two dpm
10 per day would have to be split into three equal
11 parts. I don't have my calculator, but you can
12 obviously --

13 MEMBER MUNN: Oh, yes --

14 DR. H. BEHLING: And the other
15 three are not alpha emitters.

16 MEMBER MUNN: Okay.

17 DR. H. BEHLING: Actinium-228 and
18 radium-228 are not alpha emitters, and they
19 should be included in the dose reconstruction
20 but they should not be part of the gross alpha
21 numbers that we're trying to use in separating
22 which alpha emitters contributes what to that

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1 gross alpha intake.

2 MEMBER MUNN: Alright, alright.

3 MR. SHARFI: This is Mutty Sharfi.
4 I can explain the table for you if you'd like
5 and why I felt that way.

6 DR. H. BEHLING: Okay.

7 MR. SHARFI: Since we're applying
8 the ratios to a gross alpha result, you're
9 correct that three of them are alphas and two
10 of them are beta emitters, but we're just using
11 the ratio to determine intakes. So there are
12 five radionuclides that you're going to end up
13 assigning. So when you sum the three alphas,
14 you do get 100 percent. But because there are
15 five radionuclides, the total fraction will end
16 up being, when you talk about total intake to
17 the gross alpha intake, the total intake is
18 actually 166 percent since all the
19 radionuclides are in equilibrium.

20 DR. H. BEHLING: Yes, I understand

21 --

22 MR. SHARFI: So we are -- so it's

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1 really an application issue. The table wasn't
2 to imply that they're alpha emitters, just how
3 the ratio gets applied to the gross alpha
4 result.

5 DR. H. BEHLING: Yes. In this
6 case, and I totally agree with you, the third
7 table would have been used. When I looked at
8 the ten-year-old fuel grade and I saw the large
9 value for plutonium-241 as an alpha emitter, it
10 kind of just threw me a curve ball, that's all.

11 MR. SHARFI: Yes, yes. All the
12 tables, yes, were all tagged to the gross alpha
13 result because that's how, yes, that's how the
14 information, that's how the intake is
15 originally designed.

16 DR. H. BEHLING: Yes. It's just a
17 nit. I'm not saying that this is an issue here
18 that needs to be belabored, but it's just very
19 confusing when you first try to get into NIOSH's
20 head in saying how did they do this, how did they
21 come up with those numbers, and --

22 MR. SHARFI: Yes. I think the

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1 confusion is because, as an AWE, we deal more
2 with gross alpha samples. And in most cases,
3 when we talk about DR, we're talking about DOE
4 sites that we're tagging to, like plutonium
5 bioassay. So it's not a tag to a gross alpha
6 sample but a plutonium alpha or a thorium alpha,
7 you know, specific. And since these are not
8 radionuclide-specific intakes that we're
9 tagging them to, it's probably unusual compared
10 to other claims that we usually look at.

11 DR. H. BEHLING: Okay. The only
12 last question I think you should answer for the
13 people on the line here, was this issue of
14 applying the intake values for 365 instead of
15 250 days, was that something that we can
16 reasonably assume also applied to the other
17 cases that were done, or was this unique to this
18 particular DR, this error of applying 365 days
19 as opposed 250 days a year?

20 MR. SHARFI: I would have to
21 generically go look at individual claims to
22 probably answer that because, generically, I

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1 mean, when we do TBDs, you develop
2 methodologies for particular claims. And I'll
3 let Grady talk more about that.

4 But I can't specifically say
5 whether or not we have gone and corrected to be
6 more specific in these tables. So if this
7 information is used for a future claim, so that
8 it now says per calendar day or per workday, so
9 that if that confusion, it's made sure that we
10 don't have that again.

11 DR. H. BEHLING: Yes, because
12 that's really what triggered this concern that
13 says, if this is not the only case where this
14 error occurred, then this is why it was an issue
15 that prompted this memo. If it is the only
16 case, then it's obviously a minor problem.

17 CHAIRMAN KOTELCHUCK: Except for
18 that case.

19 DR. H. BEHLING: Yes. Again --

20 MR. SHARFI: Again, this does
21 result, as Hans cited, to an overestimate, not
22 an underestimate.

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1 DR. H. BEHLING: Yes.

2 MS. K. BEHLING: This is Kathy
3 Behling. I believe this also, though, brings
4 up a bigger or more generic issue in my mind.
5 The fact that we were really not aware of this
6 dose reconstruction methodology, and I realize
7 that there are these documents out there and
8 they are now showing up in the claim files, I
9 think it's important -- again, when the
10 Subcommittee selects cases, there may be these
11 smaller sites out there that don't have Site
12 Profiles where these dose reconstruction
13 methodology documents are in the files, and we
14 never get to see them unless there is a case that
15 we're assigned.

16 So I don't know how many of these
17 types of documents exist out there, but maybe
18 NIOSH could shed some light on that because it's
19 not something that we will typically review or
20 see unless it's a case that's selected by the
21 Subcommittee.

22 MR. CALHOUN: This is Grady.

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1 We've done that intentionally because, as you
2 know, we have hundreds of covered sites. And
3 the thought is that those sites without an
4 approved TBD, the reconstruction itself needs
5 to be detailed enough to judge on its own. It
6 needs to be able to stand alone.

7 So there are sites with these what
8 we call methodologies out there. We have no
9 intent of making those approved TBD documents.
10 In this case in particular, you think we've had
11 less than a hundred cases in the 13 years we've
12 been in existence. And there's a lot of other
13 sites that we've had fewer than that, so those
14 do exist. But the intent is that the DR is
15 detailed enough, the dose reconstruction is
16 detailed enough it can stand alone.

17 So that's what we need to be looking
18 at is the actual dose reconstruction. And if
19 it's not detailed enough to verify that the
20 answers are okay, then we need to revise how we
21 do the dose reconstruction, rather than making
22 a full-blown approved TBD for every site we do

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1 a dose reconstruction for.

2 MS. K. BEHLING: Okay, fine.
3 Thank you.

4 DR. H. BEHLING: And just to recap
5 for everyone, including Dave Kotelchuck, I
6 don't think anything really extravagant needs
7 to be done here, even if this is not an isolated
8 case, simply because if this even applies to
9 other previous cases that have been
10 reconstructed then those estimates would be
11 higher than would normally result if you used
12 the correct 250 days. And if I recall, we never
13 correct an error that is on a claimant's side
14 or favor, so, at this point, I think we can put
15 this to rest.

16 CHAIRMAN KOTELCHUCK: Okay. And,
17 NIOSH folks, do you agree?

18 MR. CALHOUN: Yes, I'm good with
19 it. How about Scott and Mike?

20 MR. SHARFI: I agree that the
21 agreed-upon correction would only reduce the
22 dose, not increase it.

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1 CHAIRMAN KOTELCHUCK: Right,
2 right.

3 MR. SIEBERT: And this is Scott.
4 The other thing to note is this will come up
5 again when we deal with the next set because
6 this is SC&A 434. And at that point, we'll
7 actually respond to all -- actually, we already
8 did respond to all the findings in that document
9 that was sent out this morning, but I believe
10 we'll cover that when we hit that in the next
11 groupings that we deal with the 14th through
12 18th set.

13 CHAIRMAN KOTELCHUCK: Very good.
14 Subcommittee Members, anybody have any further
15 comment or concern?

16 MEMBER MUNN: This is Wanda. Not
17 here. No, I think Hans' explanation was well
18 received here.

19 CHAIRMAN KOTELCHUCK: Okay. And I
20 don't have any further comments. So I think
21 that this issue is resolved, and we're ready to
22 move on to our case reviews.

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1 Okay. Now, actually, let us go
2 back to the single case that's sitting out in
3 set 9, where we were with -- 270 -- no.

4 MR. FARVER: This is Doug. It's
5 185 --

6 CHAIRMAN KOTELCHUCK: -- 185.7,
7 right? We needed a report, or there was some
8 -- can we put that on the screen? And then,
9 hopefully, it will be resolved today.

10 MR. FARVER: Dave, this is Doug.
11 Probably the best thing we could do is put up,
12 we have a matrix of the Huntington Pilot Plant
13 issues, and it contains the NIOSH responses and
14 what our reply to those are.

15 CHAIRMAN KOTELCHUCK: Alright.

16 MR. FARVER: I think John Stiver is
17 going to get that on the screen. Just to recap,
18 we had that one outstanding finding from the
19 Huntington Pilot Plant, and it all stemmed back
20 to a report that SC&A wrote reviewing the
21 revised Site Profile.

22 And in that report, we had

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1 identified six findings. Two of the findings
2 were closed out with the 185.6 discussion,
3 which was a finding before this one. That left
4 four findings that NIOSH was going to go back
5 and read the report and respond to.

6 So that we could capture all this,
7 we just put this in a matrix. And that way, we
8 have all the information in one piece.

9 CHAIRMAN KOTELCHUCK: Okay.

10 MR. FARVER: They're on the screen.

11 CHAIRMAN KOTELCHUCK: It is on the
12 screen, findings one and two.

13 MR. FARVER: Okay. These were
14 issues that Steve Marschke identified based on
15 a review of the Site Profile. So the first one
16 deals with contaminants that are in the TBD, and
17 NIOSH's response was that they're revising the
18 TBD and they will include the contaminants that
19 we're concerned about. So it's a TBD
20 modification, and, as long as they modify the
21 TBD, we really don't have a big concern about
22 this because they're just including the

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1 information that we would like to have them
2 include.

3 CHAIRMAN KOTELCHUCK: Good.

4 MR. FARVER: Finding two is very
5 similar. It has to do with the
6 uranium-specific activity, and there were some
7 rounding issues where they rounded the two
8 significant figures. And all we're asking --
9 and they said they're going to modify the TBD.
10 We just want to make sure the TBD is specific
11 and states that those results are rounded to
12 significant figures, and it also quotes the DOE
13 standard, STD-1136 as a reference.

14 So we really don't have any concerns
15 as long as they modify the TBD to be specific
16 to say that they rounded it. You know, pretty
17 much put in the TBD what they put in their
18 response is what it comes down to. So then we'd
19 have no concerns, and we can close that issue.
20 That's the short version.

21 CHAIRMAN KOTELCHUCK: Okay.

22 MR. FARVER: And the third finding

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1 on the next page, we had identified a unit
2 conversion error. There really wasn't a
3 conversion error, but the labeling of the
4 columns -- one of the columns -- was
5 incorrect. So they're going to correct it in
6 the TBD revision, so we have no concerns with
7 that. I mean, we agree that's good.

8 MR. CALHOUN: Doug, this is Grady.
9 I'm assuming here that you don't have a copy of
10 the revised TBD. Is that a true statement?

11 MR. FARVER: Not [one] that it's
12 been revised to include these issues.

13 MR. CALHOUN: On 2/21, the 2/21
14 2014 revision?

15 MR. FARVER: Oh, probably not.

16 MR. CALHOUN: Okay. I'm going to
17 shoot that off to you. I don't expect you to
18 do anything with it right this moment, but I
19 should have sent you that.

20 MR. FARVER: Grady, have all these
21 changes been incorporated?

22 MR. CALHOUN: That's what I

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1 believe. I believe that is the case.

2 MR. FARVER: Okay.

3 MR. CALHOUN: But I understand
4 you've got to take a look at it so --

5 MR. FARVER: Okay. Thank you.
6 And, finally, finding four, which is on page
7 four, has to do with the energy spectrum or
8 energy fractions. And they identified that
9 the data that they used was from the National
10 Nuclear Data Center, which is a little
11 different than what we were assuming. So we
12 have no problems with their response.

13 And really this was just to clear up
14 some issues. We had talked about them before,
15 but we wanted to get everything down in writing
16 and all in one place. These were the four
17 outstanding issues. And then, if you want to
18 go on, you can see that the findings five and
19 six have already been addressed at our August
20 meeting of last year. So as long as those TBD
21 changes are made, that should wrap up the
22 Huntington Pilot Plant issues and that should

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1 wrap up our 9th set matrix.

2 MEMBER RICHARDSON: Doug, this is
3 David Richardson. Could you describe number
4 four?

5 MR. FARVER: Number four.

6 MEMBER RICHARDSON: It had to do
7 with the dose distributions, assumption of
8 energies.

9 MR. FARVER: Okay. What I'm going
10 to do is look at Steve's report and get a more
11 detailed answer. It looks like we were just
12 trying to identify what gamma spectrum they
13 used. It was not identified in the document
14 where the data came from.

15 MEMBER RICHARDSON: Right.
16 Because this was -- I mean, there are several
17 issues here, but one of the issues is I wasn't
18 aware before of there being parameters in a dose
19 reconstruction which are dynamic. That is, if
20 today I were to go and try and figure out those
21 parameters, they would not be the ones which
22 were used at the time of the dose

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1 reconstruction. And unless somebody is
2 archiving the history of those changes that
3 they evolve in this data center, there's not a
4 clear reference table. It would have to be
5 accessing a website on a given date. Is that
6 how this is? I've just not seen parameters like
7 that before.

8 MR. FARVER: I really don't have a
9 good answer for you, David.

10 MEMBER RICHARDSON: My
11 understanding, you used a library, a, quote,
12 frozen library. That's a lookup table which
13 you were going to use as a reference that might
14 be in a Technical Basis Document, and the
15 response was we checked a different library
16 which is dynamic and is online.

17 MR. FARVER: I understand your
18 point. I don't have a good answer. Grady, do
19 you have any input?

20 MR. CALHOUN: Basically, what we do
21 when we determine what the energies are that
22 we're going to use, it's based on what materials

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1 were present during that time frame. I don't
2 know exactly what, I don't know exactly what
3 that one is. It's not that they change, and I
4 don't know if this is a library like they're
5 talking about whole body count, a software
6 library. That's what it sounds like. I'll
7 have to go back and look and see the particulars
8 on this case.

9 But they don't vary from day to day
10 like you're saying. It's just something based
11 on, if it's a nuclear library that's included
12 in the software, that's what is used to detect
13 photons and whole body count. I don't know if
14 that's the case in this one, but in other of
15 these, when we're assigned photon dose, you
16 base the energies on the materials that are
17 present because there is a breakdown of the
18 different energy spectra that we see, and we
19 have to bend those to put them into IREP.

20 MEMBER RICHARDSON: Those are sort
21 of physical properties, which I would imagine
22 are invariant, and so it's difficult for me to

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1 understand why --

2 MR. CALHOUN: That's the fact, and
3 that's how we'll use it. However, if this is
4 a nuclear library, and I don't know that, but
5 based on this comment, when a whole body count
6 exists in the setup or any kind of gamma
7 spectroscopy is set up, there's a library
8 that's in that software that's used to detect
9 certain energy level photons. I just don't
10 know, based on this information here right in
11 front of me, if that's the case or not.

12 MR. FARVER: David, a little bit
13 more information. It looks like we were trying
14 to use MicroShield to check the MCNPX
15 calculations that NIOSH performed and were
16 explained in Appendix A of the Site Profile.
17 That's why we're having trouble with
18 MicroShield because it's a different library.
19 We're having difficulty matching the dose
20 rates, and we were assuming a different
21 spectrum and we still couldn't quite match.

22 MR. CALHOUN: How far off were

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1 these? Is it 50/50 to 70/30?

2 MR. FARVER: I don't know.

3 MR. CALHOUN: So, basically, what
4 this comes down to is you guys used a little bit
5 different library than we used.

6 MR. FARVER: Correct.

7 MR. CALHOUN: Oh, okay.

8 MEMBER RICHARDSON: Okay. I think
9 I'm seeing the issue. And if you have the
10 library and it's assumed to be fixed, in
11 principle, one could go back and find it, and
12 it's not the issue that there was one which was
13 frozen and one which is dynamic. There are two
14 different libraries based on two different
15 software systems.

16 MR. FARVER: I believe that is the
17 case.

18 MR. CALHOUN: That sounds like my
19 understanding, too, now from this. And unless
20 somehow ours is wrong, then it's just a
21 difference that we picked -- that they picked
22 a different library to evaluate what we had done

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1 already.

2 CHAIRMAN KOTELCHUCK: But if, for
3 any reason, anybody came back years from now and
4 wanted to take a look at that calculation, you
5 would have the information in what you did about
6 which library you used?

7 MR. CALHOUN: We would for sure.
8 And so really the issue is whether or not the,
9 quote, library that we used was incorrect, and
10 obviously we don't believe it is.

11 CHAIRMAN KOTELCHUCK: Right,
12 right. Okay. But yours, which is to say
13 NIOSH's calculations do say what library was
14 used, and that can be looked at in the future,
15 and if, for any reason, somebody ever were to
16 think it was wrong it could be changed or
17 modified. So it doesn't matter whether SC&A...
18 I mean it matters whether your documentation is
19 not so much reproducible but is discoverable,
20 and it is apparently, right?

21 MR. CALHOUN: I believe that's the
22 case, yes.

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1 CHAIRMAN KOTELCHUCK: So, David
2 Richardson, that should resolve it, shouldn't
3 it?

4 MEMBER RICHARDSON: Yes, that's
5 clearer to me. Thank you.

6 CHAIRMAN KOTELCHUCK: Yes, okay.
7 Thank you for asking.

8 MEMBER MUNN: Well, I'm glad it's
9 more clear to David than it is to me. This is
10 Wanda. And what the puzzler, from my point of
11 view, is why do two perfectly reliable,
12 supposedly, libraries have different values
13 for the same spectra? It doesn't seem to
14 follow that that would be expected, does it?
15 Am I missing something?

16 MR. CALHOUN: No, you're not.
17 This is Grady. I don't think you're missing
18 anything at all. I think that we need more
19 information here to look into what assumptions
20 were made with the different percentages of
21 what radionuclides were assumed on our side
22 versus your side because you're absolutely

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1 right: the energy coming off of a given
2 radionuclide is pretty much constant, for the
3 most part.

4 So I think that we'd have to look at
5 what the assumptions were with both cases if we
6 need to pursue this any further. And I guess
7 it really depends on how wrong the SC&A guys
8 think we are.

9 MEMBER MUNN: Well, based only on
10 the information that we have for a person like
11 me who knows absolutely nothing about even the
12 existence of the libraries, much less their
13 content, it does create a puzzler because one
14 would assume that you could expect the same
15 information about spectra from one reliable
16 library to another.

17 MEMBER RICHARDSON: Yes. Wanda,
18 so was I -- that part of the issue, kind of one
19 of them has to do with process and being able
20 to document and reproduce what was done. The
21 other part of the content of these two software
22 packages and why there's a kind of disagreement

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1 between this, that isn't obvious. My
2 experience in the past was if we were to hold
3 this finding until we had resolved that -- I
4 mean, I don't know. In some cases, it would be
5 to try and reconcile two different software
6 programs. It could be potentially a lot of
7 effort.

8 MEMBER MUNN: Oh, I'm not concerned
9 with the programs itself. I'm concerned, as I
10 think I said, with the libraries.

11 MEMBER RICHARDSON: Right, right.

12 MEMBER MUNN: It's strange to me
13 that using a different library would give you
14 a different result.

15 MR. FARVER: Well, I think it's a
16 matter of just using different assumptions.

17 CHAIRMAN KOTELCHUCK: Different
18 assumptions about what?

19 MEMBER MUNN: This is the level of
20 detail which is probably beyond our purview,
21 but it is, you can understand why it raises the
22 question.

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1 MR. FARVER: Oh, I understand. It
2 looks like we're trying to model a 20-gallon
3 drum and the dose rates that are coming off --

4 MEMBER MUNN: Yes, I have no
5 objection to closing this item.

6 CHAIRMAN KOTELCHUCK: Yes.

7 MEMBER CLAWSON: Well, this is
8 Brad. I understand where we're going, but,
9 Doug and everybody, I thought one of the things
10 we'd be able to, 20 years from now or whatever
11 else, be able to come back and figure out how
12 these things were done, and we can't even figure
13 that out for sure today. How can we say that
14 that is correct?

15 MR. CALHOUN: That's not true,
16 Brad. This is Grady. We certainly can show
17 how we did ours. The question is they used a
18 different, you know, when they go into
19 modeling, someone else goes in to try to model
20 a different situation. You know, there are so
21 many parameters that come into effect that
22 could affect the energy distribution. You

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1 know, if you're talking about a drum, you're
2 talking about the density of the drum itself,
3 you're talking about the density of the
4 material in the drum, you're talking about the
5 type and quantity of the material in the drum.

6 So I think, basically, we have our
7 justification and it's readily reproducible.
8 The issue is that when an evaluation of our
9 approach was done, a different tool was used.
10 So it's not really an issue with our process
11 being unreproducible, because I believe ours
12 is.

13 MR. STIVER: This is John Stiver.
14 Maybe I can jump in. I said something similar
15 to this in the back and forth that went on with
16 GSI when a lot of the results and the spectral
17 differences depend on, as Grady said, on the
18 different assumptions about the density of
19 material and the types of material and so forth.
20 And what we did to kind of help resolve that was
21 just have NIOSH send us the input file that they
22 used and we could check the assumptions. So at

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1 least that way, you know, we had to be on the
2 same page, as opposed to kind of running off and
3 doing a separate analysis with our own
4 assumptions and coming up and trying to resolve
5 all this. Some of those things, you know,
6 maybe some communication up front, at the front
7 end, might help too, it would save us a lot of
8 work later on.

9 MR. FARVER: Rather than trying to
10 beat this to death right now, let's try to get
11 Steve Marschke on the line -- maybe after lunch
12 -- since he's the one that reviewed the profile
13 and he's the one that reviewed the responses and
14 he's the one that actually wrote the report when
15 he did the model. And he didn't have a concern
16 about it, but we'll try and see if he can give
17 us a quick explanation for that.

18 CHAIRMAN KOTELCHUCK: That sounds
19 reasonable. So if you can have him come on the
20 line after lunch, let's do that. I'm satisfied
21 that the result is reproducible and could be
22 reproduced at some later time. The fact that

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1 data might change, and spectra measurements may
2 result in, I hope, small changes, that does not
3 bother me, as long as the result that is agreed
4 upon is reproducible in the future by other
5 parties.

