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NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY AND HEALTH

convenes

MEETING 6

THE SUBCOMMITTEE FOR DOSE RECONSTRUCTION REVIEW
OF THE

ADVISORY BOARD ON

RADIATION AND WORKER HEALTH

The verbatim transcript of the 6th
Meeting of the Subcommittee for Dose Reconstruction
Review of the Advisory Board on Radiation and
Worker Health held at the Marriott Airport, Hebron,
Kentucky, on Sept. 12, 2007.

STEVEN RAY GREEN AND ASSOCIATES
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Sept. 12, 2007

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TRANSCRIPT LEGEND

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

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

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

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MEMBERSHIP

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P R O C E E D I N G S

(9:00 a.m.)

WELCOME AND OPENING COMMENTSDR. LEWIS WADE, DESIGNATED FEDERAL OFFICIAL

1 DR. WADE: (by Telephone): This is Lew Wade,
2 and I have the privilege as always of serving
3 as the Designated Federal Official for the
4 Advisory Board. This is a meeting of the
5 Subcommittee of the Advisory Board on Dose
6 Reconstruction. I'm sorry I can't be with you
7 today. This meeting was scheduled on
8 relatively short notice, and I have a
9 commitment at the National Academies today
10 that I really need to be in D.C. for.

11 But Dr. Christine Branche is with you,
12 and in my absence when I'm not on the phone
13 then she would assume the responsibilities of
14 the designated federal official. It's
15 possible I'll be with you for the entire
16 meeting. My involvement over at the Academies
17 is over lunch, so it's possible I won't be
18 absent. But if I am I'll let you know and
19 then Christine will be the designated federal
20 official.

1 As I mentioned this is a meeting of
2 the Subcommittee on Dose Reconstruction. It's
3 very ably chaired by Mark Griffon, members
4 Gibson, Poston and Munn; alternates Clawson
5 and Presley. What I'd like to do is just take
6 a brief roll call. We need to establish that
7 we have a quorum of the subcommittee. That
8 would be three. So either in the room or on
9 the phone, Mark Griffon?

10 **MR. GRIFFON:** Here.

11 **DR. WADE:** Mike Gibson, not with us I
12 believe.

13 John Poston?

14 (no response)

15 **DR. WADE (by Telephone):** Wanda Munn?

16 (no response)

17 **DR. WADE (by Telephone):** Brad Clawson?

18 **MR. CLAWSON:** Here.

19 **DR. WADE (by Telephone):** Robert Presley?

20 **MR. PRESLEY:** Here.

21 **DR. WADE (by Telephone):** So we have a
22 quorum of the subcommittee, and we can
23 continue. Just for the record the next
24 meeting of the subcommittee is scheduled for
25 Wednesday, October 3rd at 9:30 through 11:30.

1 That's the morning of our full Board meeting
2 scheduled for Naperville in the beginning of
3 October.

4 What I'd like to do is just do the
5 introductions, and we'll start with those in
6 the room. Then we'll ask for other members of
7 the NIOSH/ORAU team on the phone, SC&A team
8 members on the phone, other feds who are
9 working on the phone call, members of Congress
10 or their representatives, workers or their
11 representatives or anyone who would like to be
12 identified.

13 But let's start with those in the
14 room. Would you please identify yourself and
15 your affiliation?

16 **MS. HOWELL:** Emily Howell, HHS.

17 **MR. SIEBERT:** Scott Siebert with the ORAU
18 team.

19 **DR. BRANCHE:** Christine Branche, NIOSH,
20 Office of the Director.

21 **MR. HINNEFELD:** Stu Hinnefeld, NIOSH/OCAS.

22 **MR. PRESLEY:** Bob Presley, Advisory Board.

23 **MR. FARVER:** Doug Farver, SC&A.

24 **MS. BEHLING:** Kathy Behling, SC&A.

25 **MR. GRIFFON:** Mark Griffon, Advisory Board.

1 **MR. CLAWSON:** Brad Clawson, Advisory Board.

2 **MR. HINNEFELD:** That's everybody in the
3 room, Lew.

4 **DR. WADE (by Telephone):** Okay, fine. How
5 about out in telephone land, NIOSH or ORAU
6 team members?

7 **MS. BRACKETT (by Telephone):** Liz Brackett,
8 ORAU team.

9 **DR. WADE (by Telephone):** Any other NIOSH or
10 ORAU team members?

11 **MS. BURGOS (by Telephone):** Zaida Burgos,
12 NIOSH.

13 **DR. WADE (by Telephone):** Welcome.

14 Anyone else, NIOSH/ORAU team?

15 (no response)

16 **DR. WADE (by Telephone):** How about SC&A
17 team members?

18 **DR. MAURO (by Telephone):** John Mauro, SC&A.

19 **DR. BEHLING (by Telephone):** Hans Behling,
20 SC&A.

21 **DR. WADE (by Telephone):** Any other SC&A
22 team members?

23 (no response)

24 **DR. WADE (by Telephone):** Other federal
25 employees who are on the line by virtue of

1 their employment?

2 **MS. HOMOKI-TITUS (by Telephone):** Liz
3 Homoki-Titus with HHS.

4 **DR. WADE (by Telephone):** Good morning.

5 **MS. HOMOKI-TITUS (by Telephone):** Good
6 morning.

7 **MR. KOTSCH (by Telephone):** Jeff Kotsch,
8 Department of Labor.

9 **DR. WADE (by Telephone):** As always,
10 welcome, Jeff.

11 Other feds?

12 (no response)

13 **DR. WADE (by Telephone):** Members of
14 Congress of their representatives?

15 (no response)

16 **DR. WADE (by Telephone):** Workers or worker
17 reps who'd like to be identified?

18 (no response)

19 **DR. WADE (by Telephone):** Anyone else on the
20 line who would like to be identified for the
21 record?

22 (no response)

23 **DR. WADE (by Telephone):** Just a brief on
24 phone etiquette, again, if you're speaking,
25 use a handset, not a speaker phone. Mute

1 whatever instrument you've got in your
2 possession if you're not speaking. And be
3 mindful of background noises. We're getting
4 better at that, but keep in mind that
5 background noise that might be unobtrusive to
6 you could be very bothersome to people on the
7 line. So keep that in mind.

8 And with that, Mark, it's up to you.

9 **INTRODUCTION BY CHAIR**

10 **MR. GRIFFON:** I think the agenda's pretty
11 straightforward for this meeting. We're going
12 to try to get through the fourth, fifth and
13 sixth set of matrices and the fourth one we
14 have a few outstanding things, but they are
15 more of the complicated cases. The same with
16 the fifth, and then the sixth one is going to
17 be our first run through that matrix, so I
18 hope everyone on the phone or here has those
19 materials.

20 I think on the fourth matrix several
21 of us in the room are dealing with maybe a
22 different version of the matrix. So what I
23 wanted to do was go through the fourth matrix
24 item by item and make sure that we have a
25 response. I'm going to stop when we get to

1 the ones where we did have some outstanding
2 actions either from NIOSH or from SC&A. I
3 know there's not many, but I just want to make
4 sure we run through the matrix one time just
5 to make sure I don't overlook some of the ones
6 that we had left as outstanding actions if
7 that's okay.

8 (no response)

9 **MR. GRIFFON:** Not hearing any response I
10 guess it's okay.

11 **FOURTH SET OF CASES MATRIX**

12 So I have on my first page of the
13 matrix, Case 61. Are there any -- maybe I'll
14 do it that way, just Case Number 61. Are
15 there anything looking down, are there
16 anything that we didn't resolve on that?

17 **MR. HINNEFELD:** I want to make sure that the
18 version you have has this edit. In the
19 version I have on 61.4.

20 **MR. GRIFFON:** Sixty-one point four, yes.

21 **MR. HINNEFELD:** That NIOSH feels that feels
22 that x-ray exams at AWEs were most likely PA
23 exams, and OTIB-004 says that. But since
24 OTIB-004 provides an overestimating technique,
25 its most recent revision directs the use of

1 PFG as an overestimating technique, PFG being
2 photofluorographic examination. And so
3 because of that we don't feel that any action
4 is necessary on those cases that were done
5 with the old version of OTIB-004.

6 **MR. GRIFFON:** All right, going on to 62. In
7 62.5 there's a change, right, Stu, a recent
8 edit on that one? I have in red here,
9 "Claimant-specific data was received after the
10 claim was assessed."

11 **MR. HINNEFELD:** Right.

12 **MR. GRIFFON:** Maybe, we've already discussed
13 that.

14 **MR. HINNEFELD:** I think what I deleted, I
15 deleted the phrase "NIOSH agrees" because the
16 finding was failure to assess the claimant's
17 specific information, and we didn't have it.
18 We got it after the claim was done, so we
19 didn't feel we had made a mistake. That was
20 the only reason I changed it.

21 **MR. GRIFFON:** And was there something
22 changed in 62.7? NIOSH is re-evaluating the
23 case. I guess --

24 **MR. HINNEFELD:** Yeah, since this was one of
25 those TIB 004 compensable cases, and we don't

1 plan to do anything on those cases unless the
2 Department of Labor asks us to.

3 **MR. GRIFFON:** And 62.8, is that the same?
4 Yes, the same edit there so there's no need to
5 re-evaluate because it was a compensable
6 claim.

7 **MR. HINNEFELD:** Right, the finding was
8 bounding, including potential radiological
9 incidents.

10 **MR. GRIFFON:** As I'm moving through this,
11 too, we might have some final things to clean
12 up with regard -- and we don't have to do it
13 here, but I'm looking at several things that
14 are unranked and maybe I'll have to work with
15 Kathy on how, if they're going to remain
16 unranked or why they're unranked or --

17 **MS. BEHLING:** I think the responses just
18 went ^, and they are ranked.

19 **MR. GRIFFON:** Okay, okay. Under review is
20 not -- okay.

21 I'm up to 63. And this is, I had
22 NIOSH agrees, and Stu says NIOSH neither
23 agrees or disagrees.

24 **MR. HINNEFELD:** Well, the finding was about
25 is it appropriate to use OTIB-004 for ET2,

1 Extra Thoracic Respiratory Tract, because it
2 excluded the lung, OTIB-004, the version that
3 was used in the ^ excluded its use for the
4 lung. It didn't say anything about Extra
5 Thoracic respiratory tract, and yet, this one
6 was, I think this is one of those compensable
7 TIB-004s as well. But the current, you know,
8 since the case was done, TIB-004 has been
9 revised to no longer exclude the lung. I
10 don't know that it would ever work since
11 there's no, I don't know that we'd ever be
12 able to use it for a lung, but it doesn't
13 specifically exclude the lungs. And since
14 that revision's been made, I think the finding
15 has been rendered moot about whether you'd
16 have to make a judgment or should the lung
17 exclusion also exclude ET2 region. Since it
18 doesn't exclude the lung anymore, the question
19 just kind of went away.

20 **MR. GRIFFON:** Can I reword this response
21 just because I think that, what if we said
22 NIOSH has revised TIB-004 to address this
23 issue?

24 **MR. HINNEFELD:** That's fine.

25 **MR. GRIFFON:** Rather than --

1 **MR. HINNEFELD:** Whatever --

2 **MR. GRIFFON:** Yeah, it's a little awkward.

3 **MR. HINNEFELD:** Makes me sound sort of
4 ambivalent there, but I'm an ambivalent sort
5 of person.

6 **MR. GRIFFON:** Sixty-four, now 64.5 I see a
7 new response here for, at least on my version.
8 Oh, this is the --

9 **MR. HINNEFELD:** Same response.

10 **MR. GRIFFON:** -- the X-ray, okay. So we've
11 got that.

12 On 65 I think we do have some
13 outstanding work here. First, 65.3 though,
14 this is the X-ray thing, right?

15 **MR. HINNEFELD:** Uh-huh.

16 **MR. GRIFFON:** On in 65.4, what's this note
17 for that?

18 **MR. HINNEFELD:** That's the, ingestion is not
19 an overriding issue I believe is on the
20 Procedures work group.

21 **MR. GRIFFON:** I'm not sure where it falls
22 out but we don't want to miss it. Is this one
23 of those generic overriding --

24 **MR. HINNEFELD:** There were three that we
25 talked about at the last Procedures work group

1 meeting --

2 **MR. GRIFFON:** Resuspension --

3 **MR. HINNEFELD:** -- resuspension, ingestion
4 and dose from fission products, and internal
5 dose from fission products. So the thought
6 being since it's procedural, which is
7 universal, that may be more efficient to
8 address it there as opposed on a specific dose
9 reconstruction.

10 **MR. GRIFFON:** Yeah. The only concern I have
11 on these is that the ingestion and
12 resuspension, not so much the fission
13 products, the action item for NIOSH to develop
14 a generic approach to those issues came up in
15 the Bethlehem Steel discussions. So now it's
16 in the procedures review I feel like it's
17 being, the ball's being pushed down the road a
18 little.

19 **MR. HINNEFELD:** Well, I hope. It hasn't
20 been resolved yet. I mean, that's the
21 comment, but I can only say that Jim has a
22 lead on it, and he certainly knows he has the
23 lead on it. And, in fact, he has recently,
24 certainly with the resuspension question, has
25 engaged in that and is starting, you know,

1 rebuild the background, find out exactly the
2 history of the finding. So there is work
3 underway, but I've got nothing else to report.

4 **MR. GRIFFON:** I mean, I guess one would
5 wonder from the outside, you know, cases
6 continue to be processed and these two
7 overriding generic issues hanging out there,
8 obviously they're not going to, I mean, either
9 you're going to end up reworking a lot of
10 cases or they're going to, you're going to
11 make them fit, like you've already done.

12 **MR. HINNEFELD:** Yeah, we're not very good at
13 doing that, but the ingestion question I think
14 is, you know, in terms of when it comes up, it
15 only comes up really without bioassay data
16 because without bioassay data, you make the
17 most favorable interpretation of the intake
18 mode in terms of bioassay data. So first of
19 all there are not a bazillion cases that are
20 still being done using it.

21 There are quite a number that were
22 done with it that are now done and if we
23 change those they have to be reworked anyway.
24 But it's not in use to a great degree I don't
25 think in cases currently being done.

1 Certainly, they're being done some, but it's
2 not real high usage, so I don't know that
3 there's that many cases we're essentially
4 proceeding to put at risk of rework by
5 continuing to ^.

6 **MR. GRIFFON:** So we're up to 66. It looks
7 like your other comments, 66.4 X-ray response
8 again.