6 So if we want to, let's go on and
7 let's come back to that finding with Steve
8 later. Let's go on to finding five.

9 MR. FARVER: Finding five we
10 already addressed in a previous meeting and
11 closed that issue.

12 CHAIRMAN KOTELCHUCK: Okay.

13 MR. FARVER: Same with finding six.

14 CHAIRMAN KOTELCHUCK: Good. And
15 that's the last finding?

16 MR. FARVER: Yes. That's the last
17 one for that report, yes.

18 CHAIRMAN KOTELCHUCK: Okay. So we
19 have that one, finding four, which we will come
20 back to later with Steve.

21 MR. FARVER: We won't close out the
22 9th set yet. We'll let it hang on a while.

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1 CHAIRMAN KOTELCHUCK: Well, we are
2 going to do our very best to finish up 9 and move
3 on to 10 and 13 and try our best to get those
4 finished.

5 So let us go on to sets 10 through
6 13. Doug, you sent out the matrices, and we had
7 the Portsmouth and Paducah. There was one open
8 case that I saw, and then we had Oak Ridge,
9 Hanford, and remaining sites.

10 Do we want to start off with the
11 Portsmouth/Paducah, the gas diffusion plants?

12 MR. FARVER: We'll go ahead and do
13 that. That's in the Paducah/Portsmouth
14 district, and it's finding 273.2.

15 CHAIRMAN KOTELCHUCK: That's
16 right.

17 MR. FARVER: And this talks about
18 the dosimeter correction factor was being used
19 for missed proton dose.

20 CHAIRMAN KOTELCHUCK: We don't
21 have anything up on the screen. You'll put it
22 up on the screen? Okay.

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1 MR. FARVER: And the action was
2 NIOSH was going to write a White Paper about,
3 you know, do they or do they not need it.

4 MR. STIVER: Hey, Doug, what was
5 the finding number?

6 MR. FARVER: 273.2 on page two.

7 MR. STIVER: Okay, alright. Here
8 we go.

9 CHAIRMAN KOTELCHUCK: Here we go.

10 MR. FARVER: If you recall,
11 Portsmouth was the only place that they used a
12 dosimeter correction factor for missed dose.
13 Normally, it's just applied to the dosimeter
14 dose and not the missed dose, and this is why
15 we questioned it in our findings.

16 And I believe for this it's not
17 really what you would call a dosimeter
18 correction factor. It's a -- how do you say?
19 It's a correction factor, but it's not
20 correcting like you would for the other site.

21 I'm trying to find NIOSH's
22 response, but I'm having some difficulty.

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1 Scott, can you come in and do you have any
2 insight on this?

3 MR. SMITH: This is Matt Smith. I
4 can talk to the response.

5 MR. FARVER: Thanks, Matt.

6 MR. SIEBERT: Do you guys have the
7 response? This is Scott. I'm just verifying
8 you have the response and the White Paper.

9 MR. FARVER: Yes.

10 MR. SIEBERT: Okay, thanks.

11 MR. SMITH: Yes, we did a White
12 Paper. That came in a January time frame. As
13 I took a look at this, it looks like the TBD
14 author was doing some referencing to the
15 Savannah River Site Profile, which was one of
16 the first Site Profiles put together on this
17 project. And what this factor is is basically
18 an approach to taking the dose that was measured
19 and converting it to what we would call modern
20 Hp10 dose.

21 In all reality, that kind of
22 approach does not need to be taken because we

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1 have the DCF, the dose conversion factors,
2 available out of DCAS-IG-001, and that lets us
3 either use an exposure DCF for the error where
4 a film dosimeter was used and calibrated but
5 calibrated not on a phantom as you would see in
6 a modern era with a DOELAP type of program.
7 When we're in that era, then we would use the
8 Hp10 DCFs when phantom is used as part of the
9 calibration routine.

10 The White Paper kind of describes
11 how we took a look at it and we can see where
12 the author is pulling some of the information
13 and data from the SRS TBD. The bottom line is
14 the correction does not really need to be
15 applied, and you can even say the same thing for
16 the Savannah River TBD, which is I know under
17 revision right now as well.

18 In retrospect, all that need be done
19 really is to apply the proper DCF, again the
20 exposure DCF for an era where film dosimetry is
21 used and then the Hp10 DCF for an era where you
22 have a TLD type of dosimeter that's being

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1 calibrated on a phantom, so the backscatter is
2 being taken into account.

3 The recommendation of the White
4 Paper was basically to update the Portsmouth
5 TBD to simply go with the recommendation that's
6 already in there regarding the proper DCF
7 values to use and to take out the references to
8 the Savannah River approach.

9 MS. K. BEHLING: And, Doug, this is
10 Kathy Behling. This was one of the issues that
11 I brought up because I was questioning if
12 perhaps this correction factor should be
13 applied at other sites.

14 And I did read through this White
15 Paper and I agree with what they have written
16 in here. I didn't realize what the correction
17 factor was, how that was being applied, or what
18 the reason for the correction factor was, if it
19 was an under-response of the TLD or the film
20 badge. But as, Matt had just explained, it is
21 a conversion from a calibration that was done
22 free in the air to now trying to determine the

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1 Hp10 dose. And so I agree with what was written
2 in the White Paper, and I feel comfortable that
3 this is not a problem that exists at other
4 facilities or in other TBDs, and I agree that
5 this should be changed in the Portsmouth TBD.

6 CHAIRMAN KOTELCHUCK: Sounds like
7 agreement. Any comments by subcommittee
8 members?

9 MEMBER RICHARDSON: This is David
10 Richardson. So to follow-up, there are
11 different corrections. I guess maybe the
12 issue is how the correction factor is being used
13 here. At Savannah River and other sites, there
14 were issues about under-response or
15 over-response of different types of dosimeters
16 to different geometries of exposure, different
17 energies of exposure. And on top of that,
18 there was talking about under-response or
19 over-response to the estimation of what
20 quantity. And one of those quantities was
21 Hp10.

22 The discussion that's happening

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1 here is you're just talking about the
2 distinction between estimates of dose in air
3 to Hp10 but not about the performance of the
4 dosimeters. That's being wrapped up in a
5 different DCF that is being taken into account
6 or is [it] not?

7 MR. SMITH: The former is a true
8 statement, and what Kathy said based off of what
9 I said is what the White Paper is putting forth.
10 With respect to the dosimeter performance in
11 the Portsmouth environment, the TBD itself does
12 state that the Portsmouth two element film
13 would overall be favorable to claimants and no
14 corrections are needed for the response of the
15 dosimetry to their radiation work environment.

16 With respect to Portsmouth, what we
17 see with that two element film dosimeter, you
18 know, basically it's the similar design [to]
19 that we found at X-10 with Oak Ridge, and it's
20 described in that TBD, as well. As we get down
21 to around 100 keV, you even start to see some
22 over-response of that dosimeter.

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1 The bottom line is only the DCFs
2 that help us convert from exposure free-air or
3 in the sense when the dosimeter was calibrated
4 on a phantom, which is an Hp10 situation,
5 convert those to organ dose. In the case of
6 Portsmouth, no other correction factor was
7 warranted based on any kind of energy response.

8 When you see the paragraph in the
9 Portsmouth TBD talking about under-response in
10 terms of calibration, what's being discussed
11 there is the response to backscatter from a
12 phantom that may or may not have been used. And
13 it's also discussed in the Savannah River
14 document as well.

15 CHAIRMAN KOTELCHUCK: Comments?

16 MEMBER CLAWSON: This is Brad. I
17 don't have any.

18 MR. FARVER: This is Doug. Just so
19 you know, I've captured this into the matrix
20 [with] some comment or some of the quotes from
21 the conclusion of their White Paper to explain
22 the situation, so it's better explained in that

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1 matrix.

2 CHAIRMAN KOTELCHUCK: Sounds like
3 we're ready to close this.

4 MEMBER MUNN: Sounds like it to me.

5 CHAIRMAN KOTELCHUCK: Okay. Then
6 I believe this one is closed, and I think that
7 is the only one that was open in
8 Portsmouth/Paducah; is that correct?

9 MR. FARVER: I believe so. So that
10 will close out that --

11 CHAIRMAN KOTELCHUCK: The gaseous
12 diffusion plants. Okay.

13 MEMBER MUNN: That does this set,
14 right?

15 MR. FARVER: Yes.

16 CHAIRMAN KOTELCHUCK: Yes.

17 MEMBER MUNN: Great.

18 CHAIRMAN KOTELCHUCK: Well, we
19 have Oak Ridge and Hanford now, and do we want
20 to start with Oak Ridge for no special reason?
21 They're both about the same --

22 MR. SIEBERT: This is Scott. I'd

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1 just like to point out Hanford actually only
2 has, the Fernald/Hanford only has one
3 outstanding finding, so that might be wise to
4 get that one out of the way.

5 CHAIRMAN KOTELCHUCK: Okay, fine.
6 Good, good. Actually, I have some questions
7 about some of them, but that's fine. Let's go
8 to Hanford. Was it 242.1? Is that the one
9 that --

10 MR. FARVER: That is correct.

11 CHAIRMAN KOTELCHUCK: -- is
12 outstanding?

13 MR. FARVER: John, that's page 17,
14 I believe. The action was that NIOSH will
15 investigate the extent of the workbook issues.
16 This goes back to some where we believed it was
17 summing up a column, and the dose that was
18 omitted was outside the range of the sum.

19 CHAIRMAN KOTELCHUCK: Right.

20 MR. FARVER: And so we asked them to
21 check the workbooks and then see if that is an
22 issue.

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1 MR. SIEBERT: Okay. And this is
2 Scott. I'll go ahead and address that. We
3 have been working diligently on that since the
4 last meeting because it involves going through
5 a lot of workbooks. I'm going to be writing up
6 the report for NIOSH to review probably in the
7 next couple of weeks, so we probably won't get
8 this closed out today but I want to let you know
9 where we are in the process.

10 When we went back and looked at the
11 tool in question, as Doug said, there were two
12 columns where the summation did not necessarily
13 go far enough to include all the information in
14 it. Fortunately, those summations were only
15 dealing with the dosimeter error that we need
16 for full best-estimate calculations, so it
17 would be a subset of the number of times we had
18 to run the tool that would actually be affected
19 by it. If we use under- or over-estimates in
20 the tool, it does not use that portion of the
21 tool, so any error in that area would not impact
22 the claim.

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1 So that was helpful to figure out.

2 CHAIRMAN KOTELCHUCK: Okay.

3 MR. SIEBERT: So what we did is we
4 looked back and it really affects the years
5 prior to 1958 only. There are times where, up
6 until approximately 1950, the site used weekly
7 badging, and the tool was set up to look for
8 weekly badging. But if a person had multiple
9 facilities, they may have had more than 52
10 badges, and that's what happened in this case.

11 So we've looked back at that. So
12 pre-1950, that can be an issue. From about '51
13 to '57, they went to bi-weekly, so we would
14 expect 26. The tool was still set up to look
15 for 52, so, in most cases, that would still be
16 okay because people generally weren't getting
17 twice as many dosimeters. But we included
18 looking at that as well in this review.

19 And then once we hit mid 1957 is when
20 they went to monthly badging. So if a person
21 has monthly badging, we were still looking for
22 at least 52 rows. In some cases, we were

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1 looking for 200 and some rows.

2 So once we hit the monthly badging period, we
3 were very comfortable that we were summing all
4 the doses that were needed for that error
5 calculation.

6 So we went back and we looked at all
7 the claims that were done prior to, that had
8 employment prior to 1958 and looked at
9 conversion of the tool that updated to reflect
10 enough rows to ensure that we're catching
11 everything. We had that updated in 2010 when
12 we went to the full Vose calculations instead
13 of the old Crystal Ball [calculation]. So we
14 looked at all of the tools that we used prior
15 to that point.

16 I won't get into all the specifics.
17 I know I've already gone a little long, and it's
18 a lot of stuff. But I'm going to be verifying
19 the numbers that we have, so this is not gospel.
20 But we are looking. I think we found six claims
21 where this error affected the total of the error
22 calculation. All but one were already

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1 compensable, so it had no impact. The one that
2 was not compensable, it looks like it missed a
3 difference of approximately 30 millirem. And
4 when we added additional dose into it, it did
5 not impact that claim.

6 Like I said, I'm going to write all
7 this up and give a lot more verification to
8 ensure it is right before I give it to Grady to
9 go over to the Subcommittee. But I wanted you
10 to know where we were and kind of get an idea
11 that the scope of the issue is not as wide as
12 we had feared earlier on.

13 CHAIRMAN KOTELCHUCK: Okay. So do
14 we, does the Subcommittee need to look at this
15 when you finish? It's correct that you're
16 going through, you're verifying all the
17 workbooks, which is excellent. Do we need to
18 -- I guess we need to leave it on our matrix just
19 to make sure it was done, although it sounds
20 like you will make corrections, when you find
21 problems you will make corrections, and that is
22 being done.

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1 MR. SIEBERT: Well, the tool in
2 question was already updated in 2010. That
3 issue was solved already back at that time
4 frame, so it's not an issue anymore.

5 CHAIRMAN KOTELCHUCK: Yes, right.
6 But you have to check back through previous
7 calculations or reconstructions.

8 MR. SIEBERT: Right. I'm
9 verifying all the work we've done to this point,
10 correct.

11 CHAIRMAN KOTELCHUCK: Sure, okay.

12 MEMBER RICHARDSON: So this is
13 David Richardson. So when you have, when you
14 said the tool was corrected, you mean that you
15 -- maybe I'm not understanding the relationship
16 of the tool to the dosimetry information. The
17 correction is that you've updated the
18 period-specific assumptions about the number
19 of badgings in different time periods?

20 MR. SIEBERT: Indirectly, yes.
21 What we corrected was -- the issue was -- it
22 would only be looking for 52 lines of data when

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1 there was weekly badging. If an individual had
2 an additional badge if they were in multiple
3 locations and there was a 53rd row, the tool
4 would not be summing that into the error
5 calculation. Now, it would sum it into the
6 dose total, but it would not add it into the
7 error portion, the calculation, which is what
8 we ran into in this claim.

9 So when we updated the tool in 2010
10 -- sorry. I keep getting a little bit of echo
11 and it's bugging me. -- When we updated that,
12 it actually is looking for over 200 rows of
13 data. So when you run into that additional
14 badging, it is included in the summation for
15 that error calculation.

16 MEMBER RICHARDSON: Okay. So in a
17 calendar year, it's looking for up to 200
18 records for a worker. Is that right?

19 MR. SIEBERT: Correct, correct. I
20 think it's 260, something like that.

21 MEMBER RICHARDSON: And it's doing
22 that in all calendar years, from '43 forward,

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1 or does it stop at some point?

2 MR. SIEBERT: No, it's always
3 looking for that.

4 CHAIRMAN KOTELCHUCK: It sounds
5 like you're pretty close to concluding your
6 work.

7 MR. SIEBERT: Correct. It's just
8 verifying what we've got and writing it up. So
9 however the Subcommittee wants to handle it,
10 obviously it's up to you.

11 CHAIRMAN KOTELCHUCK: Right.
12 Well, to the extent that we want to eventually
13 move on to writing our report, we could probably
14 consider this done. But we'll leave it open
15 until, I assume we'll leave it -- what do others
16 think in the Subcommittee? My feeling is we
17 have to leave it open just simply as a signal,
18 a reminder to us to come back and make sure --

19 MEMBER CLAWSON: This is Brad. I
20 think we've got to make sure that, you know,
21 it's not that we're saying that they didn't do
22 what they did, but we just need to make sure that

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1 what was said was done was done and that it's
2 working properly.

3 CHAIRMAN KOTELCHUCK: Okay. So I
4 think we can move on. I believe we can move on.
5 We'll leave it marked, though. We'll leave it
6 marked to come back to. But this is
7 essentially done. Now, do others agree? No
8 problem?

9 I had some questions on Hanford.
10 The number, the cases 319.1 to .4, I was a little
11 unclear what that was all about. It was just,
12 these were a number that were marked right at
13 the end of the Hanford set that you gave us.
14 Could we look at them? Could somebody tell me
15 what those --

16 MR. FARVER: I think we already
17 addressed them when we did the Group A findings.
18 And I meant to add the responses in here because
19 they've all been closed out.

20 CHAIRMAN KOTELCHUCK: So we've
21 gone over these before?

22 MR. FARVER: We've gone over these.

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1 I was just putting them in here for
2 completeness.

3 CHAIRMAN KOTELCHUCK: Okay.

4 MR. FARVER: They are contained in
5 a Group A matrix, which I have to track down.

6 CHAIRMAN KOTELCHUCK: Right.
7 Now, this is on the last page I believe, the last
8 page of this matrix.

9 MR. FARVER: Right.

10 CHAIRMAN KOTELCHUCK: Could we
11 take a look? There we are. Okay. So what
12 you're saying is we've done them, and I see the
13 markings for what the problems were. So you're
14 just going to fill in the rest of the matrix?

15 MR. FARVER: I'm going to fill in
16 from the Group A matrix.

17 CHAIRMAN KOTELCHUCK: Okay.

18 MR. FARVER: I mean, that's my
19 thought.

20 CHAIRMAN KOTELCHUCK: Okay. So
21 there's nothing that we have to consider --

22 MR. FARVER: No.

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1 CHAIRMAN KOTELCHUCK: -- as a
2 Subcommittee; is that correct?

3 MR. FARVER: That is correct. And
4 when I send this out after this meeting, all
5 that will be filled in.

6 CHAIRMAN KOTELCHUCK: Good.

7 MR. FARVER: I hope.

8 CHAIRMAN KOTELCHUCK: Right. And
9 the suggested action will be closed on all of
10 those four cases.

11 MR. FARVER: Correct.

12 CHAIRMAN KOTELCHUCK: Okay. Then
13 that would be it for Hanford. Any other
14 Hanford issue? Good.

15 It is 11:50 on the East Coast.
16 There was the thought, since we started at
17 10:30, that we might go on until 12:30 and then
18 take a lunch break. I'm open to that. How do
19 other people feel? That is to say to continue
20 on for about a half an hour more?

21 MEMBER CLAWSON: This is Brad.
22 I'm fine with that.

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1 MEMBER RICHARDSON: Could we
2 possibly take a five-minute break?

3 CHAIRMAN KOTELCHUCK: Yes.

4 MEMBER CLAWSON: No, David.
5 You've got to sit there and just smile.

6 CHAIRMAN KOTELCHUCK: Okay. We
7 will take a five-minute break. And it's 11:53.
8 Hey, we'll make it seven minutes. We'll be
9 back at noon, and we'll start with Oak Ridge.

10 (Whereupon, the foregoing matter
11 went off the record at 11:53 a.m.
12 and went back on the record at
13 12:00 p.m.)

14 CHAIRMAN KOTELCHUCK: Hello,
15 folks.

16 MEMBER CLAWSON: Hi, Dave. This
17 is Brad.

18 MR. KATZ: Okay. Are we all back?

19 CHAIRMAN KOTELCHUCK: It's noon,
20 and we're ready to restart.

21 MR. KATZ: Super. Take off.

22 CHAIRMAN KOTELCHUCK: Oak Ridge is

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1 on the screen, and the first one, I believe, is
2 246.2. I believe that's the first open one. A
3 little bit more. We need to flip up one more
4 page, I think.

5 MR. FARVER: Well, we haven't
6 discussed any of these yet. This is the first
7 time you're looking at these.

8 CHAIRMAN KOTELCHUCK: Okay.

9 MR. FARVER: I know NIOSH sent out
10 some responses yesterday, but I'm not sure
11 which file you're looking at.

12 CHAIRMAN KOTELCHUCK: Well, right
13 now I happen to be disconnected. I assume
14 that, it seems to be trying to --

15 MR. STIVER: Doug, the one I've got
16 up is entitled "10th to 13th Oak Ridge Sites
17 SC&A 2014." That's the one you sent over that
18 was posted on the O: drive. You're telling me
19 there's a newer one that we should be looking
20 at?

21 MR. FARVER: Well, they sent one
22 yesterday morning, or yesterday sometime I saw

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1 it.

2 MR. STIVER: Well, let's see if I
3 can pull that up.

4 CHAIRMAN KOTELCHUCK: Okay.

5 MR. STIVER: Bear with me one
6 moment here.

7 MR. SIEBERT: This is Scott. It
8 has the same name with an extension of dash
9 NIOSH March 2014 on it.

10 MR. STIVER: Okay. Hang on just a
11 minute.

12 MEMBER MUNN: Oh, there it is.

13 CHAIRMAN KOTELCHUCK: There we
14 are.

15 MEMBER MUNN: Did Board Members get
16 that transmission, also? Should I have that
17 somewhere other than on the screen here?

18 CHAIRMAN KOTELCHUCK: No. I don't
19 recall, I did not see it.

20 MEMBER MUNN: Okay. Just checking
21 to make sure I wasn't missing something.

22 MR. FARVER: Okay. Are we on the

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1 screen?

2 CHAIRMAN KOTELCHUCK: We are.

3 MR. FARVER: 229.1. This is from
4 the K-25 plant. The person worked there from
5 '45 through '53, and it looks like he had a
6 couple of skin cancers.

7 The first finding has to do with not
8 all the occupational medical exams were
9 accounted for, and it looks like three of the
10 exams that were in the record were not
11 considered, and that's what prompted the
12 finding. We couldn't figure out why because
13 the medical dose calculations were a little
14 confusing because the ones that were provided
15 to us were not the ones in the final IREP. So
16 it's hard to determine why the three exams were
17 omitted. And NIOSH says they were omitted and
18 they should have been evaluated for the dose
19 assessment, but, you know, I'm still concerned
20 why were they omitted to begin with? So I'll
21 come back to NIOSH with why were they omitted,
22 and how will we prevent this?

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1 MR. SIEBERT: This is Scott. This
2 claim was done in 2006 by somebody who's no
3 longer on the project, so I couldn't dig out
4 exactly why they did not do it. I can just
5 state that they did miss assigning those three
6 x-rays.

7 CHAIRMAN KOTELCHUCK: Okay. And
8 that's just charged up as an error, category C,
9 QA. Well, it is now corrected or in the process
10 of being corrected?

11 MR. SIEBERT: Well, this is Scott.
12 Even though there wasn't specifically an
13 initial question in SC&A's response, we did
14 look back at the claim, along with the rest of
15 the responses for the rest of this claim, and
16 we did reassess it using the information that
17 we had. We actually had to go back and request
18 actual x-rays from the site to verify whether
19 they were PFGs or PAs. We did that, and we
20 included that information, along with
21 everything else in this claim. And we actually
22 discussed the final outcome in the next

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1 finding, if you can hold your suspense until the
2 end of the next finding.