9 And then 67, I know we have extensive
10 work on this one so this is the first one with
11 a lot of, where you went back and reworked
12 some of the internal dose calculations, et
13 cetera. So maybe we can start there. I'm not
14 sure if it's 67.6. Is that the first?

15 **MS. BEHLING:** I believe it's 67.6, yes.

16 I guess our finding on 67.6 had to do
17 with the triangular distribution that was put
18 into the workbook and the fact that the
19 workbook uses a minimum-maximum that
20 encompasses the entire geometric, or all of
21 the exposure geometries as opposed to just ^.
22 And for this particular workbook the EDCW
23 version 21 and everything prior to that, that
24 range, incorrect range of DCF values was
25 incorporated into the workbook and what was

1 interesting in this particular case I felt was
2 you did rework, I believe, the photon dose 30-
3 250 photon dose using the correct DCF values.
4 But then it seemed like you went on to make
5 changes to the low energy photon dose which we
6 really didn't have an issue with the low
7 energy photon dose.

8 **MR. HINNEFELD:** Yeah, and that's on our list
9 of things where we owe you technical
10 information. It's on the matrix where we
11 still owe you a technical response on that. I
12 could speak briefly to the question of that
13 use of a different low energy photon. The low
14 energy photon range was originally developed
15 to cover the entire, less than 30 keV range.

16 So as you can imagine when you get
17 down into the 10 keV, as far down as they have
18 the numbers, you have some quite large
19 adjustment factors that are far different than
20 even a 30 keV photon would be. So it's quite
21 a broad range when you cover everything under
22 30 keV in these photon dose ^. So because of
23 that there was a decision made to develop a
24 set of dose conversion factors for plutonium
25 specifically, and it's a 17 keV photon. I

1 think 20 was used because that was a
2 tabulation rather than a table of data, a
3 chart of data.

4 So it was the tabular value that was
5 close yet conservative, meaning 20's organ DCF
6 would be marginally or very slightly higher
7 than 17 keVs. So that set was developed at
8 the time the glovebox TIB was being prepared
9 and so that's where they were put. Glovebox
10 TIB has since been revised and those DCFs are
11 now in IT001.

12 Now the question is why, when do you
13 use less than 30 and when do us use this
14 plutonium-specific DCF. And that's what we
15 need to provide for you guys is the technical
16 rationale and basis and essentially where's
17 the guidance at for doing that.

18 **MS. BEHLING:** The other thing I had
19 questioned on this particular case is the fact
20 that you did go back to, when this dose
21 reconstruction was initially done, the version
22 two of the implementation document had not
23 been published at that time. So the table
24 that you're talking about, which I believe
25 4.1A, was not in the implementation guide.

1 But now that you're going back and looking at
2 this again you are incorporating -- because I
3 think the DCF changed from like 0.06 to a
4 0.024 or something like that. And as I said
5 that really wasn't even an issue that we had
6 addressed here. We were only addressing the
7 photons 30 to 250. So we were somewhat
8 surprised that you went in and made this
9 change to the low energy photons.

10 **MR. HINNEFELD:** Well, and that's why what we
11 need is a coherent explanation of why, you
12 know, why do that. You know, where's the
13 guidance that says don't use less than 30, use
14 the plutonium-specific. And that's what we
15 need.

16 **MR. GRIFFON:** So that's going to be an
17 outstanding item?

18 **MR. HINNEFELD:** Yes, it's an open item on my
19 version of the potential additional
20 information.

21 **MR. GRIFFON:** We're hoping we can get that
22 before our next meeting.

23 **MR. HINNEFELD:** I'm hoping, yeah.

24 **MR. GRIFFON:** Let me go back just for a
25 second to 67.3. I'm looking at your revised

1 answer or edited answer rather. It says, "but
2 the HPAREH records are complete and
3 consistent."

4 **MR. HINNEFELD:** 67.03?

5 **MR. GRIFFON:** Yeah. I'm always troubled
6 when I see that kind of language. What's our
7 basis for saying these records are complete
8 and consistent? The individual DRs --

9 **MR. HINNEFELD:** This person here, this
10 finding was based on the fact that the totals
11 on the, you know, from Savannah River we get
12 the print-by-print or report-by-report. It's
13 not necessarily every read, but we get report-
14 by-report that tells us they're generally
15 quarterly totals. And when you would sum the
16 quarters from where you found this guy's name
17 underlined, and you found the quarters summed,
18 it didn't total the total that was in the
19 annual total that was in the HPAREH.

20 What had happened was Savannah River
21 when they had marked this sheet and sent it to
22 us, they had underlined the wrong name on the
23 individual read sheet. And fortunately, the
24 correct name was on that same sheet so we had
25 the correct result. And when we took the

1 correct person's result for that quarter, they
2 did in fact sum with HPAREH. So in this
3 instance that's what I meant by that.

4 **MR. GRIFFON:** I'm just going to say about
5 the individual's HPAREH records are
6 consistent.

7 **MR. HINNEFELD:** Fine, fine.

8 **MR. GRIFFON:** When you read these summary
9 statements sometimes you get the wrong idea.

10 All right, moving on to 67.8 I think
11 is the next one or 67.7? Well, 67.7 has an
12 additional response.

13 **MS. BEHLING:** I believe we were questioning,
14 if I read this correctly, we were questioning
15 why you stopped after 1979, but...

16 **MR. GRIFFON:** Yeah, it does sound right. I
17 think the written explanation said something
18 like after that it would have been less than a
19 minimum or something.

20 **MS. BEHLING:** Yeah, that was it. It does
21 say that although I believe that the earlier
22 calculated by the OTIB-007 procedure does
23 indicate in here that prior to 1980 or after
24 1980 most facilities stopped the practice of
25 subtracting out that so that is appropriate I

1 think.

2 **MR. GRIFFON:** So 67.7's okay?

3 **MS. BEHLING:** It's okay.

4 **MR. GRIFFON:** Sixty-seven point eight? Oh,
5 this is the fission product question. This is
6 going to be, this can go on to the Procedures
7 review. I think as long as we see, we'll
8 track it --

9 **MR. HINNEFELD:** As an initial set of ^.

10 **MR. GRIFFON:** That's fine.

11 Sixty-seven point nine then is the
12 internal I think, right?

13 **MS. BEHLING:** Yes. And I believe NIOSH
14 provided us with quite a bit of response to
15 this finding, 67.9. And our finding was
16 inappropriate solubility class assumed for
17 calculating internal doses.

18 **MR. GRIFFON:** I guess the question I had
19 just while Kathy's reading this. The question
20 I had when I looked at this, Stu, was just to
21 understand the IMBA runs that you provided.
22 These were done for this subcommittee, right?
23 They weren't archived. They weren't from the
24 original work. I think in a couple instances
25 you said when it was an original run from the

1 dose reconstructor's work. But in these cases
2 I think you went back and you basically
3 provided the IMBA runs to demonstrate your,
4 that the approach, to support your approach.

5 **MR. HINNEFELD:** To be honest with you I
6 don't know.

7 **MR. SIEBERT:** I think that's actually
8 correct because we didn't, we don't keep all
9 the different example runs. We may have run
10 to rule things out. We actually submit the
11 run that actually is used in dose
12 reconstruction. So the initial runs were done
13 at the time of the dose reconstruction is our
14 assumption by the dose reconstructor. We just
15 reconstructed them to give to you to
16 demonstrate that it was correct.

17 **MR. GRIFFON:** And you, just on the O drive
18 or whatever you would put your final IMBA runs
19 that you used.

20 **MR. SIEBERT:** Correct.

21 **MS. BEHLING:** And Hans is on the line, and
22 if he wants to add anything to this particular
23 case, we worked on this together. Hans
24 actually had worked this particular case.

25 **DR. BEHLING (by Telephone):** Yeah, let me

1 raise a couple of questions. I think the
2 issue is one of were these calculations that
3 are now here, presented here to justify what
4 was done. Were they done at the time of dose
5 reconstruction? I think I just got the
6 answer, but I'm not convinced that necessarily
7 is the case.

8 But the other issue that I do have a
9 problem with in a sense where there is a
10 justification based on the inconsistency by
11 which a urine data that would assume a
12 different timeframe would give you a higher
13 dose subsequently based on chest count. And
14 then I have to take some exception to that.
15 Even if you were to take Type S for chest
16 count and to make certain assumptions but
17 realizing that this individual worked for a
18 long number of years.

19 And even if you have Type S inhaled,
20 it's not going to stay there forever, and
21 realizing the timeframe of employment, the
22 potential exposure that took place years
23 earlier would not show up in a chest count.
24 So I don't necessarily agree with the
25 justification for assuming that there has to

1 be some consistency between urine data and
2 chest count data simply based on the timeframe
3 during which these exposures could have taken
4 place.

5 **MS. BEHLING:** And I guess the other issue
6 with comparing this to the chest count data is
7 if you go back into the site profile for
8 Savannah River under Section 4.2.2. It does
9 indicate there, in general, chest counting MDA
10 should not be used to determine potential
11 undetected intakes of plutonium if uranium --
12 if urinalysis data are available. So that was
13 another reason why we were questioning this
14 comparison of urinalysis data to the chest
15 count.

16 **MR. GRIFFON:** That's why I was curious if
17 these old runs are archived because I think
18 what you're saying here is that the chest
19 counts were used not to reconstruct the dose
20 necessarily, but to show, to sort of look at
21 what would be bounding or what would be
22 reasonable as far as your urinalysis data I
23 think is what you're saying. But my question
24 is did the DR, did the dose reconstructor ever
25 do that originally or do you just kind of get,

1 you know, it kind of worked out that way and
2 worked good this time.

3 **MR. HINNEFELD:** Well, I think Scott can
4 speak to this because Scott is an internal
5 dosimetrist, and I believe what he said was
6 that they do a number of samples on this to
7 see which one fits, and then they submit the
8 one that fits. So now, and the ones that
9 didn't fit --

10 **MR. GRIFFON:** So I think this is a unique,
11 this is a little unique. I mean, you've got a
12 case where you're clearly going away from your
13 sort of a standard practice which would be
14 like to split your difference in your intake
15 dates. And if you don't, you know, you've got
16 cases where you're assigning intakes the day
17 before and you run a sample, and you're saying
18 that it's because it fits the data better.
19 But I think in this kind of circumstance I
20 would say additionally, we've got lung count
21 data and that also supports our case.

22 **MR. SIEBERT:** So you're saying it could have
23 been explained better in the dose
24 reconstruction that the lung counts were used
25 for limiting purposes. Is that what you're --

1 **MR. GRIFFON:** There's a lot of, I mean, --

2 **MR. HINNEFELD:** I don't see a set of intakes
3 that match this data other than, you know,
4 that would end up with Type S intake that
5 would match this data. Is that what you're
6 proposing, that these could, in fact, have
7 been Type S intakes?

8 **DR. BEHLING (by Telephone):** Let me make a
9 couple points clear here. In your response it
10 says the Type S intake based only on urine
11 predicts the May 27, 1975 chest count by an
12 approximate factor of ten. But realize that
13 this individual started employment in 1952.
14 The chest count took place in 1975 so we're
15 talking a total of 23 year timeframe.

16 And even if he were to inhale, let's
17 say early on in the '50s and '60s Type S, you
18 won't see it in the chest count in 1975. So I
19 don't take that particular statement as being
20 a strong piece of evidence to say that there
21 has to be consistency between urine and chest
22 count data.

23 **MR. HINNEFELD:** Well, but if he had inhaled
24 Type S early in his employment and then had
25 not had any additional plutonium exposure, he

1 wouldn't have had the plutonium urine data
2 that he had, right?

3 **MR. SIEBERT:** Right, if he was being
4 monitored by urinalysis, the assumption would
5 be he was being exposed during that timeframe.
6 And I don't, Liz might want to jump in on
7 this, but I don't know if I necessarily agree
8 that Type S is not appropriate, say that we
9 can limit it out with chest counting because
10 it is long retained in the chest.

11 **MS. BRACKETT (by Telephone):** Right,
12 actually I was just doing some runs on IMBA
13 because that's specifically why they do lung
14 counting is to make sure that it's not, you
15 know, that it wasn't Type S, that it's not
16 being retained in the lungs. So it stays
17 there for a very, very long time.

18 **DR. BEHLING (by Telephone):** I mean, let's
19 assume that this guy took his intake in 1960
20 and then was chest counted in '75, would you
21 expect it still to be there?

22 **MS. BRACKETT (by Telephone):** Yes.

23 **MR. GRIFFON:** It depends on --

24 **MR. HINNEFELD:** If he was providing --

25 **MS. BRACKETT (by Telephone):** It depends on,

1 I mean, I don't know the details of this case,
2 what the intake was, but, yes, that could
3 certainly be --

4 **DR. BEHLING (by Telephone):** Yeah, a massive
5 intake would, but we're not talking about
6 massive intakes. We're just basically looking
7 at americium as a surrogate, and I have a
8 tough time, and as I said as Kathy mentioned
9 if you look at, for instance, the site profile
10 it says, and on page 76, in general, chest
11 counting MDAs should not be used to determine
12 potential undetected intakes of plutonium if
13 urinalysis data are available.

14 **MS. BRACKETT (by Telephone):** And you're
15 interpreting that the opposite way in which it
16 was intended. What that means, it says it
17 should not be used for undetected dose. That
18 the reason is that the MDA is so large that
19 you would over-predict what the person could
20 have had. If you have positive results then
21 that's fine, but if you have, if there's
22 nothing detected, it's not appropriate to base
23 a missed dose on that because it's so large
24 compared to what urine samples can see.

25 And so that is what that is intended

1 to mean. And, in fact, since americium is
2 what's being used, americium is growing in
3 over time, and you would expect to be able to
4 detect a Type S intake later on because you
5 are increasing your americium over time.

6 **MR. SIEBERT:** And that's actually frequently
7 what we saw in the DOE complex. The later on
8 chest counting did demonstrate intakes that
9 weren't seen by urine earlier on.

10 **MS. BRACKETT (by Telephone):** Right, because
11 the further in time you go, the more likely
12 you are to detect the Type S intake because of
13 the americium.

14 **MR. GRIFFON:** I don't actually disagree with
15 the, that calculating how much could have been
16 there and the use of the lung for bounding. I
17 just was curious whether this one is actually,
18 you know, that there's nothing telling a
19 dosimetrist if you, you know, like how much of
20 your work, you know, it's the question on an
21 exam, show your work, you know? If you'd just
22 throw this final run at me I'd say, geez, I
23 have a lot of questions on this. Like why,
24 like the ones we had. I mean, why do you have
25 these intakes the day before --

1 **DR. BEHLING (by Telephone):** And also let me
2 weigh in on this one, and I think, Mark, you
3 alluded to this. Maybe this time you got
4 lucky that the question is was this
5 calculation done ahead of time to justify the
6 original assumption of a couple days before
7 the bioassay as a way of saying, okay, we know
8 that if we do anything else it will not match
9 the subsequent data involving chest counting.
10 The question is was this done, obviously, up
11 front, and if not, to what extent would there
12 be other instances. Let's assume the chest
13 count had never been done. What would be the
14 justification then to, and would you have done
15 what was done and still assume the dates for
16 intake would have been just a day or two
17 beforehand. Let's just hypothetically raise
18 that question. What would the dose
19 reconstructor have done had there not been a
20 chest count that would provide some credence
21 to your explanation? And I'm not convinced
22 that this is not a recurrent issue. That is,
23 if you have an acute intake, let's just for
24 simplicity and unclaimant favorably assume the
25 intake was a day or two beforehand.

1 **MS. BRACKETT (by Telephone):** Well, the
2 direction that they had been give is to assume
3 the midpoint between positive results and the
4 previous --

5 **DR. BEHLING (by Telephone):** Well, exactly,
6 and I agree with that, but in this case as it
7 turned out, you were fortunate in saying,
8 okay, we can justify the day before even
9 though there's no justification for it based
10 on the fact that all of these bioassays were
11 stated as routine, and it would be
12 outrageously coincidental that just about
13 every time there was a routine bioassay the
14 intake occurred a couple days ahead of time.
15 Either you have then a problem with regard to
16 the assumption regarding the intake date or
17 the solubility, one or the other. But it's
18 purely a statistical improbability for you to
19 make that decision and end it up being
20 correct.

21 **MR. GRIFFON:** That's my point. There's, I
22 think if I were doing this from scratch I'd
23 say, you know, because you made some statement
24 -- I'm reading this quick. I actually read
25 this last night, this seven page Word document

1 that you sent to support this case. But it
2 seems to me that you're making some statements
3 about where the person regularly worked, and
4 your assumptions on solubility, but then, you
5 know, I guess I didn't see anywhere where
6 anybody looked closely at sort of a job
7 analysis, area analysis versus this data.

8 I mean, why? Why are you seeing this
9 unique thing going on? Is there an
10 explanation based on the person's job and type
11 of work and what they were working with? And
12 clearly there is a problem with the
13 assumptions if these intakes are always a day
14 or two before an annual, regularly scheduled
15 urinalysis. It's not a special, at least as
16 far as I can tell.

17 **MR. FARVER:** I believe you jumped to point
18 11, about 11?

19 **MR. GRIFFON:** Yeah, I might be overlapping
20 with nine and 11 a little bit.

21 **MR. FARVER:** Nine deals with plutonium and
22 americium. Eleven deals particularly with
23 uranium. I don't want to confuse the people
24 on the phone.

25 **MR. GRIFFON:** Yeah, I guess I'm doing nine

1 and 11 kind of together. But I mean did
2 anyone, I guess it's a question. Did anyone
3 look at the, is there information on this
4 individual's job? Is there anything in the
5 CATI that was reviewed to see if there were
6 any incidents? I don't even know if this was
7 a survivor case or a living claimant. It
8 doesn't seem that that was factored in at all.
9 It was all fitting the data and based on best
10 fit kind of. I just want to understand how it
11 was done and whether there would ever be any
12 need to sort of explain. This looks a little
13 abnormal to us. Let's go back and look
14 further, you know?

15 **MS. BEHLING:** It certainly would be
16 beneficial, at least from our point of view,
17 to have some of these files, these working
18 files, that disputes some of these we're
19 talking. In fact, sometimes some of the dose
20 reconstructors, as you state here, they will
21 assume an M and S solubility, and they'll
22 include both those files, and then we can
23 verify that. If not, we can run it also, but
24 it certainly helps when these files are part
25 of the record, can help to avoid these types

1 of questions.

2 **MR. GRIFFON:** It also seems, I mean, we
3 wouldn't be going to this level of detail if
4 this case wasn't a 45-50 percentile case. I
5 mean, it's a best estimate case. If it was a,
6 you know, if this was an overestimating
7 approach, and you pick these types of intake
8 dates and said, well, it doesn't really matter
9 because it maximizes the person's dose, that
10 would be a different scenario.

11 I think we wouldn't question that.
12 But you've got a best estimate case here that
13 you're providing a lot of information on the
14 fit but not a lot of explanations on what the
15 person did and what they worked with and how
16 you justified these solubility assumptions and
17 intake assumptions.

18 **DR. BEHLING (by Telephone):** Let me just
19 finalize that. I think we can go on. We're
20 not going to contest the final bottom line
21 that says, okay, based on the chest count data
22 that the final bottom line assessment is
23 correct, but when we deal with solubility, as
24 the regulation specifies, that when we don't
25 have a clear-cut understanding or definitive

1 data that would suggest one solubility over
2 another you choose the one that's claimant
3 favorable. In this case it would have been
4 Type S.

5 And let's assume for a moment that
6 there hadn't been a chest count in 1975. The
7 real question now is, and it's a hypothetical
8 question, would the dose reconstructor have
9 done the same thing without necessarily being
10 able to support it with a chest count that was
11 just fortunately there to justify in a back
12 fitting sense. And that's really the bottom
13 line question.

14 **MR. SIEBERT:** Yeah, that hypothetical I can
15 answer you off the top of my head. We would
16 not have limited by chest count that doesn't
17 exist. And this person probably would have
18 been assumed a much large plutonium intake and
19 probably would have been over 50 percent.

20 **DR. BEHLING (by Telephone):** Well, that's
21 the issue I'm just not convinced that would
22 have been the case, that had there not been a
23 chest count whether the assumption of a Type M
24 would have been applied regardless and without
25 necessarily giving the benefit of the doubt.

1 That's the question.

2 **MR. SIEBERT:** Well, I can tell you I
3 personally have done many cases where we have
4 actually done that, given very large intakes
5 like that because we did not have chest counts
6 to limit it and come up with compensation
7 decision that was favorable to the claimant.
8 We consistently did that.

9 **DR. BEHLING (by Telephone):** Frequently,
10 when we do the dose reconstruction audit, we
11 actually look behind the scenes. And
12 frequently it's clear that both solubility
13 types would have been tested, and then you
14 would have obviously checked for whether or
15 not the higher one was used. And in this case
16 we didn't see that, and I'm not sure we saw
17 the justification based on chest count. It is
18 now obviously part of the matrix and response,
19 but what extent that piece of information was
20 part of the dose reconstructor's logic is open
21 to question.

22 **MR. HINNEFELD:** Our position is that there
23 is no vagueness. There is no reason to choose
24 claimant favorable because just claimant
25 favorable when you're choosing between two

1 equally probable outcomes. And the data in
2 front of us do not support two equally
3 probable outcomes.

4 The data in front of us support the
5 Type S intake. Now we can provide, I think we
6 can provide, we might be able to provide an
7 additional explanation. Maybe we can explain
8 some of these things. Maybe we could show
9 some other hypothetical intakes that have been
10 discussed here and why they don't fit the data
11 in hand. But --

12 **MR. FARVER:** Well, I think what Hans is
13 getting at is if you would have showed in the
14 dose report said we looked at M and this is
15 what it was. We looked at S and this is what
16 it was, and we chose S. But he's not
17 convinced that they would have looked at the
18 other solubility class. And as a point I just
19 made a note here.

20 This is similar to a finding we have
21 in our seventh set where it was a chest count
22 and plutonium urine data, and they were trying
23 to cap it with the americium on the chest
24 count. And they chose Type S plutonium. And
25 it was wrong. It's not claimant favorable.

1 They should have used the M. As you state
2 here, M is more favorable when you limit it by
3 the bound.

4 **MR. HINNEFELD:** I'd have to see that case.

5 **MR. FARVER:** Well, no, it's just we're going
6 through the review right now. But I'm just
7 saying that it can happen where they don't
8 necessarily choose the right one.

9 **MS. BEHLING:** And we've seen that.

10 **MR. HINNEFELD:** Well, I guess if it
11 happened, but the case in front of us, that
12 doesn't seem to be the case. I mean, the dose
13 reconstructors use IMBA, you know, they do
14 multiple runs on IMBA if need be. I mean, it
15 could be that a person is experienced with
16 looking up the data and can look at a set of
17 data and say that lung count can't be there if
18 this was a Type M or a Type S intake.

19 I mean, if this was a Type S intake,
20 that lung count would have to be much, much
21 higher, and we'll run the M. And that would
22 be what they, it could be that they do that.
23 But that would have to be somebody who's
24 really experienced with doing it. And I think
25 for the most part they check to see which one

1 is most favorable. In fact, there are quite a
2 number of dose reconstruction tools that do
3 that automatically and check for the more --

4 **MS. BEHLING:** I think one of the other
5 points -- and correct me, Hans, if I'm wrong
6 here -- but, I believe on this particular
7 case, this individual is one that we actually
8 thought should have been part of the high five
9 group and wasn't, based on the data that we
10 looked at.

11 **MR. GRIFFON:** Is that for the uranium
12 though?

13 **MS. BEHLING:** I think that may have been for
14 the uranium. Yes, I'm sorry, uranium.

15 **MR. SIEBERT:** Well, I'm just thinking.
16 Looking at what was selected in the initial
17 assessment, knowing our process, it's very
18 obvious to me the person looked at different
19 options and selected the one that fit the data
20 the best. Didn't just pick out, out of a hat,
21 you know, a couple days beforehand. I believe
22 that's unlikely that you would not pick
23 something like that right off the top of your
24 head. You'd start at the midpoint and do
25 comparisons. So I can just tell you most

1 likely this individual did that kind of
2 comparison because that's what we normally do.

3 **MR. HINNEFELD:** I mean, we can try and
4 provide a more complete response and more
5 complete explanation, but I haven't heard
6 anything yet that would cause me to question
7 the way this was done.

8 **DR. BEHLING (by Telephone):** No, Stu, I
9 fully concur with the bottom line that given
10 the chest count in 1975 and the value that was
11 recorded, the assumption of a Type S is
12 probably not correct; and so therefore, the
13 data supports what was done. The question,
14 however, is was that necessarily done up front
15 to justify, was this analysis done the way
16 it's presented to us now?

17 And the question is are there cases
18 were, or what would happen if the chest count
19 hadn't happened. It's not contested right now
20 based on the evidence that you've presented
21 that the bottom line is a Type M should have
22 been used, but my question is was that
23 justified up front? And that's really the
24 central question. I'm not looking to change
25 anything. I'm just asking the question.

1 **MR. HINNEFELD:** See, I don't know if we can
2 answer that because if we went back to the
3 dose reconstructor who did it, he won't
4 remember.

5 **DR. BEHLING (by Telephone):** Of course not.

6 **MR. GRIFFON:** And I can see that you would
7 keep your final, I mean, I'm not even asking
8 for every, because I know you go through
9 drafts of different fitting, and I can see
10 that in the final file that you submit for the
11 O drive or whatever that you would have your
12 last run, your final run. But I sort of see
13 this lung thing as a separate; it's kind of a
14 supporting run.

15 Here's our urinalysis run projecting
16 our intakes, and, oh, by the way, this is why,
17 you know, this probably looks a little odd. I
18 would have included another, at least an
19 explanation of our run with the lung data to
20 show this is why we didn't select S because it
21 just doesn't make sense with our other urine
22 data. I don't know. We're not going to be
23 able to answer that because it wasn't there.

24 **MR. HINNEFELD:** Right, I hate to get into
25 committing restoring and putting in the case

1 record. I mean, what you guys see is the case
2 record, and any, you know, it's like putting
3 the scratchings on the page before you write
4 your paper and putting that in the folder with
5 your official report. I mean, any preliminary
6 work you do then is rejected because it
7 doesn't match the facts of the case. I hate
8 to get into committing to collecting all that
9 and putting it in the official record of the
10 case.

11 **MR. GRIFFON:** I'm not saying that though.
12 I'm saying that the case that you provided
13 here showing, you know, here's your lung count
14 and here would have been your projected. And
15 that's why that scenario didn't make sense to
16 use Type S. That's a supporting document --

17 **MR. HINNEFELD:** I'll go, I guess I can see -
18 -

19 **MR. GRIFFON:** -- for what otherwise looks
20 like an unusual sort of parameters, you know?
21 That's what I would say. But anyway, we're
22 not going to be able to do much more with that
23 one I don't think at this point.

24 I'm going to go to 67.11 if that's
25 okay because I don't know whether we're going

1 to answer that question now, and I think we
2 agree with the bottom line.

3 **MS. BEHLING:** Yes, and I think we've
4 partially discussed already 67.11 which
5 indicates the selection dates for the acute
6 uranium intakes not procedurally compliant or
7 claimant favorable and the fact that they
8 took, they used these as acute dates, acute
9 intakes, and they took one, two, three days
10 prior to the urinalysis when, as your
11 procedures state, you want to use the midpoint
12 between the last bioassay.

13 **MR. GRIFFON:** So this is for the 67.11, the
14 uranium projections and --

15 **MS. BEHLING:** Yes, the uranium. As I
16 indicated, I think this individual should have
17 been one of the high five individuals.

18 **MR. GRIFFON:** I guess I wanted to know, I
19 mean, I'm looking at your detailed response,
20 and in there I think you say that the initial
21 intake in the SC&A scenario that dominates the
22 entire ^ intake of uranium of 74,131
23 nanocuries, 0.7 grams based on an assumption
24 of highly enriched uranium. This is over 400
25 times larger than the largest reported volume

1 given in TIB-001. Therefore, you're saying
2 it's unreasonable.

3 I mean, I guess that's your point,
4 Kathy, is maybe it should have been in TIB-
5 001, right? That maybe it should have been
6 one of the high five values. I'm reading from
7 your -- everybody know where I'm at? I don't
8 know if everybody has this document, but it's
9 titled "ORAUT Response 67.9 and 67.11". It
10 was a document provided in support of the
11 matrix.

12 **MS. BEHLING:** Stu had sent this out on a CD.