3 CHAIRMAN KOTELCHUCK: Certainly.

4 MR. FARVER: Okay. Move on to the
5 next finding right now?

6 CHAIRMAN KOTELCHUCK: Yes.

7 MR. FARVER: Okay. The next one
8 has to do with the adjustment factor for the
9 employment period. Well, we thought it was too
10 small, and there was no calculation to show how
11 it was calculated or how it was determined in
12 the record. Once again, we just believe the
13 case, you know - that's a QA concern again
14 because it's not something you go back and
15 reproduce. No one is ever going to know why
16 that number was used, and I believe, like I
17 said, they can't really go back and contact the
18 dose reconstructor to figure out why, but it's
19 just one of those things that's just not clear.
20 We feel things like that should get caught when
21 it's reviewed, but I'm not sure there's much you
22 can do about it at the moment.

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1 MR. SIEBERT: And we agree
2 wholeheartedly that it should have been caught
3 in the review. This is the one where I said
4 that we included this change, as well as the
5 x-ray and as well as the other things that are
6 further down that we're discussing. We did
7 re-run it, and the final PoC changed from 46.79
8 to 48.93. So the compensability decision was
9 still the same.

10 CHAIRMAN KOTELCHUCK: Okay.

11 MR. FARVER: Are we going to move to
12 close that issue?

13 CHAIRMAN KOTELCHUCK: Yes.

14 MR. FARVER: Okay. Next was just
15 an observation. It looks like there was
16 another error, a number was transposed.
17 Instead of 0.622 it was 0.662. You know, it's
18 one of those things where we couldn't even
19 determine how this type of error occurred
20 because the workbooks in the employee's file
21 did not contain the same direct input as the
22 other, as the final IREP table.

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1 MR. SIEBERT: And that one, when I
2 dug a little bit further into this, this one I
3 can answer specifically why it did happen.
4 That time frame, these doses had to be prorated,
5 rather than for a full year of exposure for a
6 partial year of exposure. The values that were
7 coming out of the workbook initially are full
8 years, so we had to do the prorating off to the
9 side. And it looks like what happened is the
10 dose reconstructor did the prorating
11 separately, and when they were entering the
12 information they just mis-keyed one of the
13 entries to be 662 instead of 622.

14 So what I want to point out on this
15 is we've updated our external workbooks now
16 that the dose reconstructor doesn't have to do
17 that prorating off to the side by hand anymore.
18 You can add in a fraction value, and it will
19 apply that automatically for coworker and
20 ambient doses directly. And we've mitigated
21 that issue. It will not happen from a dose
22 reconstructor point of view anymore.

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1 CHAIRMAN KOTELCHUCK: Okay.

2 MEMBER RICHARDSON: As a question,
3 the change to the workbook and the ability to
4 have fractions, was that motivated by this
5 finding or was that independently --

6 MR. SIEBERT: No, we did that years
7 ago.

8 MR. FARVER: Okay. The next,
9 observation number two, assigning the recycled
10 uranium component doses for '45 through '53
11 appears to be overly claimant-favorable.
12 Apparently, the tool has now been corrected to
13 reproduce specific intake rates and time
14 periods for coworker uranium, recycled
15 uranium, and technetium. So I guess this is
16 one of the early on issues to be corrected or
17 modified.

18 That takes care of case 229. 235 --

19 CHAIRMAN KOTELCHUCK: Wait a
20 minute. I thought I was holding my breath for
21 something.

22 MR. FARVER: Oh.

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1 CHAIRMAN KOTELCHUCK: On 229.

2 Scott, you said I was --

3 MR. SIEBERT: Yes, that was the
4 fact that we did run the claim again with
5 everything that we found here, the recycled
6 uranium, the x-rays, and so on. We ran it to
7 see if there was any impact and --

8 CHAIRMAN KOTELCHUCK: Very good.
9 Okay. So the 48.79 was the resolution?

10 MR. SIEBERT: Right. Forty-eight
11 --

12 CHAIRMAN KOTELCHUCK: The
13 correction on the errors.

14 MR. SIEBERT: Correct.

15 CHAIRMAN KOTELCHUCK: Okay. Then
16 that should close it.

17 MEMBER MUNN: Well, we need to
18 remind ourselves from time to time that
19 observations do not rise to the level of
20 finding, and we agreed early on that we would
21 not require extensive, rigorous following of
22 observations simply because they were

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1 observations and not specific findings. So
2 I'm certainly content with the response that's
3 been given.

4 CHAIRMAN KOTELCHUCK: Okay.
5 Brad, David?

6 MEMBER CLAWSON: This is Brad. I
7 don't really have anything at this time.

8 CHAIRMAN KOTELCHUCK: Okay.
9 David?

10 MEMBER RICHARDSON: I was looking
11 for whether there were lessons learned from
12 this, and it seems to be very much like other
13 things in the past. Some of them are
14 inexplicable. It's not clear why things
15 weren't caught in review, and it's not clear if
16 anything has been learned from it. And then
17 revisions that have been made, it seems like
18 we're chasing after a tail of a moving truck so
19 that there are -- we're laboring over
20 observations and responses. Well, that was a
21 long time ago and things have changed, and what
22 you're studying is not relevant to the practice

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1 today. So those are my observations.

2 CHAIRMAN KOTELCHUCK: Yes. Well,
3 your latter observation says that we are going
4 to put in -- those may be old errors, but they
5 are errors. And when we write our report to the
6 Secretary, those will have to be included and,
7 if you will, count against us. But I hope that
8 what will be reflected in that report is that
9 those were done a while ago, they were
10 corrected, they were updated and corrected
11 afterward, but that the errors were made at that
12 time and I hope that the errors that are made
13 on the more recent sets will be fewer. We
14 believe so. I hope so.

15 Okay. Well, then let's move on,
16 folks.

17 MR. FARVER: Okay. Tab 235, there
18 were no findings. There were two
19 observations. The first observation has to do
20 with a reference that was used in the DR report,
21 an incorrect reference, and it should have
22 pointed to the Y-12 K-25 plant, rather than

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1 PROC-61. So we've seen those type things
2 before.

3 The second observation is similar
4 to the previous one where the CAD tool now takes
5 in the specific intake rates and time periods
6 with recycled uranium. It's very similar to
7 the previous observation.

8 CHAIRMAN KOTELCHUCK: Okay.

9 MR. FARVER: And that will take
10 care of 235. 236, finding one, NIOSH did not
11 account for all the reported dose. When we
12 went through the record, we found 20 millirem
13 that was in the dosimetry records but was not
14 accounted for in the dose calculation.

15 When I went and started doing some
16 digging, I found out that the lens of the eye
17 doses were entered as deep doses and the deep
18 dose was entered as lens of the eye dose. So
19 it was entered incorrectly by the keypunch
20 operator. Now, I don't know what kind of
21 controls they have to prevent this, but it
22 happened.

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1 CHAIRMAN KOTELCHUCK: Yes. NIOSH
2 folks, I see your comment. Do you want to say
3 anything?

4 MR. SIEBERT: Yes, the only
5 additional thing that we did is we have gone
6 back and we've updated the data entry files.
7 We've switched those numbers so that they are
8 correct.

9 CHAIRMAN KOTELCHUCK: Yes. Well,
10 that's all you can do when you have an error is
11 to correct it and then look at its impact.
12 Okay. You had observations on 236?

13 MEMBER RICHARDSON: Can I follow
14 up?

15 CHAIRMAN KOTELCHUCK: Yes, please.

16 MEMBER RICHARDSON: Because, I
17 mean, we've had this discussion before. The
18 other thing you can do with data entry errors
19 is do some sort of double entry, at least on a
20 fraction of them. I mean, the response has
21 been that it takes time and it costs money. But
22 to me, you know, starting off with data entry

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1 errors is, you know, it is a problem that can
2 be handled through -- the way that research has
3 handled data entry problems.

4 So I believe nothing has changed.
5 It's always been a hard thing to get a handle
6 on. We review such a small fraction of cases.
7 We're talking, you know, in proportional terms
8 that when we're doing a survey sample, if we
9 extrapolate up and we find keypunch errors, we
10 have to say, well, in a one-percent sample, we
11 find, you know, one, two, three data entry
12 errors, that suggests that the data entry
13 keypunch problem is on the order of magnitude
14 of whatever it's going to be, one, two, three
15 percent of cases have problems of mis-entry of
16 basic information going into a claim.

17 CHAIRMAN KOTELCHUCK: That's a
18 fair appraisal. At least to me, it seems
19 worthy of further consideration. That is to
20 say further consideration as to whether there
21 should be some double-checking, double data
22 checking of the second checking of the data for

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1 some fraction of the samples, even of those
2 that we're doing, that NIOSH and SC&A are doing.
3 I hadn't been party to that earlier discussion
4 about, you know, we can't double enter the data,
5 we can't do double entry.

6 Does someone want to fill me in on
7 what has gone on before or what --

8 MR. CALHOUN: Yes, this is Grady.
9 And I think that David is right. In the past,
10 we've said that it's just too costly for us to
11 do that. I mean, we can always take a look back
12 and see if there's something additional that we
13 can do, but I'm not prepared to say that we're
14 going to go forth and start doing that at this
15 point.

16 CHAIRMAN KOTELCHUCK: Well, maybe
17 this is something that we can hone in on in our
18 report. I mean, the report is certainly on my
19 mind as we're coming toward it. And if we're
20 able to use the data that we've been reviewing,
21 it may make sense to reopen that issue, and
22 we'll do it in a way that will go to the

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1 Secretary and move up the ladder a little bit
2 because, obviously, it does cost money. But it
3 may be, I'm not going to say worth it. It may
4 be proper. So --

5 MEMBER RICHARDSON: Yes. I don't
6 know if it's worth it in the sense of
7 financially or anything else. I mean, it's an
8 issue which I still don't feel like I have a
9 handle on. And there's a non-random selection
10 of cases, so it's hard to understand where --
11 I don't understand the etiology of these data
12 keypunch errors. If it was a research project,
13 I would want to understand the etiology of it.
14 I would want to know are they recurring from the
15 same keypunch operator, or are there multiple
16 keypunch operators who have done it?

17 There's been no description of, you
18 know, who entered the data and why, who oversaw
19 it, who was responsible for signing off and
20 saying it was correct, and what's the magnitude
21 of this? If we had to put confidence intervals
22 around the uncertainty on keypunch errors at

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1 this point, it would be very, very wide because
2 we have the time and resources to only review
3 a very, very small fraction of the number of
4 claims that have gone in and the number of
5 records that have been keypunched. And so I
6 have a huge amount of uncertainty about the
7 fundamental issue of errors in the basic
8 information that go into the calculations.

9 CHAIRMAN KOTELCHUCK: Yes. In the
10 earlier case, I certainly took note of the
11 comment that the person who made the error is
12 no longer with us, with the team. And I did not
13 know whether that meant that the person left on
14 their own, I should say left on their own accord
15 or whether the person had been found to have too
16 many errors and something was done about it in
17 employment terms.

18 And I don't want to know
19 specifically about that case, but maybe, as we
20 write our report, we can definitely go back and
21 find, we'll have a record of the cases where
22 there were keypunch errors and we can ask for

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1 those cases. We can ask the NIOSH folks if they
2 would give us data on how the errors were spread
3 out.

4 MEMBER RICHARDSON: Right. Now,
5 we asked to look at that, and that was not
6 information, I believe, that was tracked at the
7 time that we asked about it. And it's, you
8 know, again, my comment then was I don't want
9 to track it to be punitive in anyway, but, to
10 me, it would be part of understanding how those
11 problems arise and kind of where the target
12 efforts to make sure that we get the highest
13 quality data as input.

14 CHAIRMAN KOTELCHUCK: Right. No,
15 I also agree. The issue is not punitive. I
16 think the issue is finding out where the problem
17 is, and we do have a way of dealing with that
18 problem called double-entry data input. But
19 that costs money, and there has to be a very good
20 justification for it, mainly that there are too
21 many, there are a moderate number of claims
22 where this is a problem. It's hard to say too

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1 many claims because one, you know, one claim
2 wrong is one too many. We're not perfect, and
3 we can never be perfect in any effort of this
4 sort. We can try as hard as we can, though, to
5 be.

6 Anyway, I think we can do this in the
7 future as we write up our report. So I don't
8 know that we need to talk further on this, or
9 I should say I don't know if we should belabor
10 this more, though I'm one of the belaborers.
11 Should we move on? It is 12:25, folks. So
12 maybe --

13 MEMBER RICHARDSON: Sure. I just
14 didn't want to drop it because it's been a pet
15 project of mine.

16 CHAIRMAN KOTELCHUCK: Okay.
17 Well, it's appropriate that it should be a
18 project of the Subcommittee, as well, I
19 believe. Do we have anything more on 236? We
20 have an observation. Can we just finish up
21 236?

22 MR. FARVER: Sure. Observation.

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1 When we were reviewing the doses, what we tried
2 to do was match the doses. And in this case,
3 we could not match the doses. This would be the
4 photon doses. And we were off by approximately
5 30 percent. That's where the 1.3 comes in.
6 NIOSH's doses were 1.3 higher or 30 percent
7 higher, I believe. Yes.

8 What it comes down to in this case,
9 based on their explanation, is it was a Monte
10 Carlo calculation. You know, I've seen them
11 where they can be 10 percent, they can be 30
12 percent. They could even be higher than that,
13 deviate from where you're just going with a
14 straight, using a DCF instead of using Monte
15 Carlo version for the DCF. It was an artifact
16 of the Monte Carlo calculation. But, usually,
17 if it's 30 percent more, we will probably write
18 that up as a finding if we can't determine what
19 really caused it. But we just wrote it up as
20 an observation because it was
21 claimant-favorable, in our opinion.

22 CHAIRMAN KOTELCHUCK: Okay. Does

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1 anybody have a comment about what the
2 confidence interval is or what the potential
3 deviation between Monte Carlo calculations
4 would be? Is 30 percent considered too high?
5 We've talked about the fact that Monte Carlo
6 calculations vary, the results often vary. Is
7 30 percent variation, is somebody willing to
8 say that's really high?

9 MR. SMITH: This is Matt Smith with
10 ORAU team. It's really going to depend on
11 things like geometric standard deviation if
12 it's a log-normal distribution. If it's a
13 log-normal with a rather large GSD, then you can
14 get a pretty wide spread in the data.

15 Conversely, if it's a normal
16 distribution and, you know, just a 10 percent
17 plus or minus spread, well, then things usually
18 stay pretty tight to that. We really see it in
19 the log-normal. And years from now when folks
20 are looking at CLL claims, they'll see things
21 with Weibull distribution embedded.

22 CHAIRMAN KOTELCHUCK: Yes.

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1 That's helpful. Thank you. That's helpful,
2 to me at least. Okay. Then I think we're
3 finished with 236. 236 is closed then. And it
4 is just about 12:30, so can we come back at 1:30
5 and we'll start with 246.1?

6 (Whereupon, the foregoing matter
7 went off the record at 12:29 p.m.
8 and went back on the record at
9 1:33 p.m.)

10 CHAIRMAN KOTELCHUCK: Let's go.
11 Alright. Then, Doug, would you start? And I
12 believe it was on 246.

13 MR. FARVER: Yes, 246, Finding One.
14 These have to do with the x-ray doses, medical
15 doses. A little background: This employee
16 worked at K-25 for about 35 years, so there were
17 a lot of x-ray exams, not just chest x-rays but
18 there's injuries. When I went back to review
19 the exams, there were over 60, so it's just
20 numerous x-ray exams.

21 So when we're reviewing the
22 original dose reconstruction, we noticed that,

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1 according to Procedure 61, there's certain
2 exams that you do not include as part of the dose
3 reconstruction. And when we reviewed it, at
4 least some of those exams that were included
5 fell into that category where they strictly
6 should not have been included, and that was the
7 basis for our finding.

8 Basically, what it comes down to is
9 NIOSH was claimant-favorable. And it was very
10 confusing. When you look at all these exams,
11 it's just very difficult to tell what is illness
12 related and what is just a regular chest x-ray.
13 So it was very difficult to read some of those,
14 especially the earlier ones.

15 So, in essence, they were
16 claimant-favorable, adding some x-rays that
17 strictly probably should not have been
18 included. This was a difficult case for them.
19 Let's cut them some slack. They did good,
20 given the number of exams. But our finding was
21 just based on strictly by the procedure, and
22 there's some that should not have been

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1 included. However, it was
2 claimant-favorable, so we figured we might as
3 well just close this. It's okay.

4 CHAIRMAN KOTELCHUCK: Okay. Was
5 that -- because I don't have my screen up yet.
6 Was that an observation?

7 MR. FARVER: It was a finding.

8 CHAIRMAN KOTELCHUCK: Okay. Any
9 other comments?

10 MEMBER MUNN: No. I think we ought
11 to accept SC&A's recommendation to close.

12 CHAIRMAN KOTELCHUCK: Okay.

13 MR. SIEBERT: And this is Scott. I
14 do just want to point out that I wouldn't
15 necessarily say we didn't follow the procedure,
16 as we were probably more claimant-favorable
17 when the dose reconstructor wasn't sure if it
18 was an x-ray exam or for employment. So they
19 were claimant-favorable and let some in.

20 CHAIRMAN KOTELCHUCK: Good.
21 Okay. Well, I think we can close.

22 MR. FARVER: Alright. Oh, I did

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1 ask Steve Marschke to phone in.

2 CHAIRMAN KOTELCHUCK: Oh, yes.

3 MR. MARSCHKE: I'm on the phone.

4 MR. FARVER: Okay. Do you want to
5 go back and let him explain about that finding?

6 CHAIRMAN KOTELCHUCK: Yes, please.

7 MR. FARVER: Steve, we were talking
8 about the Huntington Pilot Plant, that matrix
9 from the findings from your report.

10 MR. MARSCHKE: Okay.

11 MR. FARVER: And you sent me your
12 recommendations about modifying the TBD. And
13 during the meeting today, we found out that they
14 already revised the TBD, so we'll have to make
15 sure these changes were made.

16 There were some questions about
17 finding four. I believe it comes down to a
18 difference between MicroShield and what NIOSH
19 used to do their calculations.

20 MR. MARSCHKE: Exactly. I think
21 that's exactly right. I don't have, I didn't
22 have access to MCNP, so I did the calculation,

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1 both calculations using MicroShield. But in
2 the TBD, in Appendix A, Table A-2, NIOSH gives
3 the photon profile, if you will, or photon
4 spectrum that they used that were generated by,
5 I think it was probably by MCNP.

6 And so I took that photon spectrum
7 and put it into MicroShield, and MicroShield
8 calculated a dose and it got about the same
9 results that NIOSH reported in the TBD. About
10 50 percent of the dose was due to photons with
11 a 0.25 or less, MeV or less, and the other 50
12 percent was due to photons with 0.25 or more.
13 And so that, you know, confirmed what they said.

14 But then when I ran MicroShield and
15 put in and let MicroShield calculate the photon
16 spectrum from U-238, by decaying U-238 and
17 U-235, I got a different spectrum. I got the
18 same, about the same dose when you look at the
19 total integrated dose over all the energy
20 spectrum. I got good agreement, but a little
21 bit more of the dose came from the less than 0.25
22 MeV photons and a little bit -- oh, no, it's the

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1 other way around. A little bit more of the dose
2 came from the less than 0.25 photons, and a
3 little bit less of the dose came from the
4 greater than 0.25 photons.

5 And so, you know, NIOSH came back
6 and said, well, we used the latest and greatest
7 energy data, photon data, and, you know, it's
8 hard to argue with that. So that was, you
9 know -- I still don't know exactly why the doses
10 or the breakdown was different, but it's, you
11 know, if they're using the latest and greatest
12 data, you know, again, like I say, that's the
13 way I think you should go because I'm not
14 completely enamored with the MicroShield
15 energy nuclide library.

16 CHAIRMAN KOTELCHUCK: Okay.

17 MEMBER MUNN: This sounds like
18 another one of those cases where it's an issue
19 of differing tools.

20 CHAIRMAN KOTELCHUCK: Yes.

21 MEMBER MUNN: Alright. I guess
22 you can't use apples to check oranges.

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1 MR. MARSCHKE: That's correct.

2 CHAIRMAN KOTELCHUCK: My basic
3 concern, which we discussed earlier, was that
4 20 years from now somebody could come back and
5 run it as NIOSH had run it and it would be
6 reproducible. And this is a matter of
7 different libraries, and that seems -- I'm not
8 too concerned about that, other than I don't
9 understand why.

10 MEMBER MUNN: I didn't hear you
11 very well. That broke up pretty badly.

12 CHAIRMAN KOTELCHUCK: Oh, I say I
13 don't understand why the two libraries differ,
14 but, as long as it's reproducible, to me that's
15 the critical issue.

16 MEMBER MUNN: I suspect we'd have
17 to get pretty deep in the weeds of the software
18 to understand why they differ.

19 CHAIRMAN KOTELCHUCK: Yes. And
20 that's not our responsibility.

21 MEMBER MUNN: Yes, I think that's
22 beyond our scope. The fact that two different

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1 tools are being used to approach the same
2 problem could be applauded from one direction,
3 and from another we could say, well, that
4 obviously can't be used as a total baseline.

5 MEMBER CLAWSON: This is Brad.
6 We're all supposed to be using the same tool,
7 so tools are supposed to be set up so this is
8 going to be able to be represented and redone
9 and there won't be --

10 CHAIRMAN KOTELCHUCK: But I've
11 just been reading email in the last week that
12 there's a real problem for SC&A being able to
13 get access to the tools that NIOSH uses for,
14 let's say --

15 MEMBER MUNN: Yes, I --

16 CHAIRMAN

17 KOTELCHUCK: -- bureaucratic reasons.

18 MEMBER MUNN: Yes, that seems to be
19 true in several occasions.

20 CHAIRMAN KOTELCHUCK: Yes. I
21 think that's a longstanding problem. But I'd
22 move to just close this now.

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1 MR. FARVER: Okay. Now, if we
2 accept the HPT matrix and all that, that will
3 close our final finding, which was 185.7, from
4 the 9th set.