13 **MR. GRIFFON:** So do you see? I mean, are
14 you saying that that is unlikely because if
15 you had an intake that large, they would have
16 caught it and it written up as an incident or
17 is it just unlikely from a physical
18 standpoint? I'm not sure.

19 **MR. SIEBERT:** I believe what we're point out
20 is this is a highly unlikely scenario based on
21 what we know from OTIB-001, the highest fives
22 for, say, uranium in that an intake like this
23 would occur unnoticed. And yet, we are still
24 assigning it to the individual to be claimant
25 favorable when we run into intakes that are

1 that large.

2 **MR. GRIFFON:** If I can go down, and this is
3 just because it's been awhile since I looked
4 at this case, but at the bottom you say the
5 final dose to the colon from this scenario is
6 3.5 rem. Is this dose different than what was
7 in your initial assessment? This is on the
8 very last page, the very bottom.

9 **MR. SIEBERT:** Yeah, I see what you're
10 referring to. I probably should have compared
11 it to what was originally assigned.

12 **MR. GRIFFON:** And then another question is
13 we note that after September 21st, 1956,
14 there's a drop off in these urine samples.
15 And I wondered again did anyone look at this
16 person's work and understand and was there a
17 physical reason why all of a sudden there was,
18 these uranium excretions were dropping, you
19 know, were much lower? Did he switch jobs
20 during that timeframe somewhere?

21 **MR. SIEBERT:** Well, the generic answer for
22 that is we use the information that we have.
23 And, I mean, you guys know from looking at the
24 records, we generally have very little actual
25 employment information as to where the

1 individual is working other than what's
2 attached to the bioassay results. That's, the
3 bioassay badging and the CATI are really the
4 major things that we have to determine where
5 the individual was.

6 **MR. GRIFFON:** And we do have the CATI.

7 **MR. SIEBERT:** And we do have a CATI, but if
8 I remember right, you're correct. It was from
9 survivors.

10 **MR. GRIFFON:** But I think, I don't know
11 about Savannah River. You don't have employee
12 cards? I forget.

13 **MR. SIEBERT:** Generally, there's not a whole
14 heck of a lot of information. The majority of
15 it comes from the bioassay cards with areas
16 that they're working from when they collected
17 the bioassay.

18 **MS. BEHLING:** Actually, I think in this
19 particular case the energy employee is the
20 claimant. At least based on what I have
21 written up under our CATI report. It seemed
22 to me it was not a survivor. It was actually
23 a worker that provided the CATI information
24 because it ^.

25 **MR. GRIFFON:** Well, I think that's

1 important, but first question first, that 3.54
2 rem. I guess what I'm getting at here is when
3 you did your reassessment here did you
4 actually end up modifying the uranium dose?

5 **MR. SIEBERT:** I'm looking at the original
6 assessment here real quick. I'm sorry.

7 **MR. GRIFFON:** That's fine.

8 **MR. SIEBERT:** The original assessment
9 assigned 4.077 for uranium so it actually
10 would have gone down.

11 **MR. GRIFFON:** That's what I thought this
12 might be.

13 **MR. SIEBERT:** Yeah, I apologize. In the
14 response I probably should have mentioned
15 that.

16 **MR. GRIFFON:** Hans, do you have anything on
17 this?

18 **DR. BEHLING (by Telephone):** Yes, I'm
19 looking at the response, and I'm somewhat
20 perplexed as to what it all means. The
21 original finding was centered pretty much
22 around the fact that you had all these routine
23 bioassays. And if you look at Table 3 in our
24 dose reconstruction audit, you will see the
25 exact dates, and then you also see the

1 previous urinalysis prior to those ones. And
2 then you see the time lapse between the two
3 successive bioassays for which the procedures
4 would normally expect you to take the
5 midpoint.

6 And as it turned out, we're talking
7 about in this case usually one or two days
8 beforehand as the day of intake. And that was
9 really the thing that jumped out at me is that
10 what are the procedural assumptions that are
11 applied here that draw, that allow a dose
12 reconstructor to come to a conclusion, oh yes,
13 we have eight spikes in our bioassays, bingo,
14 they all have to be an acute intake.

15 And second, the intake is two or three
16 days before the bioassay, when, in fact, the
17 bioassay is routine. And none of that
18 obviously has any sense of logic attached to
19 it.

20 **MR. SIEBERT:** Well, and you see in the
21 response that when I rework this for the
22 response to get this 3.5 rem calculation, I
23 did run it as a couple different chronics to
24 handle the time periods. And go back to
25 assuming midpoint. I want to be sure we're

1 finishing the thought process in the
2 procedure. The procedure says to assume the
3 midpoint as long as it's not inconsistent with
4 other data that you have. And in this
5 scenario, it's clearly inconsistent with later
6 data. It would have over-predicted the rest
7 of the data horrendously. So it would have
8 been inconsistent.

9 So what the dose reconstructor was
10 doing was trying to find a scenario that was
11 consistent with all the uranium data, not just
12 taking the midpoint and just assuming that and
13 moving on. If it had been a non-compensable
14 case with those assumptions, they probably
15 would have left it that way would be my guess.
16 I assume that would be the first thing they
17 tried and would have left it that way if it
18 was non-compensable because if it over-
19 predicts, that's okay.

20 As you know, we were in the realm
21 where we needed to get a better estimate so
22 they were doing work to try to fit the data.
23 And I agree that a couple days beforehand
24 consistently is not necessarily the most
25 appropriate way to go in all cases.

1 And that's why when I re-worked this
2 and looked at it, did the chronic scenarios
3 which once you start talking long-term
4 excretion, you notice the doses were virtually
5 identical. So there may be better ways to fit
6 it; however, that's what the dose
7 reconstructor was trying to do.

8 **MR. FARVER:** I think you start with the
9 midpoint for procedure, and then it's pretty
10 much left up to the dose reconstructor to do
11 a, basically a visual best fit. Is that how
12 it works, Scott?

13 **MR. SIEBERT:** Generally, yes.

14 **MR. FARVER:** Right. So you could give Scott
15 and I and Liz the same case to work, we're
16 going to come up with three different
17 scenarios, but probably the doses will be
18 about the same.

19 **MR. SIEBERT:** Correct, generally speaking.

20 **MR. FARVER:** But it is based on professional
21 judgment and a visual fit.

22 **MR. SIEBERT:** Right, and as we know with
23 internal dosimetry, within a factor of two is
24 pretty darn good. So in looking at these two,
25 you know, four rem in the initial and then 3.5

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MR. FARVER: I think Hans is concerned about how you chose those acute intake dates. And I think the answer is professional judgment.

MR. SIEBERT: Correct.

MR. GRIFFON: I guess my question would be more to ask why. Why did you choose acute intakes?

MS. BEHLING: That's what I was just going to ask.

MR. GRIFFON: I mean, it seems to me like I would, I don't have much information on ^ at all. You say that right in your response. And yet the dose reconstructor assigns acute one day before routine bioassays. It makes no sense to me. Why not assign a chronic to the whole thing like you always do? I mean, almost all the time you do that. What was the point of that?

MS. BEHLING: The other question I think that Hans is trying to point out is that when we looked at these bioassay records, I think they were marked as routine, not as a special or they were all routine. So we think the questions that we asked were legitimate.

1 **DR. BEHLING (by Telephone):** And then also
2 let me add something with regard to the fact
3 that when you re-worked it, you would have,
4 that it would have over-predicted. But
5 wouldn't that also heavily depend on the
6 assumption regarding solubility? Did you test
7 different solubilities to determine whether or
8 not the over-prediction holds true for a Type
9 F or M?

10 **MR. SIEBERT:** Yeah, when I reworked this --
11 and bear with me. I'm thinking back five
12 months when I did this for you guys. The
13 original assessment did use Type S because of
14 the type of work -- and this is where we do
15 tie back to where he was working -- the work
16 the individual was doing if I remember
17 correctly.

18 And Kathy was correct. It was the
19 actual employee who did the CATI which is
20 where we got this information. The individual
21 said they were working inspecting uranium
22 slugs and weighing and autoclaving uranium.
23 Well, that's insoluble work. Generally,
24 you're not dealing with Type F uranium at that
25 point, most likely Type S, maybe Type M. So

1 that was factored into the assumptions in the
2 original assessment.

3 When I reworked it, I did look at a
4 variety of different solubility types. And
5 because of the type of cancer we're talking
6 about, Type S actually did turn out to be the
7 most claimant favorable assumption from a
8 dosimetric point of view as well.

9 **MR. GRIFFON:** But, and that's, I'd have to
10 re-look at this, too, but I mean, what struck
11 me was that drop off in '56, after '56. The
12 data looks very different before '56 and after
13 '56. And did they do different work --

14 **MR. SIEBERT:** Actually, that's --

15 **MR. GRIFFON:** -- were they working with
16 different types of uranium --

17 **MR. SIEBERT:** That is, when I look at the
18 data, that's more of an issue with the type of
19 analysis that was being done as opposed to the
20 type of work the individual was doing. They
21 could only detect up to such and such an
22 amount in the earlier years. Obviously, in
23 later years detection limits were much lower.

24 And if I remember correctly, too, the
25 initial, the early years are all based on mass

1 base measurements, and we made a claimant
2 favorable assumption as to what material the
3 individual was working with which gave you a
4 much larger number from an activity point of
5 view which would also give you larger numbers
6 in the early years. And then once you go to a
7 mass-based detection -- or activity-based
8 system it's much lower.

9 **MR. GRIFFON:** Did you look at any solubility
10 mixtures, I mean we're talking about S or M.
11 Did you look at, you know, 50-50 or mixes like
12 that?

13 **MR. SIEBERT:** Yeah, we -- Liz, do you want
14 to handle that one specifically? Would you
15 mind?

16 **MS. BRACKETT:** Well, a few comments. I got
17 quite a lecture from the authors of IMBA that
18 that is not appropriate to do mixtures. That
19 instead --

20 **MR. GRIFFON:** Is that because IMBA doesn't
21 handle it very well?

22 **MS. BRACKETT:** No, no.

23 **MR. GRIFFON:** Okay, because I noticed that,
24 too.

25 **MS. BRACKETT:** You're right. It is

1 difficult to do them to do actual mixtures.
2 Well, you can't put in any specific mixture.
3 You can put in two different types and have it
4 do the mixture for you, but their opinion is
5 that ICRP-66 was designed specifically so that
6 you could adjust the parameter value of the
7 lung model itself and come up with what's
8 appropriate by adjusting those rather than
9 mixing types. That it basically amounts to
10 the same thing. But the intent of the model
11 was to be able to do the adjustment.

12 **MR. GRIFFON:** So my question stands then.
13 No matter what you want to call it, did you
14 adjust the parameters?

15 **MS. BRACKETT:** Right, but then, okay, but to
16 adjust parameters you need to have a lot of
17 data. You need to be able to have enough data
18 on which to make a basis for actually changing
19 the parameters, and that's why we compare the
20 different material types to come up with
21 whatever is more claimant-favorable rather
22 than trying to mix things.

23 Because I think if you try this you'll
24 see that in a lot of cases different mixtures,
25 the fit is not very different because we did

1 this when we did the Mound dose
2 reconstruction. And people started doing like
3 really wild mixtures that had no basis in
4 anything because it doesn't really matter. It
5 doesn't really change the fit.

6 And so that's why we pretty much go
7 with 100 percent of each of them and then
8 compare them. Because I don't really think
9 that it would change your answer if you
10 started doing mixtures as far as being
11 claimant favorable. We still need to use the
12 most claimant favorable, and I think that
13 would end up being 100 percent of something.

14 **DR. BEHLING (by Telephone):** Mark, can I
15 just wrap it up because of a couple comments
16 that both Doug and Liz made, and I think
17 here's the issue. From what Liz was saying
18 and Doug had prompted that response is that
19 there is an awful lot of professional
20 subjective opinion that goes into dose
21 reconstruction. That's statement one.

22 The second that obviously these dose
23 reconstructions have a tremendous amount of
24 uncertainty when we talk about internal
25 dosimetry. And Liz made a comment if your

1 factor of two is a range between multiple
2 people doing this then you're probably within
3 the area of reality. And yet when you deal
4 with best estimate, and this guy had a 48.16
5 percent POC, and his internal dose was seven
6 rem. And I can assure you that if you doubled
7 that seven rem as a bounding value using the
8 current one as a lower limit value, then he
9 would have been compensated.

10 And that's something of a disturbing
11 factor when you're that close to the breaking
12 point, the uncertainty associated with
13 internal dosimetry and the subjective nature
14 of a dose reconstructor being able to apply
15 his opinion or his interpretation is somewhat
16 disturbing. In a sense where when you're that
17 close it should be somewhat very prescriptive
18 so that we don't have, oh, you were denied
19 because you had dose reconstructor X, and you
20 got compensated with the same set of data
21 because you had dose reconstructor Y.

22 I think that has been a problem with
23 us all along. It's when you get this close,
24 it should be very prescriptive and the room
25 for subjective interpretation should be

1 extremely minimal. And I think this whole
2 thing brought it out with this issue of making
3 a selection that says it's my opinion that for
4 eight acute exposures, which first of all are
5 questionable in defining them as acute
6 exposures, that the day of intake was one or
7 two days beforehand.

8 I think to me that's a very, very
9 subjective opinion, and why can you justify it
10 and say, well, that's our professional
11 opinion? It's questionable if you had ten
12 people doing the same thing whether they would
13 have ended up doing the same thing in each
14 case.

15 **MS. BRACKETT:** Well, I'd like to point out
16 that Scott re-did this, and he used different
17 assumptions. And he did chronic intakes. And
18 my understanding is that he didn't get
19 anything significantly different or larger.

20 And, I mean, this is not something
21 that we can change. This is internal
22 dosimetry. There have been studies done where
23 cases have been sent to internal dosimetrists
24 around the world to do comparisons of what the
25 outcomes were. And there is this difference

1 because it is subjective.

2 **DR. BEHLING (by Telephone):** I realize that.
3 I realize that, Liz, and I'm not chiding
4 anyone for it. But as I said, in this case
5 when there's a Procedure Three that says use
6 the midpoint, and someone elects not to
7 because of some other factor or decision, it's
8 obviously a situation where we have a
9 potential for a person whose claim is being
10 evaluated, the luck of the draw determines
11 whether you're going to be under, just under
12 or just over the 50 percent.