5 CHAIRMAN KOTELCHUCK: That's
6 correct.

7 MR. FARVER: Okay.

8 CHAIRMAN KOTELCHUCK: And that's
9 lovely. Okay. [Set] nine is closed. And
10 thank you, Steve.

11 MR. MARSCHKE: You're welcome.

12 CHAIRMAN KOTELCHUCK: And we
13 should now get back to Oak Ridge and 246.

14 MEMBER MUNN: Did I lose you or did
15 we lose somebody?

16 MR. FARVER: No, I'm making
17 modifications to the 9th set, and then I'll go
18 back to my --

19 CHAIRMAN KOTELCHUCK: Oh, sure,
20 sure. We're fine.

21 MR. FARVER: Then I'll go back to
22 the Oak Ridge set. Okay. 246.2. The finding

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1 reads that NIOSH did not appropriately assign
2 external ambient dose. This finding came out
3 of a --

4 CHAIRMAN KOTELCHUCK: By the way,
5 we don't have anything on our screen as you're
6 reading, Doug.

7 MR. FARVER: Okay.

8 CHAIRMAN KOTELCHUCK: But that's
9 okay, although if we're just moments away let's
10 get it on the screen. There we go. Nope.
11 There we go.

12 MEMBER MUNN: Great. Thanks,
13 John.

14 MR. FARVER: The basis for this
15 finding comes from our one-on-one conference
16 calls that we had with the Board Members when
17 we were reviewing the draft. And one of the
18 Board Members had a concern regarding the
19 assignment of external on-site ambient dose for
20 46 and 47 when the employee was a truck driver
21 because the truck driver's duties involved many
22 different things, such as loading and unloading

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1 radioactive cargo. And in the Board Member's
2 opinion, the assignment of on-site external
3 ambient dose does not account for the worker's
4 external exposure during these years, and it
5 would have been more claimant-favorable to
6 assign unmonitored dose based on co-worker
7 data. So that's the gist of the finding.

8 CHAIRMAN KOTELCHUCK: Okay.

9 MR. FARVER: We can see NIOSH's
10 response then. I agree there is no information
11 provided in the files that shows that the
12 employee handled radioactive materials.
13 Agree.

14 CHAIRMAN KOTELCHUCK: And security
15 clearance in 1948, which is to say later, so
16 that if the person were handling nuclear
17 materials, they would have had to get security
18 clearance earlier. I don't know how long
19 security clearance takes, but it would quite
20 reasonably be, in my mind, the case that the
21 person was working in '47, already starting to
22 load nuclear materials, in which case his

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1 supervisor would say, wait a minute, you've got
2 to get security clearance, and that would take
3 some period of time. I assume months,
4 whatever. And, therefore, possibly the person
5 was handling in '47.

6 MR. CALHOUN: This is Grady here.
7 One thing we've got to make sure of is the idea
8 of him loading nuclear materials is completely
9 hypothetical. We have no idea that's what he
10 was doing.

11 MEMBER MUNN: Would it -- how can we
12 make the assumption that that happened and, at
13 the same time, fail to note that he was being
14 badged for such things? Even in the early
15 years, it was recognized that folks who
16 actually handled radioactive material needed
17 to be badged, regardless of their job
18 description.

19 MR. CALHOUN: Right. And it's my
20 understanding, too, that in the earlier years,
21 you had to have a security clearance before you
22 were allowed to work in the areas where

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1 radioactive material was.

2 MEMBER MUNN: Pretty much. The
3 whole thing was top secret for years after the
4 40s.

5 CHAIRMAN KOTELCHUCK: Yes.

6 MR. CALHOUN: So, basically, I
7 think what we're saying here, and Scott or Mutt
8 can jump in, is that kind of the weight of the
9 evidence here supports the use of ambient dose
10 here. And we do get dosimetry from this site
11 routinely, and this guy didn't have it, you
12 know, in that period. So I think that that and
13 some of the other information that we have, it
14 seems to support that decision.

15 MR. SIEBERT: Yes, this is Scott.
16 I would agree with Grady that that's what we
17 looked at. The preponderance of information
18 did not support him doing any radiological work
19 during that time.

20 CHAIRMAN KOTELCHUCK: I'm just
21 worried about sort of boundary value problems.
22 I would agree for '46, but, at some point, well,

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1 at some point I would have just a concern,
2 although there's not clear evidence. But I
3 think it's, you know -- well, could I ask
4 someone how long would it take to get security
5 clearance back in those days if somebody
6 decided this person needed security clearance?
7 Weeks? Months?

8 MR. CALHOUN: I don't know that,
9 but I think, David, one thing you're thinking
10 is that he'd be allowed in that area without a
11 clearance, and I'm not so sure that's true.
12 And there's another thing in there, too, if you
13 look. There's a sign-off on a supervisory
14 industrial health exam, and that also coincides
15 with right before we got our bioassay. So
16 we've got a minimum of two things that kind of
17 indicate that he wasn't working with rad
18 material, along with the big thing that there's
19 no indication that he was.

20 CHAIRMAN KOTELCHUCK: Well, that's
21 evidence. That is evidence. Could somebody
22 move the screen up a little bit so I can read

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1 a little bit more of the NIOSH answer, the
2 greens? Yes. Yes, okay. You present
3 evidence here and admit that it's supposition,
4 certainly on my part and maybe on the other
5 reviewer's part. So I'm willing to accept that
6 the person did not begin to get exposure until
7 '48. What do others think, particularly
8 Subcommittee Members?

9 MEMBER CLAWSON: This is Brad.
10 You know, we're making a lot of assumptions
11 here, and that's what we have to come down to.
12 And we can all think that in the ideal situation
13 that he didn't get there. You know, he may not
14 have been able to work with S&M, but he also
15 might have been able to work with waste because
16 that didn't need a clearance. There's a lot of
17 things that play into this, and, you know, we're
18 trying to make a decision here of using the
19 ambient dose or the missed dose. And myself,
20 I personally think for that time, you ought to
21 give him -- if he's in that area, if he's driving
22 around in those areas and stuff like that, give

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1 him the missed dose or whatever. That's just
2 feelings on it because, you know, you're
3 painting one side of the picture, but we could
4 actually paint the other side of the picture and
5 say, yes, but he could have been in there. It's
6 the whole thing, neither side has --

7 CHAIRMAN KOTELCHUCK: Well, yes,
8 that's right. There's reality and there's
9 evidence, and I think there may be lots of
10 perceptions about reality, but if we don't have
11 evidence I find it very hard to act on that.
12 When we have evidence, I think we have to follow
13 it, even though I'd agree with what you said.
14 And I would also, I can't help but believe, that
15 fellow was exposed in '47, I mean even though
16 it shouldn't have been. But there's so many
17 things that shouldn't have been that people do
18 because you've got to get production done,
19 you've got to get things delivered, you've got
20 to -- this was, you know, this was, I wouldn't
21 say a war-time setting but it was a setting of
22 great tension and, you know, defense and

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1 military buildup.

2 However, that's speculation. That
3 is just speculation on my part, and there is no
4 evidence to support it.

5 MEMBER MUNN: Well, actually, some
6 of us actually remember the late 40s, and it was
7 not a time of buildup. Au contraire. We were
8 glorying at the end of a terrible war that had
9 taken literally millions of our people by
10 surprise, and we were able to prevail in that.
11 And we were in the process of falling back from
12 that as much as possible. The armed forces,
13 obviously, were reducing their ranks by the
14 thousands. We had guys out and everybody was
15 breathing a great sigh of relief. No war on the
16 horizon yet as far as the Korean Peninsula was
17 concerned, and I wouldn't think, of any time
18 during the entire history of the weapons
19 complex, I would think this would be one of the
20 times when there was least production pressure.

21 So I guess we're talking
22 assumptions here, but we really have to, I

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1 think, go on the bulk of obvious evidence. And
2 the obvious evidence says to me that it's
3 unlikely that this individual was handling
4 radioactive materials at that time because we
5 were very sensitive about that. I would
6 imagine he would be badged as soon as he began
7 to do that. I would consider it to be a
8 requirement, as a matter of fact.

9 CHAIRMAN KOTELCHUCK: We'll talk
10 about that sometime. You lived it on site
11 there, so I will not.....it will be an interesting
12 conversation. The Cold War had already begun,
13 and these were important things.

14 However, I agree with you that you
15 have to go by the evidence, and the evidence,
16 to the extent that it's there, does not speak
17 to exposure before '48. So as far as I'm
18 concerned, my vote is that we have to just
19 simply accept that it started in '48 and that
20 the concern of the person who reviewed this was
21 a good concern, but I don't think we can act on
22 it.

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1 MEMBER CLAWSON: But, Dave, I want
2 to throw out one thing because Wanda threw out
3 something really wonderful and I thought it was
4 great. Let's look at all the DOE sites and all
5 the facilities and let's figure out by weight
6 of the evidence how many times there was a lot
7 of problems there and what they said they didn't
8 do, and it was a whole other issue. We keep
9 forgetting that. That's part of the reason why
10 we're even in this mess right here.

11 CHAIRMAN KOTELCHUCK: Yes.

12 MEMBER CLAWSON: So you talk about
13 weight of the evidence, there's a lot of
14 evidence there, too. But you know what? I
15 agree. I don't have a problem with this one
16 here. It's a little bit bigger picture. I
17 think we're still making assumptions on this,
18 and when we don't have the weight of the
19 evidence I think we ought to go with the side
20 of the claimant. That's my personal --

21 CHAIRMAN KOTELCHUCK: Right. And
22 I agree with you that we go with the evidence,

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1 despite whatever feelings we have about what
2 might have been. David Richardson, you're a
3 Subcommittee Member who hasn't said anything on
4 this. How do you feel?

5 MEMBER RICHARDSON: I'm fine with
6 kind of moving forward with this. I don't
7 think there's much more we can resolve.

8 CHAIRMAN KOTELCHUCK: I agree.
9 So, folks, I think we have pretty well come to
10 a conclusion to close this.

11 MR. FARVER: Okay. We'll close
12 that one. Now, that one is for the external.
13 The next finding, 246.3, deals with the
14 internal for '46 and '47. They assigned an
15 environmental dose, and the finding says that
16 they should have assigned a co-worker dose
17 based on OTIB-14, job category of a driver,
18 category two, which has jobs generally that
19 have some potential for workplace internal
20 exposures, depending on job specifics.

21 This kind of ties on to the first
22 one. But I would say that if you can't buy into

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1 the external, then you can't buy into the
2 internal. So they assigned environmental,
3 which, if they're going to assign ambient for
4 external, it probably is appropriate to do
5 environmental for the internal for that same
6 time period. We're talking two years.

7 MEMBER MUNN: Can we move the
8 screen so that we can see the rest of the
9 response there? Even though it was just read,
10 it would be helpful. Thank you.

11 CHAIRMAN KOTELCHUCK: Yes.

12 MEMBER MUNN: So what are we
13 discussing?

14 CHAIRMAN KOTELCHUCK: 246.3. The
15 assignment of environmental dose.

16 MEMBER MUNN: And I'm still waiting
17 to see the bottom part of it. We've seen the
18 top of it here, right?

19 MR. STIVER: Wanda, basically,
20 it's the same responses for 246.2, so I just
21 went back up to that.

22 CHAIRMAN KOTELCHUCK: Right.

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1 MEMBER MUNN: Right. That's what
2 I thought.

3 MR. FARVER: Yes, it's just the
4 internal component. I mean, it's pretty much
5 the same argument.

6 MEMBER MUNN: Yes.

7 CHAIRMAN KOTELCHUCK: Yes, I think
8 so.

9 MR. FARVER: So I would just use the
10 same exposure --

11 MEMBER MUNN: Yes, yes.

12 CHAIRMAN KOTELCHUCK: I guess so.

13 MR. FARVER: Insufficient evidence
14 to make a change.

15 MEMBER MUNN: And it's unlikely.
16 I can't see that there's an issue that we
17 haven't already discussed.

18 MR. FARVER: The only thing that
19 makes this a little different is there is a
20 little basis in Attachment A of OTIB-14. But
21 like I said, if you don't buy into the external
22 side, then I'd have a hard time justifying the

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1 internal side.

2 MEMBER MUNN: Yes, that doesn't
3 seem reasonable unless there is evidence of
4 internal injury that carried a deposition with
5 that.

6 CHAIRMAN KOTELCHUCK: Okay. Yes,
7 I think so. Should we close it, folks?

8 MEMBER MUNN: Yes, please.

9 CHAIRMAN KOTELCHUCK: Hearing no
10 objection and some support, let's go on. Let's
11 close it.

12 MR. FARVER: Okay. Now, 247.1.
13 Inappropriate exposure period. They prorated
14 the dose, but it was prorated incorrectly.

15 MR. KATZ: While you're doing that,
16 Doug, I have a note from someone asking if I
17 would just remind folks who are not speaking to
18 mute their phones. So anyone who's just
19 listening, please mute your phone. Press *6 to
20 mute your phone, and press *6 again to come off
21 of mute, or press the mute button if you have
22 a mute button. Thanks.

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1 MR. FARVER: Okay. The employee
2 worked for six months in 1956, and the dose
3 reconstructor used a value of 0.49 months
4 instead of 0.49 years, [that is] 0.04 years.

5 CHAIRMAN KOTELCHUCK: That's it.

6 MR. FARVER: Oh, okay. They used
7 0.04 years instead of 0.5 years. They prorated
8 it incorrectly is what it came down to.

9 MEMBER MUNN: Do I understand
10 correctly that it appears that review will more
11 than likely change the PoC?

12 MR. SIEBERT: Yes. Wanda, this is
13 Scott. We worked this one because, looking
14 forward in time, the X-10 co-worker values
15 changed dramatically and there's already the
16 assumption we will have a PER for that coming
17 along down the road. So we ran with those
18 numbers, and it will likely be compensable
19 based only on the plutonium itself, without
20 even dealing with everything else. So we
21 didn't go back and look at it.

22 MEMBER MUNN: Yes, yes, I imagine

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1 that the PER will take care of the whole thing.

2 CHAIRMAN KOTELCHUCK: But it
3 hasn't yet? Question.

4 MEMBER MUNN: I don't think the PER
5 has been issued yet, has it?

6 MR. SIEBERT: That's correct.
7 There's still some other updates to the X-10 TBD
8 that we're working on. So once those all get
9 rolled out, then we'll do a PER all rolled
10 together. Grady can probably correct me if I'm
11 wrong, but that's my understanding of what
12 we're planning for X-10.

13 CHAIRMAN KOTELCHUCK: Okay.

14 MR. CALHOUN: That's correct.
15 Yes, that will flip because of a revision to the
16 co-worker data, or may flip, not because of the
17 mistake in prorating.

18 MEMBER MUNN: There's a lot going
19 on still.

20 CHAIRMAN KOTELCHUCK: Yes,
21 apparently. It seems like 247.1 is still going
22 to be open, right? It's open.

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1 MR. CALHOUN: We may not get to that
2 PER for a year. So if we want to keep it open
3 for a year, that's okay, just so you guys know.

4 CHAIRMAN KOTELCHUCK: Well, I most
5 certainly do not want to keep it open for a year
6 but --

7 MEMBER MUNN: Well, it's a process
8 issue we probably need to resolve in our own
9 minds because this is not going to be the only
10 time that will occur.

11 MR. CALHOUN: We have reviewed
12 hundreds and hundreds and hundreds of cases via
13 our PER system and the system we call PADs. And
14 whenever we come up with a case that flips or
15 has the potential of flipping, we make that
16 request to DOL to reinstate the case, and they
17 do and we rework it.

18 MR. FARVER: Now, keep in mind that
19 the finding had to do with a calculation error
20 in the prorating. This information about the
21 co-worker and the PER that's also going on, but
22 that did not really have to do with the finding.

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1 MEMBER MUNN: That's a good point
2 because what this boils down to is calculator
3 error. This is a human error issue. They
4 chose the wrong input, and the PER is not going
5 to change that. It will change the end result,
6 but it's not going to change what happens in
7 this case.

8 CHAIRMAN KOTELCHUCK: I'm a little
9 concerned now because we can correct the, we can
10 take care of the calculational error now. That
11 will not change the PoC, and I believe the
12 person will get a rejection letter. We can
13 then open it up in a year when the PER comes out,
14 as will open up all the cases that were affected
15 by that PER.

16 At a human level, I feel like to deny
17 the person in anticipation that we probably
18 will change it or maybe there could be something
19 in whatever statement that's given to the
20 person who filed that, there are other changes
21 that may occur in the future and that we're
22 anticipating some changes and that may have

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1 some effect. I'm just worried about telling a
2 person, no, you're claim is denied when we know
3 at this point that probably it will not be. We
4 can't say it will not be or it will be accepted.
5 But it's clear in our own minds that there's a
6 pretty good chance it will be accepted.

7 MEMBER MUNN: Well, this raises a
8 process issue as far as the Agency is concerned,
9 in my mind. I was of the impression that once
10 an error had been identified that the Agency
11 would, by their own process, recalculate that
12 PoC and proceed accordingly. Am I incorrect in
13 that?

14 MR. CALHOUN: You're not incorrect
15 in that. Typically, we come across those
16 issues through the PER or PAD process.

17 MEMBER MUNN: Yes. But in
18 situations like this, and this is not the only
19 one, you've looked at this case now and we've
20 found that there's an error and we think it's
21 likely compensable, will the Agency not, as a
22 matter of process in their own procedures,

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1 undertake the reassessment of the case for the
2 client?

3 MR. CALHOUN: I'd have to look at
4 that case. It seems like we could.

5 MEMBER MUNN: It seems likely to
6 me. I thought that's what occurred. I didn't
7 think we had to wait for a PER in a case like
8 this. I guess I'm trying to identify whether
9 Dave's concern is justified. In my mind,
10 you've found an error and I thought the Agency
11 proceeded accordingly.

12 CHAIRMAN KOTELCHUCK: Which is to
13 say corrected it.

14 MEMBER MUNN: Yes.

15 CHAIRMAN KOTELCHUCK: That error,
16 yes.

17 MEMBER MUNN: Yes, it's my
18 understanding that this would automatically
19 trigger a recalculation of the case for
20 compensability.

21 MR. CALHOUN: Just leave that one
22 open then and let me look at it and make sure

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1 that the TBD is, in fact, the co-worker study
2 is, in fact, revised officially and we can get
3 back to that one next week. And if it is and
4 it will flip, and I don't think we've done the
5 calculations officially through the PER, then
6 we'll make that notification.

7 MEMBER MUNN: Yes, I think there
8 was a question in Dave's mind as to whether or
9 not we had to wait for a PER for this claim to
10 be addressed and the error corrected. I
11 thought you corrected errors when we found
12 them.

13 CHAIRMAN KOTELCHUCK: Right. I'm
14 thinking of farther along. But you know what?
15 We've got to leave this open a little bit, and
16 I'm open to leaving it open just for a bit.

17 MEMBER MUNN: Yes, I think that's
18 fine because we can get a report back as to
19 whether or not NIOSH is undertaking a redo of
20 this claim, which is a logical thing. We've
21 found an error, a human error but error
22 nevertheless. It will be addressed.

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1 CHAIRMAN KOTELCHUCK: Agree. And
2 resolved.

3 MEMBER MUNN: Yes.

4 CHAIRMAN KOTELCHUCK: Okay, folks.
5 This will remain open.

6 MEMBER CLAWSON: This is Brad.
7 That's fine.

8 CHAIRMAN KOTELCHUCK: Yes. Okay.

9 MR. FARVER: Okay. 247.2,
10 inappropriate method used to determine modeled
11 photon dose at Y-12. The basis for this
12 finding is in the file we came across this
13 co-worker data photons tool, worksheet,
14 whatever you want to call it, that we have not
15 seen before and not familiar with how it was
16 used. And this is their person who normally
17 does all the Oak Ridge cases.

18 So I had a concern about what the
19 basis is and is it working correctly and so
20 forth. And when he went back to the ORAUT
21 report 32 and looked at some numbers and tried
22 to do some calculations, they did not match up

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1 to what this worksheet was saying. That's what
2 prompted this finding.

3 MR. KATZ: Doug, are you still
4 there?

5 MR. FARVER: Yes, I'm still here.
6 Really, what it comes down to is the new
7 worksheet that we had not seen, and we did not
8 understand the basis for it. And the NIOSH
9 response is, basically, that they're putting
10 together files to help explain it to us. Well,
11 this is pending.

12 CHAIRMAN KOTELCHUCK: And, NIOSH
13 folks, where is that? What stage is that?

14 MR. SMITH: This is Matt Smith with
15 ORAU team. I found this deep in my archives.
16 A brief explanation I can give right now is
17 there is an OTIB called OTIB-12, and that kind
18 of gives a general outline of how Monte Carlo
19 tools were being used at the time this claim
20 went through the production process. So,
21 basically, what it was doing is to find the DCF
22 values of the distribution, the triangular

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1 distribution, against the co-worker values
2 that we have for Y-12. At that time, a Y-12
3 co-worker model for external was, as everybody
4 is probably recalling, quite a complex set of
5 data that was based on some real statistical
6 analysis that had some variability associated
7 with it, depending on how much dose a worker got
8 after the, roughly after 1960.

9 So I'm at the point right now where
10 I'm going to put together a description of how
11 this whole thing was working back then. And
12 based on the data of the file I found, we're
13 talking almost ten years ago, so I want to put
14 together a good description that gets everybody
15 up to speed.

16 MEMBER MUNN: It sounds like this
17 remains open until Matt finishes his report to
18 us.

19 CHAIRMAN KOTELCHUCK: That seems
20 correct. Okay. That's open. So --

21 MR. FARVER: Okay. 247.3,
22 inappropriate photon energy range used for the

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1 Y-12 site. NIOSH applied the 30 to 250 keV
2 photon energy range to all three sites. This
3 person worked at all three of the Oak Ridge
4 sites. So they're appropriate for the K-25
5 sites, but for the Y-12 site the OTIB lists 50
6 percent 30 to 250 keV and 50 percent greater
7 than 250 keV. It may not have been appropriate
8 for the Y-12 site, but it was applied across the
9 board to all sites. That's what prompted the
10 findings. You get a little higher REFs with
11 the greater than 250 keV photons. So the dose
12 is a little high, so that was kind of our
13 concern.