13 And I guess this is the point that I
14 wanted to make here is the luck of the draw
15 being a potential deciding factor that in
16 instances of best estimates of dose
17 reconstruction is one that I would try to
18 minimize by being a little more prescriptive
19 and perhaps claimant favorably prescriptive in
20 doing a dose reconstruction.

21 **MS. BRACKETT:** Well, I would point out that
22 that's why we have the peer review process.
23 And then OCAS again reviews. So I agree that
24 it is subjective, but there are many reviews
25 done to try to eliminate any bias that there

1 might be on anybody's part.

2 **DR. BEHLING (by Telephone):** And you'll see
3 in the next particular claim that we're going
4 to be reviewing where there was some very
5 different assumptions were made for dose
6 reconstruction that could have gone, or could
7 have been interpreted in a different way. So
8 we will see shortly that there is a subjective
9 element to dose reconstruction that may in
10 some instances make a significant difference
11 in terms of compensability.

12 **MR. GRIFFON:** It's actually good, Liz, that
13 you brought that up, the peer review aspect.
14 I mean, it strikes me again that to model this
15 as seven acute intakes one day before, I'm
16 surprised that someone didn't do what Scott
17 just presented to us in the peer review
18 process. But that didn't come up. You know,
19 why not model this as a chronic? How do you
20 support modeling this as seven acutes or
21 whatever, however many acute intakes? But
22 anyway, I don't know that we can discuss it
23 much more.

24 **MS. BRACKETT:** I do agree, and I think we've
25 had the same discussion before because I've

1 given training to the dose reconstructors.
2 And I beat them over the head to tell them not
3 to do this, that it's not a likely scenario,
4 that every intake happened to be one day
5 before a routine sample.

6 **MR. GRIFFON:** Oh, yeah, I'm not, that's
7 fine.

8 **MS. BEHLING:** One last thing. I was also
9 going to bring up the QA issue in light of
10 this discussion. And based on the cases that
11 we've seen, we very often see a peer review
12 signed off the very next day. So, and I
13 realize you have a lot of cases that you have
14 to get through, but for these best estimate
15 cases, and especially something that's this
16 close, I don't have that particular dose
17 reconstruction in front of me, but very often
18 we see one day it's completed, and the next
19 day the peer review is signed off. And it may
20 be two to three days later and NIOSH signs
21 off.

22 **MR. GRIFFON:** Okay, I think my bottom line
23 anyway if Hans and Kathy agree with me is that
24 I don't think there's any more outstanding
25 action for NIOSH on these two items. We've

1 got enough certainly to understand your
2 answers. So I think we'll close them at that
3 point.

4 And what I'm going to ask for at this
5 point is just can we take five, take a five
6 minute comfort break. We're just going to
7 mute you for about five minutes. I'm going to
8 try to keep it brief, but a five minute
9 comfort break.

10 (Whereupon, a break was taken from 10:20
11 a.m. until 10:30 a.m.)

12 **MR. GRIFFON:** I think we're ready to start
13 up again. Is everybody, SC&A on the line?

14 **DR. BEHLING (by Telephone):** Yes, I'm here.

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

16 **MR. GRIFFON:** We're moving on to case 68,
17 68.1, and I'm going to turn it over to Kathy
18 for 68. There's a number on this small matrix
19 that Stu sent out. This is one of the ones we
20 requested more work on, right, case 68?

21 **MS. BEHLING:** Right, and the finding is
22 inappropriate method used for assessing missed
23 photon dose. I actually have to go back and
24 look at the findings. Focusing on the
25 internal on this one.

1 **MR. HINNEFELD:** I guess this is an LOD2
2 issue, isn't it?

3 **MS. BEHLING:** LOD over two is it?

4 **MR. HINNEFELD:** LOD-2.

5 **MS. BEHLING:** Okay, and that issue, what
6 that issue had to do with is the fact that
7 NIOSH was not assigning values that are LOD
8 over two, anything less than LOD over two, as
9 a missed dose. And this again is something
10 that has now been incorporated into I believe
11 the workbooks as of about September of last
12 year I believe. It's now being incorporated
13 into the workbooks so this is an issue that I
14 believe NIOSH has taken care of. I guess --

15 **MR. GRIFFON:** Did this result in a change in
16 this particular case? Did you reassess this
17 particular case for this?

18 **MR. HINNEFELD:** Yes.

19 **MR. GRIFFON:** Because I think this is
20 another one that's pretty close to the --

21 **MR. HINNEFELD:** Well, I mean, this change is
22 marginally when you get down to the outcome of
23 doing this because you subtract -- what
24 happened was there was a positive reading of
25 LOD is, say, 30, LOD over two is 15, so you

1 have a result that's somewhere between zero
2 and 15 that's in there in the measured dose
3 and instead you're going to substitute a 15
4 with an LOD of two in the missed dose. So
5 that the change is almost inconsequential.

6 **MS. BEHLING:** Although, although I always
7 point this out. I bring this up because we do
8 have cases where we're looking at people
9 having 40 years of employment starting back
10 sometimes in the late '40s or early '50s when
11 the badge exchanges were weekly or 26 weeks,
12 and the LOD is --

13 **MR. GRIFFON:** That's why I asked, yeah.

14 **MS. BEHLING:** -- 40 millirem at that point.
15 So it can --

16 **MR. HINNEFELD:** In how many of those
17 exchanges though do you have recorded results
18 that is less than LOD over two?

19 **MR. GRIFFON:** True, true.

20 **MS. BEHLING:** True, but it's --

21 **MR. HINNEFELD:** To me this is a fairly
22 marginal change. I mean, we can, there are
23 other things that are going on on this case
24 that it's going to be, the case is going to be
25 looked at again.

1 **MS. BEHLING:** Agreed.

2 **MR. HINNEFELD:** And when it is, it would be
3 able to, LOD over two would be treated
4 appropriately.

5 **MR. GRIFFON:** Treated appropriately, that's
6 the answer that we need. Okay.

7 Sixty-eight point two, Stu, I think
8 two and three, you are saying you still --

9 **MR. HINNEFELD:** These are pretty generic,
10 broad ranging findings. They may be written
11 elsewhere as well. And as I understand them
12 it has to do with, well, two is, anyway. Two
13 is the one that has to do with, this is kind
14 of a broad issue is the reading of the badge
15 the best number to use?

16 **MS. BEHLING:** Right, and your response of
17 the dosimeter.

18 **MR. HINNEFELD:** Yes, that's essentially the
19 question because we use the reading on the
20 badge as the most representative of what the
21 person was exposed to. And the finding is, is
22 that the best thing to use. So we have some
23 response on that.

24 **MR. GRIFFON:** Have those been captured, it
25 seems to me that was brought up in our first

1 set of reviews, the first 20 cases or
2 something. Have those been captured as
3 generic action items somewhere along the line?

4 **MR. HINNEFELD:** Yeah, I believe so. I
5 believe so.

6 **MR. GRIFFON:** This is just a generic --

7 **MR. HINNEFELD:** It's a generic question,
8 yeah --

9 **MR. GRIFFON:** -- question to make sure we
10 don't lose these.

11 The same for the second one, the iso
12 for the --

13 **MR. HINNEFELD:** Well, outside of ambient. I
14 would say we provide a basis for using. We
15 think isotropic DCFs are correct for the
16 ambient exposure environment.

17 **MS. BEHLING:** And we agree with that. After
18 that I was going to say we did agree with
19 that.

20 **MR. GRIFFON:** Yeah, so I think that one's
21 okay, right?

22 **MR. HINNEFELD:** That one's okay.

23 **MR. GRIFFON:** So 68.3's okay. 68.2 is going
24 to be a generic, a broader response, right?

25 **MR. HINNEFELD:** Uh-huh.

1 **MR. GRIFFON:** Instead of NIOSH re-evaluating
2 this case for 68.2, I'm going to say NIOSH is
3 developing a general response to this issue,
4 right?

5 **MR. HINNEFELD:** Okay.

6 **MR. GRIFFON:** All right, 68.3 is, we're in
7 agreement on that, right?

8 **MS. BEHLING:** Yes.

9 **MR. GRIFFON:** Sixty-eight point four, so
10 this is --

11 **MS. BEHLING:** Yeah, this is an internal. In
12 fact, I'll let Hans take this. This one is,
13 Hans' response was plutonium internal dose
14 calculation and assumptions excessively
15 complex without scientific basis and
16 potentially not claimant favorable. And I
17 think he was -- you can elaborate, Hans -- but
18 I think he was indicating here that rather
19 than assuming an MDA over the entire
20 timeframe, they broke this exposure up into
21 discontinuous --

22 **DR. BEHLING (by Telephone):** Yeah, Kathy,
23 let me just summarize it and not dwell on it
24 too much. The point here was this. As
25 auditors you're expected to obviously follow

1 the breadcrumbs into a cave and hopefully you
2 find where the breadcrumbs lead you to and
3 determine whether or not that's correct. And
4 I have to say based on our attempt, and I
5 think we did identify exactly what was done,
6 but it brought me back to one of the issues
7 that we wrote into the protocol for assessing
8 or auditing dose reconstructions.

9 And that is based on regulatory
10 guidance that state that there must be a
11 balance between efficiency and precision in
12 doing dose reconstruction. And quite frankly,
13 to be humorous or cynical, if Rube Goldberg
14 had been a health physicist, this is how he
15 would have done it. There's much more detail
16 in here than certainly can be justified or it
17 needs to be. And having said that, I think
18 that's as much as I want to say.

19 As I said, using different methods
20 here you would have ended up with questionable
21 differences of a few millirem that one would
22 have been extremely straightforward, simpler,
23 understandable as opposed to the program that
24 was introduced here which was really entering
25 a black hole with blindfolders on. You just

1 didn't really have an understanding of what
2 was going on.

3 And as far as I was concerned, there
4 was just no justification for doing so. But
5 aside from that there's nothing that needs to
6 be changed here other than a complexity that
7 at this point cannot be justified.

8 **MR. HINNEFELD:** In our response we pretty
9 much agreed with that. That it didn't have to
10 be as complex as it was. We provided a more
11 simplified analysis that gives essentially the
12 same or very similar results.

13 **DR. BEHLING (by Telephone):** I think we can
14 go to 68.5 or whatever --

15 **MR. GRIFFON:** I was just pulling open the
16 response document which is six pages which I
17 don't think I've looked at in awhile, so --

18 **DR. BEHLING (by Telephone):** Yeah, NIOSH in
19 the second paragraph states, NIOSH agrees that
20 the original assessments were more complex
21 than the claim required and will show that ^
22 simplification has been assessed. And as I
23 said I did the same thing. We end up with the
24 same numbers. The differences are so trivial
25 as to be inconsequential, and I think I've

1 made the statement.

2 **MR. GRIFFON:** This question, and it came up
3 in the last case, too, this assumption of 12
4 percent Plutonium-240 mixture aged ten years,
5 ^ growth, is that just, we got that from
6 Savannah River. Is that pretty standard or
7 are there exceptions to that? Was there other
8 less aged material that they dealt with?

9 **MR. SIEBERT:** Yeah, we have numbers for
10 fresh, five year aged and ten year aged, and
11 generically speaking, the ten year aged, since
12 you have aging is more claimant favorable
13 because you have more americium.

14 **MR. GRIFFON:** In the last scenario if you
15 have more americium, your detection limits for
16 the lung are probably lower.

17 **MR. SIEBERT:** For your chest count actually
18 can combine. So generally speaking for the
19 first five years of the site that they had
20 plutonium on it, we'll normally assume fresh
21 because obviously it hadn't aged yet. And the
22 next five years we'll assume the five year age
23 and then ten from that point on.

24 **MR. GRIFFON:** In that case 67 he was, he
25 worked in the early '50s, didn't he?

1 **MR. SIEBERT:** Uh-huh.

2 **MR. GRIFFON:** But you assume ten year aged.

3 **MR. SIEBERT:** I'd have to look at it.

4 **MR. GRIFFON:** I mean, I'm going, well, I'm
5 sorry --

6 **MR. HINNEFELD:** Well, the lung count was
7 taken in '75 --

8 **MR. GRIFFON:** Oh, so the lung count was '75
9 --

10 **MR. HINNEFELD:** It was way late, and so when
11 it was ingested, it could have been ingested
12 fresh; it would have been aged by the time of
13 the lung count.

14 **MR. GRIFFON:** Yeah, that's true. That's
15 true.

16 Okay, I'm not that up to speed with 68
17 so unless Hans or Kathy have anything else
18 I'll defer to you guys.

19 **MS. BEHLING:** Sixty-eight point five,
20 uranium internal dose calculation assumptions
21 in the air are not claimant favorable. Hans
22 and I spent quite a bit of time going through
23 your explanation of this and after reviewing
24 everything and realizing as you said this
25 enriched uranium was activity based, it was in

1 DPM, we agree with your response. We agree
2 with questioning the use of the depleted
3 uranium and whether that was an appropriate
4 assumption. But after reviewing your
5 response, we understand why you did that, and
6 we agree.

7 **DR. BEHLING (by Telephone):** Yeah, let me
8 just add something, Kathy. The issue is
9 really one of, our concern was the issue of
10 using depleted uranium as a default assumption
11 for the F area. And it is really only for
12 the, even though the majority of the bioassays
13 involve the depleted uranium assumption, which
14 is defined in terms of micrograms per 1.5
15 liter, it is, in essence, also a relatively
16 short period of time in contrast to the number
17 of assays taken.

18 And that's the only issue that needs
19 to be looked at because the assumption was
20 that it's depleted uranium, and the second
21 assumption was that it is U-238 as opposed to
22 the normal assumption of U-234. But the
23 difference is marginal in terms of the energy
24 of the alpha and therefore the DCF.

25 And the other values that were

1 assigned, again, the assumption was, I think
2 according to the statement, was assumed to be
3 depleted uranium, but it really doesn't matter
4 because all of the other values were defined
5 in DPM per unit volume of urine in which case
6 it doesn't matter whether it's U-238, 235, 234
7 because they all have comparable energy values
8 for their alpha and their effective half-life
9 in the body is essentially identical.

10 So it really doesn't matter with the
11 exception that as I said for that very brief
12 period of time where the, for the period of
13 time when enriched uranium was, in fact, the
14 assumed mixture of uranium in which case, U-
15 234 would have been the dominant radionuclide,
16 and therefore, because it has a slightly
17 higher alpha energy it has also a higher DCF
18 value. But I think you've corrected that so
19 we have no further comment.