14 And NIOSH gives a good explanation.
15 And we were concerned about it. A secondary
16 concern was when I looked at the workbook. The
17 maximizing assumption was to use the 30 to 250
18 keV, and we felt that that may not be maximizing
19 and suggested that they look at it.

20 NIOSH provided a response and,
21 basically, even though the DCF is a little
22 higher, when it cuts into the IREP part, the

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1 REF, Radiation Effectiveness Factors, of the 30
2 to 250 photons are higher than for the greater
3 than 250 photons. So it seems they did do the
4 claimant-favorable thing. So I suggest
5 closing this because there's really no further
6 action.

7 MEMBER MUNN: Well, if that was the
8 claimant-favorable decision, then it appears
9 that we can close this item.

10 MR. FARVER: Yes.

11 CHAIRMAN KOTELCHUCK: Agreed.
12 Okay. Let's close, unless I hear objection.
13 Let's move on.

14 MR. FARVER: Okay.

15 CHAIRMAN KOTELCHUCK: Which then
16 takes us to 247.6.

17 MR. FARVER: Yes, we'll get there
18 eventually. 247.4 is the same prorating
19 issue, and this is for internal dose, where he
20 worked six months out of the year and was -- yes.
21 It was prorated incorrectly. It's the
22 internal counterpart to the first finding, I

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1 believe.

2 CHAIRMAN KOTELCHUCK: If I may ask,
3 is this two errors or one? I mean, they
4 calculated something incorrectly. They put it
5 in years, rather than months. But once they
6 did it, did they have to enter it again? I
7 mean, at some level, I would think the person
8 just said, oh, yes, I just calculated that here,
9 I'll put it in.

10 MR. FARVER: It was probably one
11 calculation to determine the fraction.

12 CHAIRMAN KOTELCHUCK: Right.

13 MR. FARVER: And then the incorrect
14 fraction was applied --

15 CHAIRMAN KOTELCHUCK: Twice.

16 MR. FARVER: -- twice.

17 MEMBER MUNN: Yes, that would be my
18 assumption. I would see it as two errors
19 because it was a calculation had to be done
20 twice but only a single error in terms of
21 identifying the correction that was going to be
22 used. So it depends on how you look at it,

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1 whether it was two errors.

2 CHAIRMAN KOTELCHUCK: Okay. I'm
3 thinking about our report, but you've answered
4 my questions and we had a discussion. Let's
5 continue on. Thank you.

6 MR. FARVER: Are we going to close
7 that item?

8 CHAIRMAN KOTELCHUCK: Yes.

9 MEMBER MUNN: I think so.

10 CHAIRMAN KOTELCHUCK: It's the
11 same issue.

12 MR. FARVER: Very similar for the
13 next one. It's prorated incorrectly.

14 CHAIRMAN KOTELCHUCK: Okay.

15 MEMBER MUNN: Another closure.

16 CHAIRMAN KOTELCHUCK: Yes.

17 MR. FARVER: Okay. Now, we
18 finally get to 247.6. The 1969 alpha dose was
19 not entered into the 2007 red bone marrow IREP
20 table. The employee had several cancers. He
21 had a 2006 red bone marrow, 2007 red bone
22 marrow, 2006 skin cancer. The '69 alpha dose

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1 made it into two of the IREP tables but not the
2 third one, which we thought was a little
3 strange. The calculation was done. It just
4 was not, it wasn't there.

5 And the NIOSH response was,
6 basically, it was a cut and paste error.

7 MR. SIEBERT: This is Scott. Yes,
8 I mean, that's the generic issue. But let me
9 just explain a little bit more. Since there
10 were 2006 and 2007 cancers, you need to prorate
11 the internal differently for those last years
12 because, obviously, exposure that happened
13 after the date of diagnosis did not impact the
14 probability of that cancer occurring.

15 So what the dose reconstructor had
16 to do was prorate the 1996, I'm sorry, 2006
17 doses and put those into the two that were
18 correct. And then you had to also prorate the
19 2007 separately because for a 2007 diagnosis
20 you would actually have the full exposure
21 during all of 2006, and then they prorate the
22 2007 value.

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1 When they did that proration, that
2 intake, which is a co-worker from 1969, were the
3 last, I want to say, 12 or so rows. And that's
4 where they had to cut and paste so they didn't,
5 they just didn't cut the last couple rows and
6 paste it into the matrix when they did the
7 prorating. So that's why there would be a
8 difference between the 2006 and 2007 cancers.

9 The other thing I want to point out
10 is we've updated, as we say all the time, we've
11 updated our external tools. They now have the
12 capability of importing some of the internal
13 tools, such as CADW, IMBA, all those internal
14 outputs that come from other tools. Instead of
15 having to cut and paste those into the IREP
16 sheet anymore, now we can pull that into the
17 external tool, which is really more of an
18 overall assessment tool, as opposed to just
19 external. And it will automatically put it
20 into the IREP sheet, as well, so we won't have
21 those type of intake errors.

22 CHAIRMAN KOTELCHUCK: Yes, that's

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1 good. Can I ask, I mean, that 247 was done by
2 a person, right? It was checked by the
3 supervisors, but it was done by one person. So
4 we're dealing with the fourth error on one case
5 by one dose reconstructor. Is that correct?

6 MR. SIEBERT: It would be the same
7 person who did this, yes.

8 CHAIRMAN KOTELCHUCK: Yes. I
9 mean, we discussed this a little bit this
10 morning. I mean, at some point, as we begin to
11 write up reports, we will need some
12 documentation about that sort of thing.

13 And, again, I don't care about the
14 name of the person and, you know, by no means
15 are we [trying] to micro manage the operations
16 from afar. But on the other hand, I can't help
17 but note that we're going to be dinged for
18 several errors, all of which were made in one
19 case by one person, as opposed to three or four
20 people, you know, each making a little error.
21 That's a comment. That's not a discussion of
22 how we dispose of this case because what you

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1 said makes sense, and it is complicated.

2 So I think that your explanation
3 satisfies me that that was properly done, that
4 the dose reconstruction with respect to this
5 was properly done. Other folks?

6 MR. FARVER: It wasn't properly
7 done, it was a cut and paste error.

8 CHAIRMAN KOTELCHUCK: Right. I
9 should say not properly done, it was corrected.
10 I correct myself. It was found, and it was
11 corrected.

12 MR. FARVER: Well, it hasn't been
13 corrected yet.

14 MEMBER MUNN: We are assuming that
15 it's going to be corrected because we're
16 assuming that the Agency is going to redo this
17 entire claim.

18 CHAIRMAN KOTELCHUCK: Right. And
19 we don't have to, we don't have to keep it open
20 because the problems have been found, they will
21 be dealt with. There's not any question about
22 how it should be dealt with, so it's just a

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1 technical matter, quotes just a technical
2 matter. Expunge the word "just." It is a
3 technical matter, and I don't see that we need
4 to see it again.

5 MR. FARVER: Unless you want to
6 keep it open like 247.1, which we --

7 MEMBER MUNN: Well, 247.1 is going
8 to keep the issue open --

9 CHAIRMAN KOTELCHUCK: That's
10 right.

11 MEMBER MUNN: -- to ensure us that
12 the case is, in fact, being reworked and will
13 be handled appropriately.

14 CHAIRMAN KOTELCHUCK: Agreed.

15 MR. FARVER: So we'll close this
16 one.

17 CHAIRMAN KOTELCHUCK: Yes.

18 MEMBER MUNN: And you might even
19 refer back to .1 that it will be reworked.

20 MR. FARVER: Yes. Okay. 247.7,
21 NIOSH did not --

22 CHAIRMAN KOTELCHUCK: Other Board

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1 Members, by the way, just as we start, as we're
2 moving along and trying to move along, if there
3 are objections, please stop us and raise them.
4 That said, go on. 247.7.

5 MR. FARVER: 247.7, NIOSH did not
6 discuss all the incidents described in the CATI
7 report. We've seen this before where the
8 employee mentioned an incident, and we feel it
9 should be mentioned somewhere in the dose
10 reconstruction. NIOSH agrees that a comment
11 could have been added to address the event, so
12 we've talked about this before. There is not
13 much action we can take.

14 I will say they're getting better at
15 that. I've seen improvement. So I suggest
16 closing this.

17 CHAIRMAN KOTELCHUCK: Fine. This
18 might have been dealing with -- yes, in fact,
19 I think this could have been viewed as an
20 observation.

21 MR. KATZ: Doug, this is Ted. Can
22 I just ask the question: Are you recording the

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1 nuances in terms of solutions where, for
2 example, NIOSH has instituted a systematic
3 correction for a kind of problem, like we've
4 talked about several of them today, like the cut
5 and paste and the cut and paste won't have to
6 be done anymore? Are you recording that along
7 with the finding, so that in the report that the
8 Board does it can sort of address the different
9 solutions that have been implemented, some of
10 which I guess are implemented independent of
11 the Board's finding because NIOSH made the
12 change before the Board made its finding.

13 But in any event, are you capturing
14 that information in your sort of matrix of
15 information that you will then summarize and
16 produce for the Subcommittee, Doug?

17 MR. FARVER: For example, the last
18 one, 247.6, I didn't include a lot of that
19 because it's included in the response.

20 MR. KATZ: No. I guess what I'm
21 asking about, though, is the Subcommittee is
22 going to get, and we'll get into this later, I

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1 guess, but will get statistics that will help
2 the Subcommittee write its report to the
3 Secretary? And some of those statistics will
4 talk about sorts of different kinds of problems
5 and how they were remedied and so on. They'll
6 sort of need those data, and so somehow, I
7 guess, you have to key this stuff so that you
8 can easily summarize it.

9 MEMBER MUNN: I don't think we have
10 had any programmatic way to do that. I don't
11 think we set up our documentation in such a way
12 that we can, certainly by machine, we can't just
13 call out that information and have it come up
14 for us.

15 MR. KATZ: I guess what I'm just
16 saying -- I'm sorry. I don't mean to derail our
17 progress, but this does relate to what we'll be
18 talking about later with the report. I mean,
19 it seems like it would be very easy to key the
20 matrix with another column that makes some
21 distinctions like this and helps you with
22 summarizing.

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1 CHAIRMAN KOTELCHUCK: You know, I
2 don't think I'd add another column to matrices
3 that we know and have been working with. I
4 don't see the value. It seems like -- maybe as
5 we start our report and maybe for the future.
6 But for the moment, it seems to me, if we're
7 going to go over the matrix, we're going to see
8 from what SC&A and NIOSH say that what were some
9 of the issues and what were some of the options.
10 I think that's about what we can do.

11 MR. FARVER: We should talk about
12 it later on and determine what information
13 would be most helpful to you so that we can start
14 applying it in our next, say, 14th through 18th
15 set findings.

16 CHAIRMAN KOTELCHUCK: That makes
17 sense.

18 MR. FARVER: What can we do? We
19 know --

20 (telephone connection interrupted)

21 MR. KATZ: -- in the matrices, you
22 have a lot, you have a lot of material.

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1 CHAIRMAN KOTELCHUCK: Well, okay.
2 I mean, I can think of columns -- it seems to
3 me a good suggestion to say let's start talking
4 about that for 14 through 18, and let's think
5 about that as we move along from 10 to 13. We
6 still got a long way to go. 247, observation
7 one.

8 MR. FARVER: Observation One is,
9 it's the rotational cycle DCFs from IG-001.
10 We've talked about this before. I believe we
11 transferred this to Wanda for her group to look
12 at.

13 CHAIRMAN KOTELCHUCK: Right.

14 MR. FARVER: And according to the
15 NIOSH response, it looks like it's going to be
16 handled under a PER.

17 MEMBER MUNN: Yes, I think that's
18 correct.

19 CHAIRMAN KOTELCHUCK: Okay, good.
20 Let's go number two.

21 MR. FARVER: Okay. Number Two.
22 And I'm not real sure about that one. It was

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1 only an observation. It has to do with the
2 ratio of the neutron to photon dose, I believe.
3 Not applicable to the other years because the
4 co-worker dose was used.

5 Okay. I guess our concern was why
6 it was only used one year and not used the other
7 years.

8 And observation three talks about
9 what Scott was talking about, prorating the
10 doses for 2006 - 2007. And what they did
11 technically was kind of unusual. We don't
12 usually see that. They're allowed to do that,
13 to prorate the partial years.

14 CHAIRMAN KOTELCHUCK: Well,
15 actually, you'll excuse me, but I think that was
16 the proper way to handle it. I appreciated
17 what was said because I hadn't thought about
18 that issue, and it seems to me perfectly -- once
19 the cancer is diagnosed, then the exposure
20 afterward does not count toward the dose that
21 caused that.

22 MR. FARVER: I understand, except I

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1 don't recall seeing it before where they
2 prorated the internal dose. Like in this case,
3 diagnosed in March, so they prorated it for only
4 three months of dose in that final year. I
5 mean, it's correct. I just don't ever recall
6 seeing it before.

7 CHAIRMAN KOTELCHUCK: Yes, yes.

8 MR. SIEBERT: Doug, this is Scott.
9 Yes, we generally don't do that for the problem
10 that we had in this case. But every time you
11 prorate something, you have the option of doing
12 it incorrectly. So if we can just leave it as
13 a full year, generally we will do so. However,
14 it's not unusual, and especially if you've used
15 IMBA to calculate the doses, it only goes
16 through the date of diagnosis.

17 MR. FARVER: Yes, I understand. I
18 just hadn't seen it before for internal.

19 CHAIRMAN KOTELCHUCK: Let's move
20 on.

21 MEMBER RICHARDSON: Before we move
22 on, when you, you've got a recorded dose for a

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1 calendar year, right? I mean, going back to
2 the external first, I guess. And you're saying
3 that you take the recorded dose for that year
4 and you take the fraction of the year prior to
5 their diagnosis and apply that? Is that the
6 prorating here for the external case first?

7 MR. FARVER: For the external?

8 MEMBER RICHARDSON: Yes.

9 MR. FARVER: That would be
10 prorating on the, it would be a total dose. And
11 is it a co-worker dose? I'm trying to find it.

12 MR. SIEBERT: Yes, I believe that
13 was co-worker dose. That's why it's prorated.

14 MR. FARVER: Yes, we're taking a
15 co-worker dose for the year and just prorating
16 it for the partial year the employee worked.

17 MEMBER RICHARDSON: Okay, okay.
18 Thank you.

19 MR. FARVER: I got to skip out for
20 a moment and call you right back because my
21 phone is dying. So I'll phone right back in.

22 CHAIRMAN KOTELCHUCK: Okay.

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1 John, while he's doing that, why don't you move
2 up to four.

3 MEMBER MUNN: It's awfully quiet.
4 Are we still on?

5 CHAIRMAN KOTELCHUCK: Yes, we're
6 on. We're looking at the screen. I'm looking
7 at the dates, the employment dates here.

8 MR. FARVER: Okay. I'm back.

9 CHAIRMAN KOTELCHUCK: Okay.
10 December 17th, '46 to April '47. And then
11 January '69 to February. Whoa. The dose
12 reconstruction performed using DOL verified
13 employment. So the person who gave the CATI
14 report, the dates would suggest that the person
15 worked all the way through, whereas the
16 employment record indicates that that person
17 didn't work between '47 and '69, right?

18 MEMBER MUNN: We don't have any
19 choice about those things. What the
20 Department of Labor gives us as the employment
21 dates is what we use.

22 CHAIRMAN KOTELCHUCK: Oh, I'm not

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1 even, I'm not asking for choice. I would
2 believe, in this case I would believe the
3 records. I have no question that the records
4 are -- if somebody paid to salary to the person,
5 we'd have records on that.

6 So what is there -- this was an
7 observation?

8 MEMBER MUNN: Yes.

9 CHAIRMAN KOTELCHUCK: Yes. Well,
10 then there's nothing more to talk about then.

11 MEMBER MUNN: No, there really
12 isn't.

13 CHAIRMAN KOTELCHUCK: No. Let's
14 move on, 248.1.

15 MR. FARVER: Yes, 248.

16 MS. K. BEHLING: Excuse me, Doug.
17 This is Kathy Behling. Before you start 248,
18 can I ask a question?

19 CHAIRMAN KOTELCHUCK: Sure.

20 MS. K. BEHLING: Okay. I'm sorry
21 to interrupt here. I was trying to talk
22 earlier. I guess my mute wasn't working. Can

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1 we just quickly tell me, when we went to the
2 Huntington case and we closed that last
3 finding, does that mean that we also closed,
4 that we are not going to have Steve Marschke go
5 back and verify that all of his findings were
6 corrected in the updated TBD, or are those
7 findings still open?

8 I'm a little confused. I just
9 thought that perhaps Steve Marschke could go
10 back and just verify that everything, all of the
11 findings he had were actually updated in the new
12 TBD. Are those findings still open?

13 MR. FARVER: Well, Kathy, my plan was
14 that either Steve or I will go back in and verify
15 that those changes were made.

16 MS. K. BEHLING: Okay.

17 CHAIRMAN KOTELCHUCK: For the
18 Subcommittee, it's closed.

19 MR. FARVER: This is closed, but if
20 something comes up I guess we'll just have to
21 reopen it.

22 MS. K. BEHLING: Okay. I just

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1 didn't want that to fall through the cracks
2 because we did say, although NIOSH has assured
3 us that the change has been made, I did think
4 that perhaps either you or Steve could maybe
5 write a brief summary as to what you find when
6 you go into the TBD to ensure that everything
7 has been corrected based on the initial
8 findings.

9 MR. FARVER: Yes. I will or Steve
10 will go back in and look at that and make sure
11 the changes were made.

12 MS. K. BEHLING: Okay, okay.
13 Since we had closed that one finding, I didn't
14 know if we'd go back to the 9th set at all. And
15 I just didn't want that to slip through the
16 cracks.

17 MEMBER CLAWSON: Hey, Doug, this is
18 Brad. I was just wondering, you know, as a
19 Subcommittee Member, can you just write up a
20 little report to us or a little paper letting
21 us know that, you know, we have closed it and
22 I understand why, but just so that everything

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1 was found correct or not?

2 MR. FARVER: Yes, I'll just write a
3 little memo and just say I looked at it or Steve
4 looked at it and it's as expected.

5 CHAIRMAN KOTELCHUCK: Appreciate
6 that. Thank you. Okay. Back to 248.1.

7 MR. FARVER: Okay, 248.1. Okay.
8 Incomplete accounting of recorded dose. Our
9 reviewer saw that there was 115 millirem in the
10 52nd week of 1956 on a dosimetry card that was
11 not included in the dose assignment. But there
12 was 55 millirem from week 52 but not the
13 additional 115. Okay. So there was a little
14 confusion there.

15 Now, this is going to take us down
16 to the bottom there on Exhibit A. I've got the
17 dosimeter card.

18 CHAIRMAN KOTELCHUCK: Okay.
19 Let's go, let's go there.

20 MR. FARVER: For 1956, we kind of
21 see what it's talking about. Let me know when
22 you're on that page, and I'll kind of explain

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1 what I can. This is kind of a piece it together
2 so you jump from week 39 and then you get down
3 to week 50 through 52. Are we there?

4 CHAIRMAN KOTELCHUCK: Yes.

5 MR. FARVER: Okay. If you see the
6 39, that's week 39, and that's going to be your
7 end of the third quarter. So that will be your
8 third-quarter doses. Then you can see 50, 51,
9 and 52. If you look under the penetrating
10 column for week 52, you'll see two numbers: 115
11 and the 55.

12 CHAIRMAN KOTELCHUCK: No, I don't
13 see, I can't quite see it on my screen.

14 MR. FARVER: Okay.

15 CHAIRMAN KOTELCHUCK: Could you
16 lift it up? I think it's just, just
17 below -- there we go.

18 MR. FARVER: It's a little
19 confusing because you've got these three bottom
20 rows of handwritten numbers, and, you know,
21 what do they mean?

22 CHAIRMAN KOTELCHUCK: Yes.

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1 MR. FARVER: Well, the one, the top
2 part of week 52 where it starts with 180, those
3 are the same doses from the third quarter. So
4 those are the third-quarter doses that are down
5 there.

6 CHAIRMAN KOTELCHUCK: Yes, right.

7 MR. FARVER: Now, underneath that
8 would be, I'm assuming, week 52.

9 CHAIRMAN KOTELCHUCK: No, the
10 bottom is the sum of, the bottom line is the sum
11 of the two on line 52.

12 MR. FARVER: At the very bottom,
13 I'm not sure what the very bottom is.

14 CHAIRMAN KOTELCHUCK: Well, the
15 very bottom is, the very bottom is the sum of
16 the last of the two lines on 52.

17 MR. FARVER: Okay.

18 CHAIRMAN KOTELCHUCK: And the
19 first line is a repeat of week 39 and,
20 therefore, not correct. And, therefore, I
21 would interpret line 52 as the 105, 80, and 55.

22 MR. FARVER: Okay.

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1 CHAIRMAN KOTELCHUCK: What do
2 others think?

3 MR. SIEBERT: This is Scott. I can
4 explain what it actually is.

5 CHAIRMAN KOTELCHUCK: Oh, well,
6 I'm sorry. Okay. Pardon me. Alright.

7 MR. SIEBERT: Dr. Kotelchuck,
8 you're exactly right. That top line that's
9 listed in 52 is a repeat of week 39. And what
10 they were doing is they were bringing in the
11 third and fourth quarters for 1956. This is a
12 time frame when they were looking at this doing
13 different dosimetry structures. If we look at
14 1957, which we don't have here, the form is
15 different, and they were in the midst of looking
16 at changing over.

17 So the first one is a repeat of week
18 39, which is quarter three's values. The
19 second row in '52 are the actual week 52, which
20 is really all the fourth quarter results, the
21 150, the 80, and 55. And then the values below
22 it, as you said, are the totals. So those are

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1 the totals for the third and fourth quarter for
2 1956.

3 The question arises with those
4 numbers that are above those that appear to be
5 in week 51, but they're actually really just
6 above week 52. They're not week 51. What
7 we're calling the D data, because this is in
8 pretty much all the 1956 cards for X-10, and
9 there's a little D there and then those values.

10 It appears what they were doing is
11 they were running some ideas as to what their
12 different values would be with different
13 assumptions in their dosimeters or things of
14 the sort. However, these are not actual dose
15 values for the 51st week. They're just
16 something that the site was using to figure out,
17 to look at how they wanted to change things.

18 We also went back, this claim and
19 the next claim we're going to talk about, 249,
20 we looked at this issue in both of these claims,
21 and that is what we're seeing with that data.
22 We also went back -- let me back up a second.

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1 What the data entry people enter are what they
2 see on the card, so they actually enter that
3 information in the 51st week with that D
4 designation as it is right now. And it's up to
5 the dose reconstructor to interpret that
6 information, which is what I'm discussing right
7 now.

8 CHAIRMAN KOTELCHUCK: Right.

9 MR. SIEBERT: We also went back and
10 we looked at what is the cumulative through the
11 beginning of 1956, adding on 1956 first half of
12 the year and then these values the second half
13 of the year, not the D values but the portions
14 that are at the very bottom, and we compared
15 that to the next year, the 1957 results, which
16 brings forward the cumulative from 1956 back.
17 And in every case that we've looked at, those
18 numbers line up with the totals that are at the
19 bottom of the sheet, not with the D values.

20 So what we determined is those D
21 values are something the site was doing with
22 their dosimetry, but they're not the doses of

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1 record that they were writing in the record.

2 CHAIRMAN KOTELCHUCK: Sounds good.

3 MR. FARVER: Okay.

4 CHAIRMAN KOTELCHUCK: That sounds
5 correct, sounds like it's --

6 MR. FARVER: But in this case,
7 those D values were used to calculate dose.

8 MR. SIEBERT: Correct. And at
9 that time, when the dose reconstructor did
10 this, they did not necessarily know that
11 information. And rather than remove anything,
12 they, from a claimant point of view, left that
13 information in.

14 CHAIRMAN KOTELCHUCK: Right.
15 Understandable. That's not an error. Right.
16 That was not an error, but it was a different
17 way of entering the data at the plant level.

18 MR. FARVER: Okay. Now that we
19 understand that, I mean, we're going to see the
20 next case is going to be a little different.
21 But this is what we're looking at where the 115
22 comes from and the 55. Really, our review is

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1 looking at the 115 and the 55 for the 52 row and
2 thought that the 115 should be added, did not
3 realize that that was the third quarter. So it
4 was our mistake.

5 CHAIRMAN KOTELCHUCK: Okay.

6 MEMBER MUNN: Any one would be
7 confused. But, yes, I can certainly, given the
8 explanation, it makes sense.

9 MR. FARVER: In this case, there is
10 no mistake.

11 MEMBER MUNN: Right.

12 MR. FARVER: We still have a little
13 data entry concern, but we're going to talk
14 about that on the next case.

15 CHAIRMAN KOTELCHUCK: So this gets
16 closed because it was properly calculated, now
17 that we understand the interpretation, right?

18 MEMBER MUNN: Yes.

19 MEMBER RICHARDSON: I have a
20 question. This is David Richardson. So this
21 is a procedure that NIOSH has developed for the
22 handling of recorded information from the

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1 dosimetry cards, and the basis for how you're
2 handling it, is that -- when you add up the data
3 through 1957, you find that it adds up if you
4 don't include that information?

5 MR. SIEBERT: That is correct.

6 MEMBER RICHARDSON: That's the
7 extent of the basis for deciding how you're
8 going to do this?

9 MR. SIEBERT: That's correct.

10 MEMBER RICHARDSON: And what's the
11 assumption that the 1957 value reflects the
12 cumulative value? I mean, ORNL doesn't have,
13 I mean ORNL -- actually, I'll start by saying
14 it the other way. ORNL has a lot of information
15 on historical dosimetry practices and
16 recording of doses. There's not documentation
17 saying that the dose of record, as recorded on
18 these dosimetry cards should be handled with
19 this algorithm.

20 MR. SIEBERT: I'm not sure what
21 you're trying to say.

22 MEMBER RICHARDSON: I'm trying to

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1 say this is like a procedure that you're
2 implementing based on an empirical observation
3 from the cards and how you want to sum them, not
4 based on a procedure for how to use the
5 information that was documented some place by
6 the health physics staff who collected and
7 recorded that information? I'm just asking is
8 there anything else, except for the max --

9 MR. SIEBERT: We have gone through
10 the SRDB references for this time frame, and we
11 have not been able to find any mention of this
12 D data whatsoever.

13 MEMBER RICHARDSON: So the other
14 thing I was wondering, and this may be helpful
15 for you and maybe you know it and have done it,
16 is Mancuso wrote very detailed guidance to the
17 people when he wrote out protocol for using this
18 information to calculate up the doses. I mean,
19 he re-keyed all this information, as well, and
20 had guidance based on discussions with the
21 health physics staff on site at the time about
22 how to interpret and handle all these dosimetry

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1 cards.

2 And, I mean, at some place, we have
3 and presumably you have because I think people
4 came and scanned all our documents at one point,
5 that guidance, as well. Is it not there? And
6 under this protocol, does it add up to the value
7 that Mancuso obtained when he keyed this
8 information and summed it up?

9 MR. SIEBERT: I can't speak for
10 that. Grady, I don't know if you want to speak
11 to this. What I'm guessing is the fact that
12 what we have from the site is the dose of record
13 that we need to use, as opposed to a different
14 study. That's all I can say on that. I mean,
15 that's just what I'm thinking off the top of my
16 head.

17 MR. CALHOUN: I have no
18 information. I have no personal knowledge of
19 the Mancuso study, other than hearing of it.
20 And we certainly would not use or at least are
21 not likely to use anybody else's interpretation
22 of the data. We try to go back to the original

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1 data.

2 MEMBER RICHARDSON: Oh, that's
3 what I'm saying, though. I'm saying you appear
4 to be interpreting -- the data of record, as I
5 took it, was the dosimetry cards. And you're
6 saying you want to discount a row of the
7 information not because there's a procedure
8 written that says discount this row of
9 information. You've found that you want to
10 institute a procedure for how to key it and then
11 interpret it to obtain a dose. And so far what
12 I've heard is that it's your, this is completely
13 something you've made up. And that's not bad
14 or wrong or right, but I'm just saying is there
15 no other guidance for how to use these dosimetry
16 cards? And there were people on site who used
17 them who worked with health physics staff who
18 wrote down procedures on how to interpret these
19 cards, not in 2014 but in 1965, which was much
20 closer to the time.

21 And, again, we can let this go, but
22 I just, it sounds like something that you've

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1 decided to do relatively recently. And I'm
2 surprised that there's not another basis for
3 this, other than the fact that this seems to
4 make it work.

5 CHAIRMAN KOTELCHUCK: David, are
6 Dr. Mancuso's files available at ORNL? I don't
7 know whether he did this as a staff employee
8 there or --

9 MEMBER RICHARDSON: He was --

10 CHAIRMAN

11 KOTELCHUCK: -- researcher outside.

12 MEMBER RICHARDSON: He was
13 employed by the Department of Energy to
14 computerize their Oak Ridge dosimetry data, and
15 he had keypunch people who were doing exactly
16 what the Oak Ridge staff are doing now of keying
17 it. And the final tabulated results, of
18 course, are available to -- NIOSH has them
19 in-house. But the other, there were
20 procedures on how to use these cards.

21 CHAIRMAN KOTELCHUCK: Right.
22 Okay. So they're available. In terms of

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1 answering my question, those data are available
2 to check? They're available for NIOSH to
3 check?

4 MEMBER RICHARDSON: Yes. But, you
5 know, I'm just, it seems like it's reinventing
6 the wheel from quite a distance to try and -- I
7 mean, when I was listening to it, it was as
8 though reverse engineering a protocol for
9 interpretation of all these recorded values.
10 And, again, you know, if I was doing this from
11 a research basis, I wouldn't want my method to
12 be we recorded these and then we excluded some,
13 and there's not a historical citation as the
14 basis for why we were or were not including. I
15 would feel much more comfortable if I had said,
16 you know, based on documentation from the
17 health physics department, these lines are not
18 empirical readings, these lines were
19 notational. And I would think, more for an
20 epidemiologist's purpose, for a compensation
21 purpose, you would like to be able to say here's
22 the basis for saying that these are not doses

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1 that we want to include.

2 MEMBER MUNN: Well, one must also
3 counsel caution in using -- I understand what
4 you're saying with respect to methods that were
5 developed at an earlier date when more familiar
6 people were available for review. By the same
7 token, it's always cautionary to use procedures
8 and methods that were developed by other people
9 for other purposes. I guess it's hard to
10 recommend that we verify or at least calculate
11 any different process because it was used by
12 other people at other times. Well, that's a
13 difficult thing to try to identify.

14 MEMBER RICHARDSON: Yes. Well, I mean,
15 again, I would say I think George Kerr who
16 works with the Oak Ridge staff, maybe still, and
17 they all wrote reports and reports. And Donna
18 Cragle was involved in this and Betsy Dupree,
19 you know, before and after Mancuso, on the
20 difficulties and the procedures in place for
21 interpretation of the historical external
22 dosimetry data and the internal dosimetry data

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1 for the Oak Ridge workers on how to work with
2 those records and interpret them. And it
3 wasn't -- the guidance was based on
4 conversations with the people who had run the
5 dosimetry programs.

6 So this is another way of doing it,
7 but it's kind of trying to figure out what
8 subtraction leads to a logical summation. But
9 I would say that's the least ideal way of
10 figuring out how to interpret these data, and
11 the best way is to understand the process that
12 led to what values were recorded in what fields.

13 MEMBER MUNN: I guess, from my
14 perspective, it's worthwhile to know that those
15 studies exist and it's worthwhile to even use
16 them as a part of background information. But
17 to actually go so far as to make point-by-point
18 comparisons of another study wouldn't seem to
19 be appropriate in serving an entirely different
20 use. But perhaps I'm being too specific about
21 it.

22 CHAIRMAN KOTELCHUCK: I don't

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1 think you need to go point by point. It would
2 seem to me that, if the data is available, one
3 would take a few samples out of the data that
4 was keyed in back in '65 and just see that it
5 agrees with what is being said now. What's
6 being said now makes real sense, and the fact
7 that the person put a D there suggests that
8 something is special about this. And --

9 MEMBER MUNN: I guess the point I'm
10 trying to make is that we -- in order to use
11 another study as a point of verification, we
12 have to work on the assumption that that study
13 underwent the same kind of rigorous review that
14 we're giving this particular study and that
15 there were no errors like the ones that we're
16 finding in our own reviews. You understand
17 what I'm saying --

18 CHAIRMAN KOTELCHUCK: Yes, yes.

19 MEMBER MUNN: -- and that it's a
20 good point of reference, but I don't understand
21 that it's necessarily a point of proof.

22 CHAIRMAN KOTELCHUCK: Well, I'd

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1 like to hear a suggestion for resolution.

2 MEMBER MUNN: Well, let's go back
3 to what our original finding was.

4 CHAIRMAN KOTELCHUCK: Right.

5 MEMBER MUNN: Are we simply trying
6 to verify that no dose was excluded and that,
7 since no dose was excluded, we do, in fact, have
8 a valid basis for making the calculation? Is
9 that what we're trying to determine? I thought
10 it was.

11 CHAIRMAN KOTELCHUCK: But one dose
12 was excluded. One set of doses was excluded,
13 and the issue is can we really ascertain that
14 it was properly excluded, [that this] makes
15 sense? But it's not verified elsewhere, and it
16 could be.

17 MR. FARVER: For this case, the
18 third-quarter doses, which is on the top level
19 of row 52, were excluded correctly. They were
20 not double -- they were considered once and not
21 double input. They were input once for the
22 third quarter, but they were not input again on

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1 week 52.

2 MEMBER MUNN: But that's correct.

3 MR. FARVER: That's correct. And
4 the D doses up in row 51, they were included.

5 MEMBER MUNN: Yes, it makes sense
6 to me.

7 MR. FARVER: Okay.

8 CHAIRMAN KOTELCHUCK: So I
9 thought --

10 MR. FARVER: Well, where we're
11 going next is, when we get to the next case we're
12 going to see that the D doses were not included.

13 MEMBER RICHARDSON: So the D doses
14 should not have been included, according to the
15 procedure which is being described as
16 implemented today but --

17 MEMBER MUNN: Correct.

18 MEMBER RICHARDSON: -- previously
19 had been included. So, one, it doesn't make
20 sense if we say that's what -- the D doses are
21 not true doses.

22 MEMBER MUNN: Yes.

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1 MEMBER RICHARDSON: So either they
2 were erroneously included there, but they
3 shouldn't have been. But as of now, the
4 decision about their status is kind of, is what
5 appears to make sense to NIOSH as a way of
6 handling the dosimetry information --

7 CHAIRMAN KOTELCHUCK: You know
8 what? Right. You are arguing that that's a
9 very good sensible explanation to what the D
10 data are, but it really isn't verified
11 elsewhere. Maybe we can resolve it by going
12 back to the principle of being claimant
13 friendly. We could put that in for week 51, and
14 that would be claimant friendly because it
15 would increase the dose. Even though I believe
16 that NIOSH is doing a sensible thing and it's
17 not verified, we could just say put it in
18 because it's claimant friendly.

19 MR. KATZ: This is Ted. I mean,
20 that just seems arbitrary, Dave. But I don't
21 see why someone can't go look at the Mancuso
22 study and look at what the associated protocols

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1 for handling the data, and see at least whether
2 it diverges from this or if it's consistent with
3 --

4 CHAIRMAN KOTELCHUCK: Well, Wanda
5 is saying that who knows how well the Mancuso
6 study was --

7 MR. KATZ: But that matters not. I
8 mean, you can look at it and see what they did
9 and at least know if that's consistent or not,
10 and then at least you know something more than
11 we know now. And perhaps it's perfectly
12 consistent, in which case there is no more
13 discussion, because that's then, in effect,
14 supporting what --

15 CHAIRMAN KOTELCHUCK: That's
16 supporting evidence, yes.

17 MR. KATZ: I mean, why not someone
18 look instead of -- I mean, it seems like we're
19 beating our heads on something that could use
20 some more information.

21 MR. CALHOUN: This is Grady. I
22 don't know. To me, it seems like the better

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1 approach may be to be better define why we're
2 doing what we're doing. Unless we buy in
3 completely to this Mancuso study, comparing us
4 against what they did is worthless.

5 So, you know, maybe we just need to
6 better define and talk to our site experts who
7 wrote our documents and find out why we're doing
8 what we're doing, and at least be able to
9 describe it a little bit more in detail. I
10 think that's a better first step than trying to
11 compare something to a document that we're not
12 sure that we buy into 100 percent either. And
13 maybe we do. I just am not knowledgeable --

14 CHAIRMAN KOTELCHUCK: Well, on the
15 other hand, one could say this: What NIOSH has
16 described makes sense for interpretation of the
17 D values. If another study confirms it, that's
18 evidence. If the other study does not agree
19 with that, then there is not supporting
20 evidence, and you folks can continue to think
21 about, you know, whether this is right or not
22 and come back and say, well, thinking about it

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1 more. We still believe it's correct and Mancuso
2 was wrong.

3 But it is possible -- I mean, what
4 I'm saying is an affirmation from Mancuso=
5 data is evidence. A lack of agreement is not
6 necessarily evidence. It doesn't confirm what
7 you've done.

8 MR. CALHOUN: I am certainly not
9 ready to commit to doing that. I'll talk to our
10 management here and see what they think about
11 that. I'd be much more apt to try to better
12 describe what we do than compare our work to
13 another study. So that's really where I'd like
14 to start it.

15 CHAIRMAN KOTELCHUCK: Well, okay.
16 Let me ask you this: do you think it would be
17 a big job to find Mancuso's data and check it
18 out?

19 MR. CALHOUN: I have no idea.

20 CHAIRMAN KOTELCHUCK: I have no
21 idea either. I mean, I respect that yours may
22 be better than his. I don't know. He's a

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1 respected academic researcher, but on the other
2 hand, you folks are good researchers and well
3 trained, you know, and experienced. So I'm not
4 saying one is better than the other.

5 (Simultaneous speaking.)

6 MR. CALHOUN: -- the topic right
7 now, to say one thing one way or another, you
8 know, I always - I'm quite confident in the work
9 we do here. But I'm certainly willing to go
10 back and look at it to make sure that it really
11 does make sense.

12 CHAIRMAN KOTELCHUCK: Well, that's
13 --

14 MEMBER MUNN: Unless there's
15 another study that specifically mentions the D
16 data here, then it's probably futile. But how
17 to know whether another study does mention that
18 is almost impossible, unless everything is
19 computerized and you can word search for such
20 a thing as D data.

21 It seems very obvious. You know,
22 some things are obvious. You look at these

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1 obvious things: 180, 135, 115. Clearly, that
2 is simply drawing down the figures from the
3 third quarter. That's not a mystery. And the
4 D data, if you look at the D data, then you'd
5 have to assume, if there's any validity at all
6 to that, that every single aspect of dose
7 increased radically over the course of a
8 quarter, which seems unlikely somehow. And
9 the addition figures below are obvious. You
10 know, you can probably eliminate the obvious
11 things, which leaves only the question of: and
12 exactly what was that D data stuff? But it
13 clearly was not the readings for the fourth
14 quarter. It would not have been identified in
15 that way.

16 CHAIRMAN KOTELCHUCK: Well, I will
17 say we've got a lot of cases to cover. We have
18 cases that are open that we're going to have to
19 come back to. I suppose we could just simply
20 leave this open and let the folks at NIOSH and
21 SC&A reconsider the evidence that exists and
22 discuss with others there about whether there's

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1 access to the Mancuso data and whether they want
2 to look at it.

3 Clearly, what I'm thinking is we're
4 not going to resolve this right now, and we are
5 going to have to come back to this data. So I'd
6 certainly be willing to give the NIOSH folks a
7 chance to re-look, rethink, based on this
8 discussion and then come back to us.

9 MR. FARVER: This is Doug. I guess
10 I'm sorry I brought this up because my concern
11 was far more basic. For Tab 248, they included
12 the D data in their calculations. We go down
13 to Tab 249, they did not include it. It was not
14 in the dosimetry input file. So even though
15 it's on the card, it's not in the dosimetry
16 input file. It wasn't keyed in. So I have a
17 quality concern. Two people are looking at
18 this and they're interpreting it differently.

19 CHAIRMAN KOTELCHUCK: That's a
20 concern.

21 MR. FARVER: I don't know what it is
22 or if it should or shouldn't be used, but at

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1 least be consistent.

2 CHAIRMAN KOTELCHUCK: Right.

3 MEMBER MUNN: Agree.

4 MR. FARVER: So that's my concern.

5 It's in the dosimetry input file --

6 MR. SIEBERT: Wait, wait, wait.

7 This is Scott. I'd like to clarify that. That
8 was not necessarily correct. That D data is
9 listed in the data entry file for both of those
10 cases. The dose reconstructor in the second
11 case decided to remove it based on this process
12 of saying that the cumulative doses did not
13 match the record. However, the data entry
14 people entered it the first time and the dose
15 reconstructor made the decision to remove it.

16 So it is not a data entry issue.
17 They were both done consistently.

18 MR. FARVER: Okay. So now we have
19 inconsistencies among the dose reconstructors.

20 MR. SIEBERT: Which we agree
21 wholeheartedly that we need to look at that, and
22 we're documenting that process already. But,

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1 you know, I know Grady is going to talk to his
2 management.

3 MEMBER MUNN: Did I understand
4 incorrectly that this occurs only during this
5 brief period of time, which, if I think I heard
6 what you said earlier, was a transition time
7 from one reporting method to another?

8 MR. SIEBERT: That is correct, the
9 end of 1956.

10 MEMBER MUNN: This is the only time
11 we see this D data, right?

12 MR. SIEBERT: Correct.

13 MEMBER MUNN: So it's not that big
14 an issue. We have a few figures here at the
15 tail-end of one type of reporting, as they're
16 moving into a different mode of reporting data.

17 CHAIRMAN KOTELCHUCK: Right.

18 MEMBER MUNN: On this case, for
19 example, we have three numbers. Gee, the
20 explanation sounds logical to me. Whether or
21 not any previous study or any study since makes
22 sense, or whether it refers to it at all, this

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1 is a logical view and we're talking about very
2 small numbers here. It seems irrational for us
3 to contribute enormous amounts of time to
4 worrying about these three numbers.

5 CHAIRMAN KOTELCHUCK: Well, the
6 three numbers, right, the three numbers are
7 three people. I mean, the three numbers here
8 are one person, but I wouldn't want to -- for
9 that one person, it's very important.

10 MEMBER MUNN: But even if those
11 three numbers appeared on every single solitary
12 report that we have, which I think is unlikely,
13 even if it did appear, my point is, given the
14 records that exist for each individual employee
15 and the fact that this occurs only during this
16 last set of data recording sheets prior to the
17 institution of new reporting system, I don't
18 see -- it seems to me we're making a "I love a
19 mystery" out of a molehill.

20 CHAIRMAN KOTELCHUCK: Okay.
21 Suppose you believe that. What conclusions
22 do you draw from that last statement?

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1 MEMBER MUNN: My conclusion,
2 personally, is that, for this individual, the
3 numbers that were drawn from the dose for this
4 last fourth quarter of this year are 105, 30,
5 and 55. That's my conclusion, regardless of
6 whether the numbers are written on there. That
7 seems obvious to me. It's in line with --

8 MEMBER CLAWSON: This is Brad. I
9 can't believe -- I do not agree with that at all.
10 That D data is there for a reason. If you can't
11 tell me why it isn't there, then it's either
12 going to be put in there or we're going to figure
13 out what it is. This arbitrarily deciding,
14 yeah, we don't need to worry about this data,
15 it doesn't really mean -- I don't think that
16 really says that we're doing a very good job
17 here. And guess what? It may only be for 55.
18 But this is for one person out there. And if
19 I was that one person or a family member or
20 something else, I guess it would matter to me.

21 The thing is, we're trying to make
22 this as clear as possible. And we want to be

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1 able to be able to explain why we do what we do.
2 To be able to hear that, well, we're just
3 ignoring it because it really doesn't matter,
4 I don't buy that. I don't think that's right.