20 **MS. BEHLING:** And I believe the next issue,
21 68.6, was the tritium internal dose
22 methodology, is excessively complex and not
23 proceduralized. However, since this,
24 reviewing this particular case which was back
25 on the fourth set, we did review OTIB-011.

1 There's also a very nice workbook
2 that's been developed for the tritium that
3 allows, I assume there are data processors
4 that put this data in up front and it allows
5 the dose reconstructor to look it over and
6 automatically do a missed included dose for
7 the tritium. That's a very nice tool for them
8 to use. So this, we agree, we can eliminate
9 this. This is not something that is an issue
10 any longer.

11 Okay, I guess --

12 **MR. GRIFFON:** Point seven is the fission
13 product.

14 **MS. BEHLING:** Point seven is the fission
15 product, and --

16 **MR. GRIFFON:** And we already talked about
17 that.

18 **MS. BEHLING:** Okay, and I guess you're
19 working on --

20 **MR. HINNEFELD:** Well, the Procedures group
21 got the first set of technical information to
22 support the fission product internal
23 dosimetry. And once that date, the second
24 step of that will be, okay, for these Savannah
25 River cases then is it consistent with or

1 bounded or do they bound that approach because
2 the current approach is a little more robust,
3 a little more technically developed than what
4 we've done.

5 So the question becomes if, in fact,
6 what we're doing now is technically valid we
7 then need to compare what was done in these
8 early -- these are fairly early Savannah River
9 cases to ensure that this is valid in terms of
10 what we're doing. So we don't want to lose
11 these completely, and just because the
12 Procedures group says, okay, if they say okay,
13 what's being done on it, on mixed fission
14 products, is it valid.

15 We still need to take that response
16 back, and we can do it in the Procedures
17 group. We can make, you know, because you and
18 I will both be there. Many of us will
19 probably be there, so we can make sure that we
20 don't, you know, that we bring that back and
21 address these at that same time in the
22 Procedures group.

23 **MR. GRIFFON:** Sure.

24 **MS. BEHLING:** But is it my understanding
25 that you're also developing a workbook to take

1 care of this fission product issue? I thought
2 --

3 **MR. SIEBERT:** Yes, there's a tool being
4 created for OTIB-0054.

5 **MS. BEHLING:** Okay.

6 **MR. SIEBERT:** I'm actually testing it.

7 **MS. BEHLING:** Sixty-eight point eight is
8 failure to properly address radiological
9 incident, and I believe on your reassessment
10 you agreed with that, and you did reassess
11 some dose for this particular individual based
12 on that incident.

13 **MR. HINNEFELD:** We've got the 68.8 results
14 here. There should be a written response in
15 the Word file.

16 **MS. BEHLING:** Yes. I know you reassessed --

17 **MR. GRIFFON:** Yeah, there's a written
18 response.

19 **MS. BEHLING:** I believe you calculated an
20 additional 500 millirem to the red bone marrow
21 and 130 millirem to the prostate based on this
22 radiological incident assuming that it was
23 airborne uranium in the C Canyon.

24 **MR. GRIFFON:** Can you tell us where the ^
25 the incident was --

1 **MR. HINNEFELD:** Well, it was described in
2 the CATI, and it was addressed in the original
3 dose reconstruction. So in our response we
4 went and researched it. If anybody's
5 interested, ^ in front of me. He claimed he
6 was involved in a failed fuel event in C
7 Canyon, or a failed tube. He said he may have
8 been exposed to airborne uranium. And so it
9 was modeled as an acute intake at that time
10 until his next bioassay.

11 He wasn't being monitored in 1966, but
12 his bioassay resumed in 1971. So the next
13 bioassay in 1971, which, I don't know if it
14 was less than ^ but whatever the result was,
15 so what acute intake do you get back in 1966
16 that gives you that result in 1971. That was
17 the intake that was modeled, and then we have
18 a dose outcome. It does add dose to the claim
19 but doesn't affect the outcome.

20 **MS. BEHLING:** And I believe the last one was
21 68.9, and again, this is a CATI.

22 **MR. GRIFFON:** Can I ask one other thing on
23 the incidence? I mean, he noted an incident
24 in the CATI, and you followed up on it. Did,
25 at the same time is there any resource where

1 you could have checked to see if he was in any
2 other incidents or is there any kind of
3 incident database at Savannah River that --

4 **MR. HINNEFELD:** Well, there's a database at
5 Savannah River that includes an incident, but
6 I would not call it an incident database or a
7 complete incident database. You're familiar
8 with that one. You've read that one. No,
9 there's not a place to go look up Joe Smith
10 and say, okay, here are all the incidents he
11 was in. Many sites will provide incident
12 information in the exposure record, not all,
13 I'd guess, maybe they all do, but we've seen
14 them at a number of sites, we've seen an
15 incident report exposure record but not
16 always. So I don't know of any other way to
17 look further. Now, I do kind of want to say
18 though since this, I believe, was a fairly old
19 claim. It was done a number of years ago. We
20 have, for a number of years, the Advisory
21 Board and we have been working to make sure,
22 based on feedback ^ the Advisory Board, we've
23 been trying to make sure that the descriptions
24 in the CATI are addressed in the dose
25 reconstruction.

1 Even if it doesn't add any dose to the
2 dose reconstruction, we want to make sure that
3 we read, the claimant understands, we've
4 listened to the CATI, we took the information
5 you provided to us in the CATI, and we
6 incorporated it into the dose reconstruction.
7 So we've been making a more concerted attempt
8 to do that. But this was a fairly old claim.
9 It may have been before we had really tried to
10 focus on it.

11 **MS. BEHLING:** We're occasionally seeing that
12 in some of the dose reconstruction reports,
13 but can I assume that when you go to the DOE
14 for the information, do you automatically ask
15 for radiological incidents along with the
16 dosimetry files, and --

17 **MR. HINNEFELD:** Well, we ask for internal
18 and external exposure information, and so I
19 don't -- I'm trying to think what the form
20 says. There's a form that we send in.

21 **MS. BEHLING:** There's a form. I know that
22 that's an element on the form. I just don't
23 know if it's always asked for just like your
24 X-ray information. You don't always --

25 **MR. HINNEFELD:** Incident's a block on there.

1 **MS. BEHLING:** Yes.

2 **MR. SIEBERT:** You know, at Savannah River I
3 know we do get incident information when it's
4 available because I've seen it in the records
5 and also on the bioassay cards as you probably
6 know. Down at the bottom they have the
7 remarks section and for those that were in
8 response to an incident, they normally mark
9 that it's incident related. So we are
10 getting, I believe, the information that they
11 have.

12 **MS. BEHLING:** Okay. Because as you know we
13 often see these CATI reports are filled out by
14 survivors, and they typically do not know.

15 **MR. PRESLEY:** A lot of the incident reports
16 would be in the medical records, too.

17 **MR. HINNEFELD:** If they went to the
18 Dispensary, there would be things there.
19 Well, we ask for, the form that we send to the
20 DOE sites asks for incidents.

21 **MR. FARVER:** Is there anything in the peer
22 review process that prompts the reviewer to
23 compare the CATI to the dose reconstruction
24 report?

25 **MR. HINNEFELD:** Well, I know in the OCAS

1 review, it's part of the OCAS review to read
2 the CATI to make sure that the CATI is
3 consistent with the dose reconstruction.

4 **MR. SIEBERT:** It's our practice as well. We
5 can always check the peer review procedure.

6 **MR. FARVER:** That's what I'm looking at, and
7 I don't see it in the checklist anywhere. So
8 that would be a good place to ^ to check for
9 incidents.

10 **MS. BEHLING:** Okay, I guess as I said 68.9
11 is another CATI information. Apparently this,
12 I assume it was the EE who, the energy
13 employee, who completed this CATI report, and
14 he marked on here that he was exposed to
15 natural and enriched uranium. And I think
16 this actually was discussed under our finding
17 68.5, and you did identify the fact that the
18 bioassay data does show that.

19 **DR. BEHLING (by Telephone):** Kathy, let me
20 just add something to that. Specifically, the
21 issue, I assume we're talking about finding
22 68.9, Kathy?

23 **MS. BEHLING:** Yes.

24 **DR. BEHLING (by Telephone):** It goes back to
25 the issue of trying to identify what specific

1 activity is to be assigned when the
2 photofluorometric urinalysis was used that is
3 defined in terms of micrograms for 1.5 liter.
4 And it's very imperative to understand what
5 your radioisotopic mixture is because if you
6 use depleted uranium, I believe the value that
7 was used there is to use a specific activity
8 of 0.372 picocuries per microgram. And, of
9 course, that's the lowest possible value that
10 you can assign in terms of specific activity.

11 I believe for the enriched uranium at
12 Savannah River it's probably an enrichment
13 somewhere between 3.5 and 4.0 percent meaning
14 that the specific activity would go from 0.372
15 to something close to 2.3 picocuries or
16 something close to a seven-fold higher value.
17 And it's just of question of whether or not
18 during the period when photofluorometric
19 bioassays were used where the activity is not
20 really measured but only defined in micrograms
21 per unit volume what was the proper assignment
22 of the activity for that period.

23 And as I said it would involve those
24 periods, and I think they're defined in the
25 table that NIOSH provided us with where you

1 have certain periods of time where bioassays
2 were defined by photofluorometric method as
3 opposed to obviously DPM per unit volume of
4 alpha activity. And that's what that issue is
5 about.

6 **MS. BEHLING:** Yes.

7 **MR. GRIFFON:** Well, the only question, and
8 the only reason I was harping on this incident
9 question a little bit was sort of reflecting
10 back on the last case as well, I mean, here's
11 a case where this individual, I guess in his
12 CATI he said that he was involved in this
13 incident, right? You found that this incident
14 did, in fact, occur? I mean --

15 **MR. HINNEFELD:** No.

16 **MR. GRIFFON:** No, you didn't or --

17 **MR. SIEBERT:** I think we just took it --

18 **MR. GRIFFON:** Oh, you just took it, his
19 word.

20 **MR. SIEBERT:** Yeah, there was no one-on-one
21 correspondence where we actually --

22 **MR. GRIFFON:** Okay, so you didn't find an
23 incident write up or anything. Because I was
24 curious why there was no bioassay right after
25 the incident. He got a fairly significant

1 intake, not a huge intake but there was no
2 incident later. That answers my question.

3 **MS. BEHLING:** We can go on to 69, 69.1.
4 That's taken care of. Sixty-nine point two,
5 this a finding that we have identified
6 numerous times. It's failure to account for
7 recorded photon dose uncertainty.

8 And in this particular case NIOSH
9 spent quite a bit of time responding to this
10 issue and indicating that when they assume a
11 DCF of one, and looking at the dosimetry data
12 they did a calculation for us that they would
13 put low doses and high doses and looked at
14 various cancers. I don't know if everyone has
15 their write up, but they did look at various
16 cancers such as bladder, red bone marrow,
17 colon, esophagus and so on.

18 The only thing that I found
19 interesting here is I first picked this up to
20 read it in association with Case 71 which
21 happens to be a thyroid cancer. And in that
22 case your main thyroid dose, in the case of
23 all of the examples that you've used here,
24 your main DCF value for these particular
25 cancers is always less than one.

1 So the assumption of using one in
2 comparison to doing a Monte Carlo technique
3 and using a triangular distribution, you still
4 are going to be higher than using that Monte
5 Carlo. However, for a thyroid cancer I'm not
6 necessarily sure that that's the case because
7 the thyroid cancer, your DCF, your mean DCF,
8 is 1.017.

9 **MR. HINNEFELD:** It's greater than one.

10 **MS. BEHLING:** Okay, it's greater than one,
11 but it was just interesting to me that your
12 table selected all cancers that would be
13 midpoint of the DCF is definitely less than
14 one.

15 **MR. HINNEFELD:** Well, that's where it's
16 supposed to be used. So the use of that
17 technique on thyroid would --

18 **MR. SIEBERT:** It wouldn't be appropriate.

19 **MS. BEHLING:** Okay, well, then we have --

20 **MR. SIEBERT:** You don't use it for DCFs
21 greater than one.

22 **MS. BEHLING:** Okay, we have a case later on
23 here that it's not appropriate.

24 Where are we here?

25 **MR. GRIFFON:** Sixty-nine point two.

1 **MS. BEHLING:** That was 69.2. Sixty-nine
2 point three, failure to include recorded
3 neutron dose uncertainty estimates. Same
4 issue.

5 **MR. GRIFFON:** So 69.2 you're okay for this
6 particular case?

7 **MS. BEHLING:** For this particular case
8 because I think this is a -- what cancer is
9 this one, a colon? A liver, this is a liver
10 cancer, and that's one on the list so that's
11 okay. But later on, under Case 71, this is
12 not appropriate.

13 So we can move on to 69.4, selection
14 of solubility class not claimant favorable.
15 Hans, do you want to help me out here?

16 **DR. BEHLING (by Telephone):** I'm trying to
17 read it myself here. It's been a long time.

18 **MS. BEHLING:** I believe our response to
19 NIOSH's, NIOSH responded to us on this
20 particular issue, and I believe again we were
21 questioning why would you use those chest
22 count MDAs to compare to this urinalysis
23 because of our interpretation of that
24 statement that we read to you earlier in the
25 site profile that indicated that we

1 interpreted that you should not be using the
2 chest count MDAs when you have urinalysis
3 data.

4 **MR. HINNEFELD:** Well, it's intended for a
5 missed dose calculation.

6 **MS. BEHLING:** Missed dose, right.

7 **MR. HINNEFELD:** But if you have bioassay
8 data, urine and lung counts, and you're doing
9 a fitting, then you should try to fit the
10 data.

11 **MR. SIEBERT:** Or at least not be
12 inconsistent with any other data that you
13 have.

14 **MR. HINNEFELD:** Right.

15 **MS. BEHLING:** Are we okay with that, Hans?

16 **DR. BEHLING (by Telephone):** Yeah, I think
17 this is a repeat of something we just --

18 **MS. BEHLING:** Yes, it is, the first case, I
19 think 67.

20 **MR. GRIFFON:** Can you just recap for me
21 because I haven't looked through this in
22 awhile? Sixty-nine, this individual, I mean,
23 the assumptions are still appropriate given
24 the time the person worked there and et
25 cetera? I mean, you're dealing with chest

1 counts here that started probably in the '70s?

2 **MR. SIEBERT:** Right.

3 **MR. GRIFFON:** So any of the, and all counts
4 were below the MDA? Is that what I'm
5 gathering here on this particular one?

6 **MR. SIEBERT:** I believe what we wrote up is
7 the fact that if you assume Type S, it would
8 have been clearly seen in the chest counts.
9 The chest counts, yeah, they were in the '70s
10 through the '80s and into the '90s.

11 **MR. GRIFFON:** All right, I see now. Okay,
12 go ahead.

13 **MS. BEHLING:** The next finding is 69.5, the
14 use of triangular distribution that assumes
15 zero MDA over two as your mode and then
16 maximum is MDA, if that's appropriate. And I
17 don't believe we got a response from NIOSH on
18 this.

19 **MR. HINNEFELD:** What was the number on that?

20 **MS. BEHLING:** Sixty-nine point five.

21 **MR. HINNEFELD:** We have not provided that
22 yet.

23 **MS. BEHLING:** No, so we have not gotten a
24 response on...

25 **MR. GRIFFON:** This has come up before as

1 well, hasn't it?

2 **MR. HINNEFELD:** I don't believe so. I think
3 it's just this finding that --

4 **MS. BEHLING:** Hans, do you want to elaborate
5 on this?

6 **MR. HINNEFELD:** -- it's been around here for
7 awhile.

8 **DR. BEHLING (by Telephone):** I think the
9 point here, Stu and Mark, is that when you
10 have consistently values that are below MDA,
11 it is not unreasonable to use a triangular
12 distribution that has a lower end value of
13 zero. But when you have positive values,
14 especially for isotopes that have a long
15 residency time, the assumption of starting out
16 with zero seems to obviously have very little
17 merit when you have positive values that are
18 detectable.

19 So that was the point here.

20 Obviously, plutonium doesn't come and go, and
21 if you see it once or twice you realize that
22 when you don't see it, it's just below the
23 radar screen. And so the question is is it
24 reasonable to start off with a triangular
25 distribution since it's also possible for you

1 not to have anything in here. And that was
2 the point of this particular finding.

3 **MR. GRIFFON:** So if everything's less than
4 MDA you're saying this might be appropriate,
5 but if you have --

6 **MR. SIEBERT:** And actually, I believe the
7 response to the finding is over to Dave Allen
8 for review. But generally speaking, these
9 were, except for the one that was assessed as
10 a positive result, these all were below MDA.
11 And I think when the finding, the case was
12 examined, there was a misinterpretation as to
13 what the results on the chest count cards
14 were. They were looking at net counts as
15 opposed to another column which should have
16 been the dif counts. And when you look at
17 that, it makes perfectly good sense that half
18 the counts were below zero. One was zero, and
19 two were slightly above zero. So it's very
20 fitting, they were all clearly less than --

21 **MR. HINNEFELD:** We've got a response coming.

22 **MR. GRIFFON:** Okay.

23 **MR. SIEBERT:** It's coming.

24 **MS. BEHLING:** Sixty-nine point six, dose --
25 I'm trying to remind myself what this finding

1 really is. Dose entries for Plutonium-241 as
2 electrons with energies greater than 15 keV
3 appears to have been ignored. We were
4 supposed to look at this further.

5 Hans, do you remember this? We're on
6 page 15 of our write up.

7 **DR. BEHLING (by Telephone):** Yeah, I'm
8 trying to recall. This has been a year and a
9 half or two years.

10 **MS. BEHLING:** Yeah, we focused on looking at
11 NIOSH's response to some of these internal.

12 **MR. GRIFFON:** Yeah, SC&A to review. I mean,
13 maybe just let's put this all on everybody's
14 radar. Before the next Board meeting we'd
15 like to get these final responses in because
16 we're down to four or five, I think, items on
17 this.

18 **MR. HINNEFELD:** Yes, I think the finding is
19 that there's no electron dose in the internal
20 in the IREP because NP-241 is an electron
21 emitter, but our response is that, well, we
22 took that energy and threw it into the alpha
23 dose. It's going to be claimant favorable,
24 and it saves us a whole string of lines of
25 IREP input.

1 **MS. BEHLING:** That's right, yes.

2 **MR. HINNEFELD:** So we don't have to have all
3 these lines of very small doses greater than
4 of those electrons. We'll just throw that
5 little bit of dose into the alpha dose.
6 That's what our response is.

7 **MS. BEHLING:** Okay. And I think that that's
8 fine because I see this a lot on the same
9 lines on the IREP sheet.

10 **MR. GRIFFON:** I'll leave a placeholder, but
11 probably it's okay.

12 **MS. BEHLING:** Yeah, I'll mark it as for us
13 to look at again.

14 And again, we're back on 69.7 is again
15 this fission product issue and whether the
16 assignment of internal dose from fission
17 products is complete or incomplete based on
18 the methodology you're currently using.

19 And 69.8, the use of a triangular
20 distribution is not claimant favorable.

21 **MR. HINNEFELD:** This actually sounds very
22 similar to what we just talked about.

23 **DR. BEHLING (by Telephone):** This is
24 identical to the issue I just talked about.

25 **MS. BEHLING:** And then 69.9 --

1 **MR. GRIFFON:** So that's forthcoming, that
2 response, right?

3 **MR. HINNEFELD:** Yeah, in fact, it's a blank
4 on our information we provided.

5 **MS. BEHLING:** Sixty-nine point nine, use of
6 environmental internal exposure values to
7 account for likely tritium, iodine and uranium
8 inappropriate. Okay, I guess we're
9 questioning, it appeared that the individual
10 worked in areas where he would have been
11 exposed to tritium, iodine and uranium.

12 However, that wasn't, that was
13 included, I guess, in the environmental dose.
14 Is that correct, Hans? It was included in
15 environmental; however, we're questioning if
16 that shouldn't have been calculated as part of
17 his workplace exposure, his occupational
18 exposure, as opposed to being considered
19 environmental.

20 **DR. BEHLING (by Telephone):** Well, I guess
21 it's the difference between using MDA over two
22 --

23 **MS. BEHLING:** Right.

24 **DR. BEHLING (by Telephone):** -- as opposed
25 to the data contained in the TBD that talks

1 about environmental exposure. There was a
2 lack of parity between the two approaches for
3 calculating those values. In other words, MDA
4 over two would probably exceed by a margin the
5 values assigned under the environmental
6 exposure conditions.

7 **MR. HINNEFELD:** And I guess that fits with
8 our philosophy is that environmental exposures
9 are supposed to be used for someone who wasn't
10 exposed to that. And if someone was exposed
11 to that, then you would have either missed
12 dose, bioassay or MDA over two. Or if they
13 were exposed, you know, where they were in a
14 job where they were likely to be exposed and
15 you didn't have bioassay data or some sort of
16 coworker approach or something like that.

17 But environmental intake or
18 environmental exposure is supposed to be used
19 for people who didn't have the opportunity to
20 be exposed to that during their job. In this
21 particular case it looks like we have tritium
22 bioassay data for this person. So if they got
23 environmental exposure to tritium, that would
24 be, you know, along with their occupational
25 exposure to tritium. So you will, by

1 evaluating their tritium bioassay record you
2 have evaluated both components, both what they
3 received environmentally, and what they
4 received occupationally.

5 Similarly, for I-131, the total
6 fission product approach, you know, if it
7 works out, would address the total fission
8 product approach for the iodine as well. And
9 the person wasn't monitored for uranium and so
10 the conclusion was, well, this person didn't
11 appear ever have the opportunity to be exposed
12 to uranium, and so therefore, they were given
13 the environmental intake for uranium.

14 **MS. BEHLING:** However, I think we are
15 questioning here if there was occupational
16 dose assigned for the tritium and the iodine
17 for this individual in addition to this
18 environmental dose. Unless that was --

19 **MR. HINNEFELD:** Well, it says the bioassay
20 results have been assessed and determined to
21 be less than one millirem. So it wouldn't be
22 included on the chart. If it was less than a
23 millirem, we wouldn't put it on the IREP input
24 sheet. The I-131 won't be listed specifically
25 because there'll be this fission product

1 number that was used on the fission product.
2 And so that's why it won't appear.

3 **MS. BEHLING:** Okay, I didn't read your
4 response.

5 **MR. GRIFFON:** And that analysis wouldn't
6 show up anywhere in the final DR record that
7 you assessed the tritium, and it's less than
8 one millirem?

9 **MR. HINNEFELD:** That's a good question. It
10 wasn't in the folder that you guys got. I
11 guess it wasn't there. I don't know what the
12 DR said right now.

13 **MR. GRIFFON:** I don't know. I'm just asking
14 the question now. I don't know, but that
15 could be --

16 **MR. HINNEFELD:** It must have been done for
17 us to reach this conclusion. Now, whether we
18 did it and said it in the dose reconstruction
19 report or -- I just don't know.

20 **MR. GRIFFON:** So where do we stand on that
21 one, Kathy? I just want to know.

22 **MS. BEHLING:** Maybe we can go back and look
23 at that and because it's been awhile.

24 **MR. GRIFFON:** The only question I would have
25 on that is, I mean, your explanation seems

1 reasonable. The question I would have is,
2 given the work history or the lack of specific
3 work history, how do you determine
4 environmental versus whether he could have
5 been in uranium areas for instance?

6 **MR. HINNEFELD:** I'd have to go look at the
7 case. I mean, the person, he was monitored
8 for bioassay for a couple different things,
9 and so the question then is did they catch him
10 for those radionuclides and then for some
11 reason overlook him on uranium.

12 **MR. GRIFFON:** That's what I mean. He was in
13 rad areas so was he exclusively in areas where
14 there wasn't uranium. And he could have been.
15 I mean, he wasn't monitored for uranium.

16 **MR. HINNEFELD:** I don't have enough with me
17 to really make a statement about it. We can
18 take a look and see what we --

19 **MR. GRIFFON:** Maybe just a little more
20 follow-up on that.

21 **MR. GRIFFON:** I think we're on to 70 now.

22 **MS. BEHLING:** Seventy point one,
23 inappropriately converted recorded photon dose
24 to thyroid dose. I think we agreed with
25 NIOSH's response, so we're fine with that.

1 Seventy point two, failed to assign
2 recorded photon dose uncertainty. Again, this
3 goes back to the discussion that we had
4 earlier, and is this, this might be the case.
5 This is the thyroid dose and --

6 **DR. BEHLING (by Telephone):** Kathy, I have
7 some --

8 **MS. BEHLING:** Yes, go ahead.

9 **DR. BEHLING (by Telephone):** The issue was
10 that if you use the DCF default value of 1.0,
11 you don't have to worry about the issue of
12 uncertainty because the DCF one is greater
13 than the actual value; and therefore, the need
14 for uncertainty has been eliminated.

15 However, in this case the target
16 tissue is thyroid and if you look at the DCF
17 for the thyroid for 30 to 250 keV it's
18 actually greater than one. It's 1.017. And
19 so the default value of 1.0 is not actually
20 claimant favorable, and moreover, even if you
21 do use the real one, 1.017, you still should
22 be applying an uncertainty value to that
23 value.

24 So the explanation that was provided
25 is okay for all of the tissues and organs that

1 were cited here that starts out with the
2 bladder, bone marrow, colon and so forth. But
3 what is lacking is the thyroid which is the
4 tissue of concern here.

5 **MS. BEHLING:** So your explanation is not
6 appropriate for this particular case because
7 of it being the thyroid.

8 **MR. HINNEFELD:** Yeah, we provided additional
9 information as part of what we provided in
10 May.

11 **MR. GRIFFON:** Yeah, a Word document you have
12 here, right?

13 **MR. HINNEFELD:** Uh-huh, there's a Word
14 document, and there are a couple it looks like
15 workbooks.

16 **MS. BEHLING:** Now if I'm referring to this
17 same Word document --

18 **MR. HINNEFELD:** The one we just looked at
19 doesn't have 70.2 on it. There's a separate
20 70.2 for a document that was submitted.

21 **MS. BEHLING:** Oh, okay, because what I'm
22 showing on this one it says finding, oh, this
23 is 71, yeah, maybe that was the wrong one. It
24 says 71.2, see 69.2. In this case it doesn't.
25 I think that should read 70.2 rather than 71.

1 **MR. GRIFFON:** Stu, can you or Scott
2 summarize the --

3 **MR. HINNEFELD:** Well, we reworked the case
4 using the Monte Carlo combination, you know,
5 measured dose with uncertainty times DCF,
6 triangular DCF, and I'm still refreshing my
7 memory myself.

8 **MR. SIEBERT:** The POC actually went down
9 when we made that assumption. Remember the
10 process that we used was not using a factor of
11 one as a DCF, but a factor of 1.017, which was
12 a mode of the triangular distribution for the
13 thyroid in the original assessment.

14 **MR. HINNEFELD:** We used 1.017, but we used
15 it as a constant. So we didn't include the
16 uncertainty of the dose in the dose
17 reconstruction. So that's what we've gone
18 back to do now is to do that on this.

19 **MR. SIEBERT:** And once we did that for both
20 the measured and the missed in the Monte Carlo
21 the POC went down.

22 **MR. HINNEFELD:** Yeah, marginally.

23 **MR. SIEBERT:** Marginally.

24 **MR. HINNEFELD:** If you do it only on the
25 measured, it went down very fractionally. If

1 you did it on, if you Monte Carloed both the
2 measured and the missed, it went down four
3 percentage points, from --

4 **MR. GRIFFON:** That's interesting that adding
5 in uncertainty to the DCF brought the POC
6 down.

7 **MR. SIEBERT:** Well, if I remember correctly
8 that the distribution is skewed higher so if
9 you use the mode, it's actually the high end
10 of the distribution. Whereas, when you use
11 the full distribution it's more --

12 **MR. HINNEFELD:** When you do Monte Carlo you
13 sample downward.

14 **MS. BEHLING:** Now, are we on 70.4 or did I
15 skip some here? Okay, 70.3, no, 70.3,
16 potential failure to properly account for
17 missed neutron dose. I guess you had an
18 initial response; however, it says that you
19 would re-evaluate this case.

20 **MR. GRIFFON:** Well, you stand by your
21 original assessment, right?

22 **MR. HINNEFELD:** Yeah.

23 **MS. BEHLING:** Okay, and what you're saying
24 here is that you used OTIB-002 for
25 hypothetical internal or --

1 **MR. HINNEFELD:** Yeah, this was an OTIB-002
2 case. There's a large internal assigned to
3 this administrative worker.