5 CHAIRMAN KOTELCHUCK: I think we
6 don't have much -- I think we need to let NIOSH
7 people rethink, based on this discussion, not
8 mandate anything other than ask you folks to
9 reconsider. If you want to talk to SC&A, fine.
10 That's up to you. And then come back to us with
11 a resolution of this and the next case, your
12 suggested resolution of it and your whatever,
13 and the body of evidence you're using to decide
14 it, although I think you're giving it to us.
15 But you may want to think about it a little bit
16 more to make us feel confident that what you
17 said was true.

18 Right now, we're not assured that
19 your D data - we're not assured of what you said
20 about the D data, although it certainly, to me,
21 seems to make sense.

22 Can we do that? Leave this open and

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1 let you come back?

2 MR. SIEBERT: That's okay with me.

3 CHAIRMAN KOTELCHUCK: And think
4 about it. I mean, it's something that sort of,
5 if you will, blew up, I mean, in terms of a
6 bigger issue than maybe we thought it was going
7 to be. And I gather that will also include the
8 next -- what is it -- 249, where the same issue
9 comes up.

10 Then if that were the case, it is now
11 -- if we agree on that, then it is 3:20. We've
12 been going about two hours. I will propose a
13 10-minute break from 3:19 to 3:30, 11 minutes.
14 Would people like to do that?

15 MEMBER MUNN: Yes.

16 MR. KATZ: Good idea.

17 CHAIRMAN KOTELCHUCK: Okay. And
18 then we'll start back on -- is there anything
19 else on 246? Are there other -- I can't --

20 MR. FARVER: There's 248. We
21 still have a couple of findings.

22 CHAIRMAN KOTELCHUCK: Okay.

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1 MEMBER MUNN: We're on 248, right?

2 CHAIRMAN KOTELCHUCK: We are? I
3 can't read it? We're on 248, yes.

4 MR. FARVER: And there's two more
5 findings and a couple observations.

6 CHAIRMAN KOTELCHUCK: Okay. Then
7 we'll come back to the rest of 248.

8 MEMBER MUNN: Great. Thank you.

9 CHAIRMAN KOTELCHUCK: Okay.
10 Thank you. See you folks at 3:30.

11 (Whereupon, the foregoing matter
12 went off the record at 3:20 p.m.

13 and went back on the record at
14 3:30 p.m.)

15 CHAIRMAN KOTELCHUCK: 248.1 is
16 open. Let's go to 248.2. Doug?

17 MR. FARVER: 248.2. The reviewer
18 concludes that the employee should have been
19 assigned missed neutron doses for the years '53
20 through '55. And this was at X-10, I believe.
21 Or, no, it could have been Y-12 for these years.
22 He worked at different places.

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1 And they base that on that the
2 employee=s files contain some NTA neutron
3 monitor film results for the last half of '53,
4 all of '54, and three weeks in '55. All the
5 results were zero, with the exception of three
6 badges which had one track edge each. So based
7 on this, we feel they should have assigned
8 missed neutron doses. And NIOSH
9 agrees, unmonitored neutron doses should have
10 been applied.

11 CHAIRMAN KOTELCHUCK: Close.

12 MR. FARVER: Yes.

13 CHAIRMAN KOTELCHUCK: And it will
14 be done?

15 MR. FARVER: That I don't know.

16 MR. SIEBERT: This is another one
17 that, since it's X-10 and there is an X-10 PER
18 coming down the pike, it will be addressed when
19 we reassess under the PER.

20 CHAIRMAN KOTELCHUCK: Okay. But
21 it will --

22 MEMBER MUNN: Since we have an

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1 obvious that's been called to our attention and
2 NIOSH agrees that a dose is overlooked, doesn't
3 that automatically trigger a rework?

4 MR. CALHOUN: It would only trigger
5 a rework if it was automatically comped, so I
6 don't know if they've actually looked at it to
7 that level yet.

8 CHAIRMAN KOTELCHUCK: Right.

9 MR. SIEBERT: We have not looked at
10 it based on present-day standards and reworking
11 it that way.

12 CHAIRMAN KOTELCHUCK: But I think
13 from the Subcommittee's point of view, I think
14 this should be closed. It'll be done.

15 MEMBER CLAWSON: Yeah. This is
16 Brad. I guess my question is: How do we know?
17 Is it going to be corrected or what?

18 MR. KATZ: This is Ted. This is
19 just standard. This has been since the
20 beginning of time with respect to this program.
21 They do look at -- I mean, if they have an error
22 that's going to change the outcome, they would

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1 address that. Otherwise, they don't
2 necessarily redo a DR because there's an error
3 in it if it's not going to change the outcome
4 of it.

5 So I think what Grady just said was
6 someone will look at it to see if this is, how
7 much impact this would have. But, otherwise,
8 then it would get addressed under the PER. And
9 that's just normal course. That's always been
10 the case.

11 MEMBER RICHARDSON: So was this
12 claimant close to a threshold already?

13 MR. CALHOUN: Well, pretty much all
14 of them that you guys look at now are.

15 MR. FARVER: Seven percent.

16 MR. CALHOUN: Three percent of all
17 the cases that we have in-house are between 45
18 and 52 percent.

19 MEMBER RICHARDSON: Yeah, because
20 they already had, like, 20 rem to the bladder,
21 right? And they're adding another rem or two?

22 CHAIRMAN KOTELCHUCK: Yeah.

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1 MEMBER MUNN: Barely over one.

2 CHAIRMAN KOTELCHUCK: Look, this
3 is going to be -- when the PER comes out, all
4 of these will be looked at. And it's not even
5 a question that they will be looked at. So --

6 MR. CALHOUN: But here's the deal.
7 And I hate to commit us to do any more work here,
8 but a lot of the times when we make our defense
9 of these things we say, well, it wouldn't affect
10 the PoC. So I think at least we need to look
11 at this to see if it affects the PoC. If it
12 affects the PoC and makes it look like it will
13 flip, we'll ask for a rework. But if it
14 doesn't, we won't.

15 MR. KATZ: Right. That's what I
16 was trying to say --

17 CHAIRMAN KOTELCHUCK: That's
18 right.

19 MR. KATZ: -- was, I thought, the
20 normal course.

21 MR. SIEBERT: Let me just interrupt
22 because this is something I should have known

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1 before you guys were talking about it, and I
2 apologize. This claim was reworked in 2009 and
3 compensated based on additional cancer
4 information. I apologize.

5 CHAIRMAN KOTELCHUCK: Okay.
6 You'll put that in the SRC action or somewhere.
7 You'll put it in. But it is closed. 48.3.

8 MR. FARVER: 48.3.

9 CHAIRMAN KOTELCHUCK: Wait a
10 minute. 248 is already compensated, so what
11 are we looking at three for?

12 MEMBER MUNN: Because we still have
13 to clear the item.

14 CHAIRMAN KOTELCHUCK: That's
15 right. Okay. And it may reveal a procedural
16 mistake that might be affecting other people.

17 MEMBER MUNN: But NIOSH and SC&A
18 agree and it has already been compensated, so
19 it's correctly closed.

20 CHAIRMAN KOTELCHUCK: That sounds
21 right.

22 MR. FARVER: This is another QA

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1 error where they misapplied the OTIB-49
2 correction factor. That's for Super S
3 plutonium. They should have applied it
4 beginning in 1953, and it would have increased
5 the employee=s doses. But they didn't apply it
6 until 1963. Once again, that's something that
7 you should catch in a peer review. You know,
8 you're off by ten years.

9 MEMBER MUNN: Yes. But this is
10 emblematic of what we were discussing earlier
11 today when we were talking about viewing these
12 things in their aftermath to identify what
13 category they fall into. The wording here is
14 appropriate. It's a QA review issue, and it
15 should have been caught. It wasn't, but the
16 closure says it's a QA issue. So any time we're
17 reviewing it in the future, we'll understand
18 that. And if we're tallying the kinds of
19 errors that we find, the kinds of findings that
20 we wish to pass on, then this clearly tells us
21 that this is QA and that's what we wanted to do.
22 We've got it, we understand it. The client has

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1 been compensated, and this item appears to be
2 closed and properly identified as QA.

3 CHAIRMAN KOTELCHUCK: Agreed.

4 MR. FARVER: Okay.

5 CHAIRMAN KOTELCHUCK: Observation
6 1.

7 MR. FARVER: Observation 1. The
8 short story is, when you look in the CATI report
9 and you look at what buildings the employee
10 worked in, he says he worked in one building in
11 Y-12, 9735. And when we went to verify the
12 interview distribution, we could not find that
13 building listed anywhere in the Y-12 or X-10
14 TBDs.

15 So that's pretty much what prompted
16 the observation was, well, we don't know what
17 it should be because we hadn't found this
18 building listed anywhere. The building that
19 was used --

20 CHAIRMAN KOTELCHUCK: Are we doing
21 248, Observation 1?

22 MR. FARVER: Yes, 248, Observation

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1 1.

2 CHAIRMAN KOTELCHUCK: I don't see
3 anything about the building.

4 MR. FARVER: Well, it was --

5 CHAIRMAN KOTELCHUCK: Oh, okay.

6 MR. FARVER: It wasn't included in
7 the...The full observation is kind of lengthy,
8 and it wasn't all included there.

9 CHAIRMAN KOTELCHUCK: Oh, okay,
10 alright. Okay.

11 MR. FARVER: We couldn't find the
12 building to verify the energy distribution, is
13 what it comes down to. It wasn't a big deal
14 because the one they used was okay.

15 CHAIRMAN KOTELCHUCK: Alright.

16 MR. FARVER: So we just wanted to
17 point out that that building was not in any of
18 their documents.

19 MEMBER MUNN: So we have a phantom
20 building, but we have an overestimation in any
21 case.

22 MR. FARVER: Yes.

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1 MEMBER MUNN: And so the
2 observation has been duly noted and been
3 properly evaluated. There's no additional
4 information we can add, so this observation is
5 closed.

6 CHAIRMAN KOTELCHUCK: Right.
7 Well, it's an observation, so, okay. Next?

8 MR. FARVER: The next one has to do
9 with some missed dose. When we were going
10 through the records, we came up with three
11 additional missed doses for '51 and three
12 additional missed doses for '53, based on what
13 was written in the margins of the dosimetry
14 records. It really wasn't going to affect
15 anything, so we didn't make it a finding.
16 Dose-wise, it's like 80 millirem, so it's not
17 very significant, which is probably why it was
18 just written up as an observation. And NIOSH
19 has replied there were visitor dosimeters same
20 week as the permanent, so they used the
21 permanent.

22 CHAIRMAN KOTELCHUCK: Okay.

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1 MR. FARVER: Observation 3,
2 incorrect MDA values were used for strontium-90
3 and uranium. Okay.

4 CHAIRMAN KOTELCHUCK: 249.1.

5 MR. FARVER: Well, 248,
6 Observation 3, basically used the incorrect MDA
7 values. They used the highest MDA values in
8 the TBD. They may err on the high side. So
9 it's an overestimating method that would not be
10 used today. We didn't write it up in the
11 finding because it was an overestimate.

12 CHAIRMAN KOTELCHUCK: Right.

13 MR. FARVER: 249.1, incomplete
14 accounting of reported dose. This takes us
15 back to 248.1. So we go down to our exhibit.
16 We go down to Exhibit B. And if you look at
17 Exhibit B, it looks very similar to Exhibit A,
18 except in this case the D values were not used
19 in the calculation. I have there that they
20 were not included in the dosimetry input file.
21 Scott says that's incorrect. And I haven't
22 been able to get to that file to check that, but

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1 I will.

2 But, in any case, the doses, in this
3 case, were not used. So it could be the dose
4 reconstructor decided not to use them, where
5 the previous ones in 248 decided to use them.
6 So in either case, they have an inconsistency.

7 MR. CALHOUN: I'm actually going to
8 try to get an answer for you by tomorrow on that.
9 I just talked to Tim, and this is not some big
10 secret. So this is something that we can come
11 up with that has to do with the change in
12 dosimeters and how they were read, and our
13 preliminary answer is the D data should not be
14 used. But we're going to get you a more --

15 CHAIRMAN KOTELCHUCK: I would love
16 that. We would love that.

17 MR. CALHOUN: I would love it more.

18 CHAIRMAN KOTELCHUCK: Okay, good.

19 MR. FARVER: The basis for this
20 finding was that in one case they used the data,
21 in this case they didn't use the data.

22 CHAIRMAN KOTELCHUCK: Right.

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1 MR. FARVER: And they should be
2 consistent.

3 CHAIRMAN KOTELCHUCK: Absolutely.
4 We all agree.

5 MR. FARVER: It's a quality
6 concern. Whether it's a data entry or dose
7 reconstructor, it's a quality concern.

8 MEMBER RICHARDSON: Doug, the page
9 scrolled down. I was trying to check on the
10 phantom building. Is it 9203?

11 CHAIRMAN KOTELCHUCK: 9203, right.

12 MEMBER RICHARDSON: Yes. So it
13 does exist in the Department of Labor's Site
14 Exposure Matrix. It's a Y-12 building called
15 Laboratory Developments Facility.

16 MR. FARVER: Right. That wasn't
17 the phantom building. The phantom building
18 was 9735.

19 MEMBER RICHARDSON: Oh, 9735.
20 Okay. Which is the Research Services
21 Laboratory at Y-12.

22 MR. FARVER: Okay.

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1 MEMBER RICHARDSON: I mean, as an
2 observation, it might be useful if the
3 Department of Labor and NIOSH agreed on what
4 buildings exist.

5 I mean, if the problem is arising
6 from it being -- I don't know how many -- I mean,
7 there's a lot of buildings at these sites. But
8 if there's a problem with them not agreeing, I
9 think that DOL has done quite a bit of work to
10 make an index of the buildings at the facilities
11 and what hazards are there.

12 MR. FARVER: Right. It just
13 wasn't in any of the Y-12 or X-10 documents that
14 we saw, that building.

15 Where are we? Oh --

16 MEMBER RICHARDSON: The other good
17 part is that it shows -- I mean, this building
18 was reported in CATI. Is that where it was
19 coming from?

20 MR. FARVER: Yes, the employee
21 information?

22 MEMBER RICHARDSON: Yeah. So they

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1 weren't making up buildings. It was there.

2 CHAIRMAN KOTELCHUCK: Well, that's
3 good. Yes. Okay.

4 MR. FARVER: How do you want to
5 handle 249.1, where at one time they used the
6 D data and in this case they didn't?

7 CHAIRMAN KOTELCHUCK: Yeah, that's
8 open, and we're going to hear tomorrow.

9 MR. FARVER: Okay.

10 CHAIRMAN KOTELCHUCK: Something, I
11 hope.

12 MR. CALHOUN: You'll hear
13 tomorrow. That's my goal.

14 CHAIRMAN KOTELCHUCK: Okay.
15 Let's hope. So right now that will be open.
16 How about 249.2?

17 MR. FARVER: 249.2. I got to close
18 one and get the other open. Hang on.

19 CHAIRMAN KOTELCHUCK: Sure.

20 MS. K. BEHLING: This is Kathy
21 Behling. Perhaps I could ask a quick question
22 while Doug is opening that other file.

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1 CHAIRMAN KOTELCHUCK: Sure.

2 MS. K. BEHLING: Grady, you had
3 made mention that to get a PER out it may be a
4 year. I was just curious as to why the length
5 of time for some of the PERs. I'm thinking
6 along the lines of --

7 MEMBER MUNN: I'm not hearing you
8 well, Kathy.

9 MS. K. BEHLING: Okay. I'm sorry.
10 Is that any better?

11 MEMBER MUNN: Yeah, lots better.
12 Thanks.

13 MS. K. BEHLING: Okay. I'm sorry.
14 I was just thinking along the lines of like the
15 IG-001 where that table 4.1(b) that we keep
16 talking about. I mean, it's four different
17 types of cancers. It's pretty specific. And
18 I hope I'm not asking a naive question, but I'm
19 just wondering what takes so long to get
20 something like that, a PER, issued.

21 MR. CALHOUN: Any time a Technical
22 Basis Document is changed, even a millirem, for

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1 whatever reason, whether it's our discussions
2 here or anything else, we have to do a PER.

3 MS. K. BEHLING: Right.

4 MR. CALHOUN: So that is literally
5 thousands and thousands and thousands of
6 claims. So we've got dozens of PERs, at least
7 tens of PERs in the system right now that we have
8 planned to do. And we do those, and they come
9 over, every week we get evaluations that come
10 over. But the sheer magnitude of them is very
11 limiting. And when we have documents that are
12 being reviewed by you guys or whoever and
13 they're not done, we're not going to do the PER
14 until they're complete.

15 So the PER is initiated once the
16 document that drives it is signed, approved and
17 done. So when we have back and forth
18 discussions amongst ourselves and ORAU, back
19 and forth between you guys, the document is not
20 done, so we don't do the PER.

21 MS. K. BEHLING: Okay. Yeah, I was
22 just trying to get a better understanding of --

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1 especially because of the issue earlier talking
2 about that there may be cases that would be
3 perhaps overturned, so I was just trying to get
4 a better understanding of what --

5 MR. CALHOUN: Well, the ones that
6 we really quickly are the ones that aren't PERs,
7 but they're PADs, and that's when we actually
8 receive a new piece of data, such as a new
9 dosimetry file. Then we can just do that case
10 according to whatever document exists. But we
11 can't do a PER unless the document that drives
12 it is approved because you've got to be doing
13 the dose reconstruction through an approved
14 document. So that's what pushes those back.

15 And we will receive, probably, I'm
16 going to guess and say a hundred a month we
17 receive of individual cases that were reviewed
18 for one reason or another. Well, the reason
19 for PERs is always because there's been a dose
20 increase of some sort in one of the driving
21 documents.

22 MS. K. BEHLING: Okay. Thank you.

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1 I appreciate that explanation.

2 CHAIRMAN KOTELCHUCK: Doug, are
3 you --

4 MR. FARVER: I'm here.

5 CHAIRMAN KOTELCHUCK: Okay.

6 MR. FARVER: I'm looking at the
7 table at the moment. Let's see.

8 CHAIRMAN KOTELCHUCK: Wait a
9 minute. Did we do 249.2? We just scrolled up
10 to Observation 1.

11 MR. FARVER: 249.2 is what we're
12 working on right now.

13 CHAIRMAN KOTELCHUCK: That's
14 right. Okay.

15 MR. FARVER: Incomplete accounting
16 of medical x-ray dose.

17 CHAIRMAN KOTELCHUCK: Okay.
18 Hopefully, John, if you might run the screen
19 down now.

20 MR. FARVER: The finding has to do
21 with we didn't see where they assigned a
22 pre-placement PFG exam. When we looked at the

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1 documents and when we looked at the workbooks,
2 it appeared that things were listed as PA when,
3 according to the TBD, it should have been a PFG,
4 okay?

5 However, for this case, and for the
6 ovaries, at this time period, the dose is the
7 same.

8 CHAIRMAN KOTELCHUCK: We're still
9 not at 249.2. Pardon me. Yes, thank you.

10 MR. FARVER: So, a chest PA is the
11 same as a stereo PFG for the prior-to-1947,
12 which is 25 millirem. Instead of assigning
13 both the PFG and a PA in the same year, they
14 assigned the one. It shows up in the workbook
15 as a PA, but it doesn't really matter in this
16 case because the PFG and the PA exams have the
17 same dose. But the finding was because we
18 looked at the workbook and saw PA and didn't see
19 a PFG exam was considered. That's why we wrote
20 the finding. And the big picture, it doesn't
21 matter because the doses are the same.

22 CHAIRMAN KOTELCHUCK: Comments,

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1 anybody?

2 MEMBER MUNN: It sounds like an
3 observation.

4 MR. FARVER: Well, it would have
5 been a finding if it was correct, but it's more
6 like a --

7 CHAIRMAN KOTELCHUCK: Well, it
8 appears then that we should close it.

9 MR. FARVER: Okay.

10 CHAIRMAN KOTELCHUCK: Okay.
11 Let's go now to the observation.

12 MR. FARVER: Observation 1, NIOSH
13 did not reference where the less than 30 keV
14 photon DCF of approximately 0.2 originated
15 from, nor did they use the special plutonium DCF
16 provided in OCAS-IG-001. It appears that the
17 method that NIOSH used to determine was based
18 on OTIB-12, and it's not used anymore. This
19 really didn't have a big impact. It was more,
20 where did you get this number from?

21 CHAIRMAN KOTELCHUCK: Right. And
22 we know now.

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1 MR. FARVER: Now we know, but now
2 it's not going to matter because they're not
3 using [it] anymore.

4 CHAIRMAN KOTELCHUCK: Okay.
5 Let's go to 2.

6 MR. FARVER: Two. This was just to
7 point out, it seems to me, a little
8 inconsistency between PROC-61 and the
9 technical basis related where PROC-61 really
10 doesn't mention PFG exams for X-10 in their
11 Table 1, whereas the information is mentioned
12 in the technical basis, TBS-12-3.

13 So you get a little confused if the
14 dose reconstructor goes to PROC-61 instead of
15 the TBD and he may not include the exam. So
16 that was just to point out this little
17 inconsistency.

18 CHAIRMAN KOTELCHUCK: Okay,
19 alright.

20 MR. FARVER: And in NIOSH's
21 response, they say they do have guidance. The
22 guidance was in both of the documents about

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1 PFGs. And you can see in our response, it was
2 just a different in revisions in PROC-61.

3 CHAIRMAN KOTELCHUCK: Okay.

4 MR. FARVER: Observation 3.

5 MR. SIEBERT: You know, I just want
6 to point out that we did do what was correct for
7 the documentation that was in place at the time.

8 MR. FARVER: Correct.

9 MR. SIEBERT: Okay.

10 MR. FARVER: Observation 3. SC&A
11 could not find any rationale for using a value
12 of a thousand times the environmental iodine
13 intake where the TE-132 intake [is] 10 percent
14 of the iodine intake for this incident -- okay.
15 A little more interesting.

16 MEMBER MUNN: That sounds like a
17 decimal point that really got moved.

18 MR. FARVER: I'm still not sure
19 that there was a rationale for the thousand, but
20 in the big scheme of things, there's no dose
21 anyway.

22 CHAIRMAN KOTELCHUCK: I wondered

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1 why this wasn't a finding, rather than an
2 observation.

3 MR. FARVER: Probably because
4 there was no dose.

5 CHAIRMAN KOTELCHUCK: There was no
6 dose of iodine? There was.

7 MR. FARVER: There was not a dose,
8 the dose resulted in very small doses. There
9 was not a significant dose. Just what's the
10 basis for a thousand, I don't know. Scott, do
11 you have any input?

12 MR. SIEBERT: It's just
13 professional judgment that the dose
14 reconstructor was coming up with an
15 overestimate and was trying to address the
16 issue and showing it still had no dose [effect]
17 when he used the large number. So I can't tell
18 you the specific reason.

19 CHAIRMAN KOTELCHUCK: Okay.

20 MR. FARVER: Now, I can see if they
21 used a thousand times an intake and it comes up
22 with some kind of dose, we'd probably rate that

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1 as a finding.

2 CHAIRMAN KOTELCHUCK: Right.

3 MR. FARVER: Okay. So we don't
4 know where it came from. Just judgment.
5 Okay. Observation 4.

6 MEMBER RICHARDSON: This is dose to
7 the bladder, is that right?

8 MR. FARVER: Yes, yes. We noted
9 that the Type SS plutonium was found to deliver
10 the most dose using the bioassay results.
11 However, Type M provided the most dose using the
12 coworker data, so we just noted the difference.
13 And in the response, the solubility type
14 supplied in the dose reconstruction matched the
15 type discussed in the observation, Type Super
16 S for '49 to '61 and then Type M for '62 to '82,
17 based on most claimant-favorable. I think
18 we're just noting there that it would be a
19 solubility change, you know, that they were
20 using, but they were using the most
21 claimant-favorable.

22 CHAIRMAN KOTELCHUCK: Alright.

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1 MR. FARVER: Okay. And that wraps
2 up that case.

3 CHAIRMAN KOTELCHUCK: I think 268
4 is the next one.

5 MR. FARVER: 250.

6 CHAIRMAN KOTELCHUCK: 268? Oh,
7 I'm sorry, excuse me. We have to discuss it and
8 suggest that it's closed.

9 MR. FARVER: Oh, okay, 250.1. A
10 PFG examination was most likely used for
11 pre-employment. When we were reviewing the
12 TBDs, each of the TBDs for Y-12, X-10 and K-25,
13 they all state that PFG equipment was most
14 likely used for pre-employment examinations
15 during the time period in question. So we felt
16 that they should have assigned a PFG dose
17 instead of a PA dose for your pre-employment.
18 And they do give an explanation, and they were
19 following their guidance.

20 However, given the time period
21 between '44 and '45, we still felt that they
22 should have used a PFG exam, because in Oak

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1 Ridge at that time they were all using PFG
2 equipment.

3 MR. SIEBERT: Hey, Doug, this is
4 Scott. I mean, I think people might be
5 digesting that answer. We agreed with that,
6 actually, which is why when OTIB-52 was updated
7 it reflected the fact that you should, for those
8 larger sites like that, you should use the
9 default x-rays at the site of interest, rather
10 than assuming they may have occurred offsite.
11 So that did get changed in OTIB-52 because just
12 for what you're saying. That makes more sense.

13 MR. FARVER: So that has been
14 changed since this?

15 MR. SIEBERT: Yes, Revision 1 of
16 OTIB-52, which was effective in 2011, made that
17 change.

18 MR. FARVER: Okay.

19 MR. SIEBERT: The version that was
20 in place when this one was assessed stated to
21 assume it was PA because it was likely not
22 screening at a large site because they were --

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1 MR. FARVER: Okay. So it's been
2 corrected or changed?

3 MR. SIEBERT: Right.

4 MR. FARVER: Okay.

5 CHAIRMAN KOTELCHUCK: Alright.
6 So it will be closed, should be closed.

7 MEMBER RICHARDSON: Can that be, or
8 will that be noted with the closing?

9 MR. FARVER: I'm writing something
10 in there about OTIB-52 being revised to --

11

12 MR. SIEBERT: Doug, that's in our
13 response.

14 MR. FARVER: Oh, good, I'll paste
15 it.

16 Okay. 250.2. Incorrect time
17 period was used for the internal dose
18 calculations. The employee worked 7.9 months,
19 not 7 months, which would change the time
20 period. It does result in an increase of about
21 12 rem. NIOSH agrees that the incorrect time
22 was used, it's going to result in a PER.

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1 CHAIRMAN KOTELCHUCK: Could I ask,
2 for 7.9 months, what about the 250-day minimum
3 that I thought was a requirement for
4 compensation?

5 MR. FARVER: I believe this was
6 just one time period.

7 CHAIRMAN KOTELCHUCK: Right.

8 MR. KATZ: Dave, you're thinking of
9 the SEC requirement, Special Exposure Cohort
10 requirement. Nothing to do with here.

11 CHAIRMAN KOTELCHUCK: Oh, right,
12 yes, correct. Thank you.

13 MR. FARVER: No, this looks like
14 the total time period for this calculation.

15 CHAIRMAN KOTELCHUCK: No, no, Ted
16 is right. I knew that there was a 250-day
17 minimum requirement for SEC qualification, not
18 for individuals.

19 MR. FARVER: Okay.

20 CHAIRMAN KOTELCHUCK: Okay.

21 MR. FARVER: That could impact the
22 PoC.

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1 CHAIRMAN KOTELCHUCK: Yeah. So
2 given that it may have an impact on the outcome,
3 shouldn't we leave this open?

4 MR. FARVER: I was thinking the
5 same thing, because we're at 48 percent --

6 MR. KATZ: Well, again, this is
7 Ted. You don't need to leave this open. As
8 long as the findings are agreed upon by the
9 Subcommittee, you can close the findings, and
10 NIOSH does the follow-up as a matter of course.

11 CHAIRMAN KOTELCHUCK: Well, mostly
12 we don't think it will have a great impact.

13 MR. KATZ: No. But whether it has
14 an impact or not on the case doesn't change
15 [what] the Subcommittee's done with this, and
16 NIOSH will do the follow-up as to whether it
17 needs to redo the dose reconstruction now or at
18 a later point. But that's independent of what
19 the Subcommittee does here.

20 CHAIRMAN KOTELCHUCK: I thought
21 we, earlier even today, said, well, let's keep
22 an eye on this and make sure that something is

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1 done.

2 MR. KATZ: Right. But I think that
3 was a little different situation from this
4 case. I don't want to go back, but there was
5 some uncertainty about that case, [which] was
6 why you were leaving it open for resolution.

7 CHAIRMAN KOTELCHUCK: Okay.
8 Alright. What do others think on the
9 Subcommittee?

10 MEMBER RICHARDSON: This is David
11 Richardson. I don't disagree with Ted. I
12 agree with Ted. What I'd like is a little bit
13 more explanation of the issue again here and
14 NIOSH agreeing with it.

15 MR. FARVER: The issue?

16 MEMBER RICHARDSON: Yeah.

17 MR. FARVER: The employee
18 employment period was 7.9 months, not 7 months.
19 And so when they did their internal dose
20 calculations, they used the wrong time period.

21 MEMBER RICHARDSON: So when they do
22 the calculation, they're using the NIOSH IMBA

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1 or something like that?

2 MR. FARVER: I believe this has to
3 do with OTIB-49 adjustments, Super S plutonium.

4 MEMBER RICHARDSON: This is a hand
5 calculation or something? Why are
6 the employment dates -- how is there an issue of
7 entering the employment dates in for the
8 calculation of an internal dose? That's not
9 imported? I guess I'm asking is this an issue
10 of having to re-enter information and, at this
11 point, the dose reconstructor not entering it
12 in properly? Or how did this come about?

13 MR. FARVER: I believe this is the
14 prorated issue where you're multiplying it by
15 a fraction. You're getting a yearly dose, and
16 you only want to apply part of that year or part
17 of that dose.

18 MEMBER RICHARDSON: This is what
19 was described as a calculation that used to be
20 marginal and something added in, and now they
21 had to do fractions? Is this something that's
22 going to happen again, I guess? Or has

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1 anything changed?

2 MR. FARVER: I'd say it's possible
3 it'd happen again because the prorating is
4 something that the dose reconstructor would
5 enter.

6 MEMBER RICHARDSON: So the
7 employment dates are validated, they come from
8 the Department of Labor as a part of the basis
9 for establishing that the worker has a valid
10 claim. And there's not a way for those dates
11 to be -- that information, to be incorporated,
12 it has to be taken, re-entered again by the dose
13 reconstructor?

14 MR. FARVER: Well, Scott's
15 probably digging in the files right now to look
16 this up. But I would say that it comes up with
17 a dose, and then the dose reconstructor applies
18 a fraction by calculating what the time period
19 is, and sometimes they calculate it
20 incorrectly.

21 MEMBER RICHARDSON: But they're
22 calculating a fraction off of dates that are

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1 in electronic form, I guess is what I'm asking.

2 MR. FARVER: That I don't know.

3 MR. STIVER: This is John Stiver.
4 It might be a good question for Grady or Scott.

5 MR. CALHOUN: I'm waiting for
6 Scott. I'm sure he's digging, just like --

7 MR. SIEBERT: Yeah, I guess what I
8 can say is, yes, it's electronically available
9 through NOCTS. However, we do not have a tool
10 as such that does prorating based on employment
11 in NOCTS. No, we don't have that directly.

12 MEMBER RICHARDSON: The person has
13 the ability to look at the dates, or do they
14 exist on this same sheet that they're doing
15 their work on with the internal dose
16 calculation? I mean, are you saying that the
17 information is siloed and they need to flip
18 between an employment-history-siloed database
19 and an internal-dose-calculation siloed
20 database, and they do something which is to
21 create a fraction based on employment dates,
22 and they do that manually moving from one type

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1 of information to another?

2 MR. SIEBERT: Yeah, they'll use the
3 information from NOCTS and do the prorating
4 into the tool for, in this case, if I remember
5 correctly, it's using the OTIB-18 tool for the
6 early years of X-10. So, yes, they have to do
7 that manually.

8 MEMBER RICHARDSON: Is there any
9 information that that tool takes from other
10 databases? Are there kind of identifiers that
11 you have that are populating already as a unique
12 subject ID or anything else?

13 MR. SIEBERT: I can't speak to that
14 because we haven't looked into specifically
15 having a tool to do that type of thing.

16 MEMBER RICHARDSON: I'm not
17 talking again about the tool. I'm just trying
18 to, you know, learn and understand the process.
19 I mean, so that tool sort of stands alone and
20 it doesn't have any information about a
21 particular case, and the value that it outputs
22 is not even uniquely identified for a claim?

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1 MR. SIEBERT: Well, the
2 information that is entered is based on full
3 annual years of exposure because we don't have
4 smaller time frames than that. Then you take
5 the output and you prorate it to the employment
6 time frame. So, yes, the dose reconstructor
7 does that themselves and does the prorating.

8 CHAIRMAN KOTELCHUCK: Why, with
9 all the detail that we have in so many of the
10 calculations where it's done for people,
11 something so simple as the employment period is
12 not computerized?

13 MR. CALHOUN: It is computerized.
14 This is Grady. It is computerized in NOCTS.
15 However, comma, there's a lot of things you've
16 got to think about. The entire employment
17 history is what we receive. They could be from
18 multiple sites. The person could have
19 multiple cancers that were diagnosed on
20 multiple dates.

21 So you've got to actually look at
22 the employment period to determine how much of

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1 that employment period is assigned to each
2 specific cancer and how much from each site, if
3 it's a multiple site case.

4 Now, I guess that could be done, but
5 it's not quite as simple as you might think off
6 the top of your head.

7 CHAIRMAN KOTELCHUCK: Part of it is
8 that most -- is it not true that most cancers
9 are singular, that is one type? Or we really
10 do have so many -- well, not skin cancer. Skin
11 cancer, there are many primaries. But the
12 other cancers are --

13 MR. CALHOUN: I can't give you a
14 percentage, but it's a lot.

15 CHAIRMAN KOTELCHUCK: Okay.

16 MR. CALHOUN: You know, there's a
17 lot of cases with multiple cancers. We
18 frequently see bladder and prostate cancer
19 together. I don't have a number, but I would
20 say that it's approaching, I don't know, maybe
21 a third, even. I don't know that. I could
22 find that out.

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1 CHAIRMAN KOTELCHUCK: I would just
2 say this: I mean, even that way, suppose there
3 were two types of cancers. Give me the dates
4 worked up until the date of diagnosis, and that
5 can't be calculated automatically? And
6 wouldn't that avoid these simple but
7 significant mistakes? Because this is not the
8 first one we've dealt with. We were dealing
9 with it earlier today. People just make a
10 mistake, you know, in the time period worked,
11 and it affects everything.

12 MR. SIEBERT: Well, this is Scott.
13 One thing I want to point out is, although,
14 you're correct, we've run into it in this set
15 a few times, in the overwhelming number of cases
16 we do not do prorating, based on the fact that
17 either we can overestimate, leave the whole
18 year in, or we can underestimate, leave a whole
19 year out, or use IMBA to do the calculations
20 themselves. It's only when we're into this
21 best-estimate territory that we'd be doing the
22 prorating.

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1 CHAIRMAN KOTELCHUCK: Right.

2 MR. SIEBERT: So that's why, you
3 know, I don't think it's been a priority to
4 develop specific tools for that issue.

5 CHAIRMAN KOTELCHUCK: Right. So
6 overestimating and underestimating obviously
7 require different approaches, and people have
8 to use their wits and understanding. So, okay,
9 that satisfies me as to why that isn't just
10 automatically done.

11 MR. FARVER: So do we want to keep
12 this case open, or this finding open? Or close
13 it? Because we're not sure exactly how much
14 it's going to impact --

15 CHAIRMAN KOTELCHUCK: I think the
16 argument was that we should close it. That's
17 what I heard. And that it will be taken care
18 of, that we don't need to come back to it.

19 MR. FARVER: Okay.

20 CHAIRMAN KOTELCHUCK: Others
21 agree?

22 MEMBER MUNN: That would be my

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1 recommendation, yes.

2 CHAIRMAN KOTELCHUCK: Okay.

3 MEMBER CLAWSON: That's fine with
4 me. This is Brad.

5 CHAIRMAN KOTELCHUCK: Okay.
6 Dave?

7 (No audible response.)

8 CHAIRMAN KOTELCHUCK: 268.1.

9 MR. FARVER: 268.1.

10 CHAIRMAN KOTELCHUCK: By the way,
11 folks, I think we only have a few more cases to
12 deal with in Oak Ridge, and I think there's a
13 chance we can finish this up.

14 MR. FARVER: I don't know. You're
15 awful hopeful.

16 MEMBER MUNN: Yeah.

17 CHAIRMAN KOTELCHUCK: Well, I
18 can't scroll through to actually see. I just
19 took some notes yesterday before our meeting.
20 But, okay, let's go ahead. Forget the comment.
21 It's irrelevant.

22 MEMBER MUNN: Everybody loves an

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1 optimist.

2 CHAIRMAN KOTELCHUCK: Well, we got
3 to -- yeah, we've got to be optimistic.

4 MEMBER MUNN: True.

5 CHAIRMAN KOTELCHUCK: Especially
6 late in the day in the middle of a two-day
7 session.

8 MEMBER MUNN: Yes.

9 CHAIRMAN KOTELCHUCK: 268.1. You
10 go ahead. Sorry, Doug.

11 MR. SIEBERT: This is Scott. I'm
12 sorry. This first one, 268.1, is a very
13 technical issue with the scaling factors at
14 Y-12. And just my opinion, it may be wise to
15 not start this one today.

16 MR. FARVER: I agree, Scott,
17 because that finding is misleading when you go
18 back and look at the original report. It's
19 very complicated.

20 MEMBER CLAWSON: Okay. There went
21 the positive attitude. Now let's get to the
22 pessimists.

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1 (Laughter.)

2 MEMBER MUNN: Thanks for that
3 recommendation.

4 CHAIRMAN KOTELCHUCK: 268.1 open.
5 Alright. Optimism has to give way to
6 experience. Let's leave that open. 268.2
7 then.

8 MR. FARVER: 268.2. Incomplete
9 accounting of all recorded doses. The records
10 show that the employee was monitored for a short
11 period in '87 with a resulting dose of 49
12 millirem. They did not assign a dose, but they
13 assigned ambient here. They should have
14 assigned the 49 millirem.

15 CHAIRMAN KOTELCHUCK: Yes.

16 MR. FARVER: It looks like it was a
17 data entry error. In other words, it just
18 didn't get entered into the file.

19 CHAIRMAN KOTELCHUCK: And NIOSH
20 believes that there will be little impact.

21 MR. FARVER: Probably.

22 CHAIRMAN KOTELCHUCK: And we can be

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1 confident that that will be checked so that we
2 can close it?

3 MR. FARVER: Well, you've got a PoC
4 of 39 percent. I don't think 50 millirem is
5 going to --

6 CHAIRMAN KOTELCHUCK: Oh, you're
7 quite right. Okay. Well, I don't know what
8 the PoC is.

9 MR. FARVER: You're right.

10 CHAIRMAN KOTELCHUCK: Okay.
11 Well, if it's 39, then it will not have an impact
12 [to flip the PoC].

13 MR. FARVER: I don't believe so.

14 CHAIRMAN KOTELCHUCK: Okay. In
15 which case, we should close it.

16 MR. FARVER: It is just another QA
17 concern.

18 CHAIRMAN KOTELCHUCK: That's
19 right.

20 MEMBER MUNN: Yes, agreed.

21 CHAIRMAN KOTELCHUCK: Okay.

22 Let's go on to 268.3, which is on our screen.

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1 MEMBER MUNN: Not on mine. I've
2 lost the whole thing.

3 CHAIRMAN KOTELCHUCK: Oh, okay.

4 MEMBER MUNN: I'm gone.

5 CHAIRMAN KOTELCHUCK: Oh my.
6 Well, it will come back. 268.3 is on the
7 screens of those of us who have screens. Yeah,
8 my computer keeps going out all the time. I
9 have to get my password to get back in, but so
10 far I've been able to.

11 268.3, Doug.

12 MR. FARVER: 268.3. SC&A
13 questions the solubility type used for the RU,
14 recycled uranium, components. And once again,
15 this is for K-25, Paducah, Y-12, X-10. Pretty
16 much it just wasn't clear where they got their
17 values from. With all the types, it was a
18 little confusing. So they cleared that up in
19 their response. It came from OTIB-60, Section
20 57, which covers the recycled uranium. It then
21 tells which types to be assigned.

22 CHAIRMAN KOTELCHUCK: Why isn't

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1 this an observation?

2 MR. FARVER: I don't know.

3 CHAIRMAN KOTELCHUCK: This doesn't
4 seem to be a finding. You had a question,
5 correctly --

6 MR. FARVER: It's a finding because
7 we just didn't know where they came from.

8 CHAIRMAN KOTELCHUCK: And now you
9 know, and it was right all along.

10 MR. FARVER: It's not that it was
11 incorrect. It was there was not enough
12 information in there to tell where these
13 assumptions came from.

14 MEMBER MUNN: Lack of information.

15 CHAIRMAN KOTELCHUCK: And that's
16 what B is?

17 MR. FARVER: I'm not sure.

18 CHAIRMAN KOTELCHUCK: Okay.
19 Well, clearly, it can be closed.

20 MR. FARVER: Okay. Observation 1,
21 there was no workbook to show the derivation of
22 the doses assigned by NIOSH in the files, they

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1 could not reconcile the doses assigned in the
2 IREP input. But because they were
3 claimant-favorable, this was listed as an
4 observation. And this is for x-ray doses.

5 CHAIRMAN KOTELCHUCK: You might
6 scroll up just a little bit now to see the end
7 of the write-up. Thanks.

8 MR. FARVER: In other words, when
9 we went through our calculations, we calculated
10 what we thought it should be compared to what
11 the NIOSH calculations were. It seemed
12 reasonable, very close. But there was no
13 workbook in there actually showing the
14 calculations.

15 CHAIRMAN KOTELCHUCK: Right.

16 MR. FARVER: Okay. Observation 2,
17 the employee had whole body counts for
18 different years that were labeled as
19 insignificant for all but cesium in '64.

20 CHAIRMAN KOTELCHUCK: Okay.
21 Observation 2 is not on the screen yet. There
22 we go.

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1 MR. FARVER: But during this time
2 period, a urinalysis was used to assign the
3 internal doses. Therefore, the whole body
4 count information was not needed to assign dose
5 in this case. We thought it would be best if
6 they would just include some kind of statement
7 in the report acknowledging that they had whole
8 body counts. NIOSH agreed that it would have
9 been nice to have some more information in
10 there. Okay.

11 CHAIRMAN KOTELCHUCK: Alright.

12 MR. FARVER: Do we want to move
13 forward?

14 CHAIRMAN KOTELCHUCK: Yes. 269.1
15 is open.

16 MR. FARVER: Okay.

17 CHAIRMAN KOTELCHUCK: No, 268.1,
18 I'm sorry, is the one that's open. 269 would
19 be the next one. Sure, let's keep going.
20 Folks, it's 4:30. What is the -- do we have
21 just a few more or --

22 MR. FARVER: I really don't think

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1 we're going to finish this today.

2 MR. KATZ: This is Ted. People are
3 sounding like they're out of gas. I don't know
4 if that's true but --

5 CHAIRMAN KOTELCHUCK: Yeah. Then
6 what do we have left, I can't see it here, for
7 Oak Ridge? We have 269.

8 MR. SIEBERT: There are three more
9 cases.

10 CHAIRMAN KOTELCHUCK: Okay.
11 294.1, 324.1. Okay. Look, then, given that
12 we have two days in a row, maybe we should just
13 call it quits now at 4:30. I'm more than open
14 to doing that and just resume again in the
15 morning with 268.1.

16 MR. KATZ: That makes sense to me.
17 And Mark Griffon will be joining us tomorrow.

18 CHAIRMAN KOTELCHUCK: Good.
19 Okay, fine. And hopefully Dr. Poston also.

20 MR. KATZ: And hopefully Dr.
21 Poston, as well. Right.

22 CHAIRMAN KOTELCHUCK: Folks, then

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1 I think we've agreed. Let me thank you all for
2 today. A long day and we have another long day
3 tomorrow. So have a good evening.

4 MR. KATZ: Yes. Thank you,
5 everybody.

6 (Whereupon, the foregoing matter
7 was concluded at 4:32 p.m.)
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