4 **MS. BEHLING:** So even if there was missed
5 neutron --

6 **MR. HINNEFELD:** And as I recall the facts of
7 this case it was a clerical worker whose work
8 location was essentially adjacent to the
9 reactor building or something like that. And
10 how do you know that there weren't some
11 neutrons there. Well, they were
12 administrative, I guess you can't say there
13 were zero neutrons, but since there's a TIB-
14 002 intake in this, administrative worker, we
15 felt we were sufficiently conservative on the
16 case.

17 **MS. BEHLING:** I agree.

18 And then lastly on this case, 70.4,
19 inconsistency between CATI and data used to
20 assign neutron dose. Again, we're going back
21 to the neutron dose so I think we've covered
22 that. And since this was --

23 **MR. GRIFFON:** And the inconsistency was that
24 this individual reported that they worked near
25 a reactor? Is that --

1 **MS. BEHLING:** Yes.

2 **MR. HINNEFELD:** And they set off the PCM,
3 and they also reported they would alarm the
4 PCM on occasion. And our response is PCMs go
5 off in the case of radon a lot. In fact, I
6 think she even said she alarmed with radon.
7 I'm not sure whether she said that or not.

8 **MS. BEHLING:** I'm going to move on to 71,
9 and I'm scanning through 71, and I see here
10 NIOSH agrees. I don't think there's any open
11 issues on 71.

12 Seventy-two, again --

13 **MR. GRIFFON:** Wait, 71.2, wasn't there
14 something on 71.2? I think we have the same
15 response as 69.2, but --

16 **MS. BEHLING:** Okay, yeah, 71.2 again is that
17 uncertainty issue. I did not bring that case
18 with me. I'm not sure what this cancer is.

19 **MR. GRIFFON:** But it's okay for this case
20 you believe because the thyroid was the one --

21 **MS. BEHLING:** The thyroid was the one and
22 that was 70.

23 **MR. GRIFFON:** So it's okay.

24 **MS. BEHLING:** I don't know what the cancer
25 is on this case.

1 **MR. HINNEFELD:** I don't have anything else
2 on there.

3 **MR. GRIFFON:** Let's go on by that one.

4 **MS. BEHLING:** Okay, we'll go ahead.
5 Seventy-two, I see 72.1, NIOSH agrees.
6 Seventy-two point two, SC&A agrees. Again,
7 going down through -- that's it for 72.

8 Moving on to 73.

9 **MR. SIEBERT:** Just to let you know 71 was
10 pancreatic.

11 **MS. BEHLING:** Pancreatic, okay, so I think
12 we're okay then.

13 Seventy-three --

14 **MR. GRIFFON:** Seventy-three point five, I
15 just want to look at the revised response
16 here. There's a 9212 neutron question is what
17 this is, right?

18 **MS. BEHLING:** Failure to account for all
19 assigned neutron dose. I thought NIOSH agreed
20 with that and will review job locations for
21 EE. I didn't see a re...

22 **MR. GRIFFON:** Well, they did review I guess,
23 and this is what I have.

24 **MS. BEHLING:** I'm really going to have to go
25 back and look at that.

1 **MR. HINNEFELD:** I think you want to look at
2 the job title of the person. If I'm not
3 mistaken, this person is a machinist.

4 **MS. BEHLING:** A machinist?

5 **MR. HINNEFELD:** And this neutron sources in
6 9212 are secure storage area for enriched
7 thorium^. So I wouldn't expect a machinist to
8 be working ^ storage area.

9 **MS. BEHLING:** I will look at that.

10 **MR. HINNEFELD:** I think this is that.

11 **MR. SIEBERT:** I believe he was actually a
12 pipe fitter.

13 **MR. HINNEFELD:** Oh, it was a pipe fitter.
14 Okay, so he'd be working on through the plant.
15 How much of his time would be in the enriched
16 storage area?

17 **MR. GRIFFON:** I don't understand the finding
18 on that one. Failure to account for all
19 assigned neutron dose, or for missed neutron
20 dose?

21 **MS. BEHLING:** Well, I believe in this
22 particular case the reason we used the word
23 assigned neutron dose is meaning that it would
24 have to be like a coworker type of dose as
25 opposed to it would be an unmonitored --

1 **MR. HINNEFELD:** Yeah, I believe it's a case
2 where -- I don't know. It may have been an
3 unmonitored person --

4 **MS. BEHLING:** As opposed to missed.

5 **MR. GRIFFON:** I would say for all
6 unmonitored neutron dose instead of for all
7 assigned dose.

8 **MS. BEHLING:** That's fine. We can change
9 that.

10 **MR. GRIFFON:** It may be moot because the
11 response may --

12 **MS. BEHLING:** Right, and I'll look at that
13 again.

14 I don't see anything else on 73. I
15 think NIOSH agrees with everything.

16 **MR. GRIFFON:** Seventy-three point eight is
17 the next red line I have here. I think you're
18 missing this version.

19 **MS. BEHLING:** I am.

20 **MR. HINNEFELD:** Oh, but this is something
21 we've had before.

22 **MR. GRIFFON:** And 74.3 is the same thing,
23 right?

24 **MR. HINNEFELD:** Yeah.

25 **MS. BEHLING:** Seventy-five, no finding.

1 Seventy-six, failure to properly account for
2 all missed photon dose. And I guess we were
3 supposed to do something here. I didn't do
4 that. I'll have to look at this.

5 **MR. GRIFFON:** Is that an SC&A action?

6 **MS. BEHLING:** Yes, this was an SC&A. I was
7 going to review this issue. I'm going to have
8 to go back to this. I apologize. I can't
9 answer that at this point.

10 **MR. GRIFFON:** Now at 76.3 we have a NIOSH
11 action to provide calculations to show
12 bounding.

13 **MS. BEHLING:** Again, this is the
14 hypothetical intake model for 76.3.

15 **MR. HINNEFELD:** I remember this. I'm not
16 sure I've got that loaded on my -- because
17 that was done.

18 **MR. GRIFFON:** Oh, yeah, it was done 4/6,
19 right? It was awhile.

20 **MR. HINNEFELD:** It was an e-mail. One I e-
21 mailed to you.

22 **MR. GRIFFON:** I was going to say I don't
23 have that on the disk.

24 **MS. HOWELL:** Which case are we on?

25 **MR. GRIFFON:** Seventy-six point three.

1 **MS. HOWELL:** We skipped 75.

2 **MS. BEHLING:** Seventy-five there were no
3 findings. I'm talking too fast.

4 **MR. HINNEFELD:** Okay, 76, I should have sent
5 a package of four folders that, this was a
6 case where TIB-002 was used and the person I
7 believe had bioassay data. And so what we
8 agreed to do was provide IMBA information or
9 the information that illustrated that the
10 bioassay would result in a lower dose than the
11 TIB-002 does. So there's a set of files here
12 that were provided on that e-mail.

13 **MR. GRIFFON:** Is this a case number? I can
14 say the case number, right?

15 **MR. HINNEFELD:** No.

16 **MS. HOWELL:** No.

17 **MR. GRIFFON:** So there is a zip file
18 actually that was sent, right, with some
19 documents?

20 **MR. HINNEFELD:** Right, they were zipped, and
21 there were like four files in folders in there
22 that --

23 **MR. GRIFFON:** Well, it's still zipped on
24 mine, but we have them.

25 **MS. BEHLING:** We were questioning -- and

1 here again I think this is another QA issue,
2 as I recall there was one case I know that the
3 individual had 56 bioassay samples, but they
4 still used OTIB-002. And based on at least my
5 understanding of OTIB-002, that should not
6 have been used based on the number of bioassay
7 --

8 **MR. HINNEFELD:** I don't think we'd do it
9 today. Of course, we wanted to get a lot of
10 cases done. OTIB-002 is a lot faster than to
11 put in 50 bioassay data points. And there was
12 probably a fairly simple comparison you could
13 make given the bioassay record and what TIB-
14 002 assigned them.

15 Like if you could take their highest
16 bioassay point and say what if they got that
17 on their last day of employment and that's
18 still lower than what OTIB would predict on
19 that day, OTIB-002, then you're probably good.
20 So there's probably a simple comparison you
21 can do to say OTIB-002 is going to be
22 bounding. And they went ahead and did it.
23 Now today we probably wouldn't do that. And
24 the analysis I believe was a little more
25 complete than that. I don't think it was

1 quite such a simplistic evaluation.

2 **MR. GRIFFON:** So SC&A is going to follow up
3 on those files, right?

4 **MS. BEHLING:** Yes.

5 **MR. GRIFFON:** Along with the work group.

6 **MS. BEHLING:** Case 77, no findings.

7 Case 78, I see first finding NIOSH
8 agrees, second finding NIOSH agrees, third
9 finding NIOSH agrees.

10 **MR. GRIFFON:** Wait, 78.3, okay, that's the
11 same one again.

12 **MS. BEHLING:** Seventy-nine, the only one I
13 see where there's supposed to be further
14 discussion is 79.4, failure to properly
15 account for all missed photon dose. I believe
16 you had some additional records. Did some
17 additional records come in on this case?

18 **MR. HINNEFELD:** This is a case where we
19 have, in this person's file there's a bioassay
20 record that was generated later after the
21 initial Los Alamos response. Los Alamos, we
22 actually participated with Los Alamos in
23 building a database of these old bioassay
24 records. And so once they had built this
25 database they then provided us these files of

1 bioassay records.

2 And this disclaimer is placed on the
3 reports they send when they provide the
4 record, a person's entire record on the
5 database. And the reason for that is that
6 there may be bioassay for this person for some
7 radionuclides other than the common ones, you
8 know, some of the more exotic radionuclides
9 that were not captured in the effort to build
10 the database. So the disclaimer about some of
11 this data, you know, this record may not be
12 complete, applies to the data provided out of
13 the Los Alamos database.

14 Of course, ^ C class in Los Alamos
15 largely because of that issue. So that's the
16 origin of that comment. Now, if I'm not
17 mistaken -- we're on 79.4, right?

18 **MS. BEHLING:** Yes.

19 **MR. HINNEFELD:** And the finding is about the
20 missed photon dose and did we properly account
21 for the missed photon dose because there were
22 periods of not being monitored. And the
23 record says, well, the record's not complete
24 because of that comment in the record we've
25 received from Los Alamos. But the comment

1 about the record maybe not being complete is
2 strictly about what we call LANL bioassay
3 repository record. That's what that comment
4 refers to, not to the external dosimetry.

5 **MS. BEHLING:** Okay.

6 **MR. HINNEFELD:** Now, that's my recollection
7 of the case.

8 **MS. BEHLING:** Because I was going to ask why
9 are you responding with bioassay data to a
10 photon in electron dose.

11 **MR. HINNEFELD:** Because I believe the
12 finding is based on the comment that's in the
13 bioassay data. I think that's the case.

14 **MS. BEHLING:** I don't remember. I don't
15 remember, and I can go back.

16 **MR. GRIFFON:** I guess we have to revisit
17 this one.

18 **MS. BEHLING:** Yes, in fact, we'll have to
19 revisit 79.4, 79.5 and 79.6. They're all
20 related, same issues.

21 Okay, 79.7, SC&A agrees there is no
22 further action.

23 And 80, again, I see NIOSH agrees with
24 one, number two, finding two under number 80,
25 SC&A agrees. Is that it?

1 **MR. GRIFFON:** 80.4 is going to be site
2 profile, right?

3 **MS. BEHLING:** Yes, it's a site profile
4 issue.

5 **MR. GRIFFON:** And 80.5 the same way.

6 **MS. BEHLING:** Yes.

7 **MR. GRIFFON:** So I think we're, we just made
8 an initial run through the fourth set. So we
9 still have a few outstanding things, but not,
10 we're certainly narrowing it down. I mean, my
11 real goal on this one is to close it out in
12 October's meeting. October 3rd we have a
13 couple of hours for the subcommittee.

14 **MR. HINNEFELD:** Yeah, we're going to try to
15 get the missing technical information, we're
16 going to try to get that out a week in advance
17 to everybody. If I could do it earlier, I'd
18 do it earlier. I've asked for it a little
19 earlier than that from ORAU because I wanted
20 to make sure that we can take a look at it.

21 So it's our, but really anything less
22 than a week ahead of time is marginally
23 useful. I understand that. Anything that
24 gets out less than a week before the meeting
25 is hardly useful because you don't have time

1 to even read it and digest it. So what we're
2 going to do --

3 **MR. GRIFFON:** Well, we tend to get a lot of
4 stuff right before these meetings.

5 **MR. HINNEFELD:** Well, the stuff I sent last
6 week though, there wasn't a lot of new stuff
7 there. I mean, I sent the initial six matrix,
8 but the rest was sort of a recap of --

9 **MR. GRIFFON:** No, no, I'm saying before the
10 full Board meetings we always get a lot of
11 material.

12 **MR. HINNEFELD:** Oh, yeah. I really intend
13 to get these out.

14 **MS. BEHLING:** I will make an attempt, too,
15 but we're finally taking a vacation after many
16 years.

17 **MR. GRIFFON:** All right we can either, two
18 options, take an earlier lunch and then we can
19 beat the rush in the restaurant, which I think
20 makes sense actually. All right, let's take
21 an early lunch and come back at 12:30. Is
22 that all right?

23 **MR. HINNEFELD:** Works for me.

24 **MR. GRIFFON:** Twelve-thirty, folks on the
25 phone?

1 **DR. WADE (by Telephone):** Christine will be
2 there. I'll join you as soon as I can.

3 **DR. MAURO:** Mark, it's John. Can you hear
4 me?

5 **MR. GRIFFON:** Yes.

6 **DR. MAURO:** Mark, would you mind sending me
7 the matrix for the sixth set so eventually
8 when we do get to that.

9 **MR. GRIFFON:** Maybe I'll let Stu e-mail
10 that. We'll get it to you, John, somehow.

11 **DR. MAURO:** Thank you.

12 (Whereupon, a break for lunch was taken at
13 11:30 a.m. and the meeting resumed at 12:35
14 p.m.)

15 **DR. BRANCHE:** We're reconvening the
16 Subcommittee on Dose Reconstruction after a
17 lunch break. I'm Christine Branche. I'm
18 going to be functioning as the DFO until Dr.
19 Lew Wade can come back on the line. I just
20 want to make sure we have a quorum, and then
21 I'm going to hand over to Mark. If I could
22 just make sure for the Board members, Mark
23 Griffon?

24 **MR. GRIFFON:** Here.

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

1 **MR. CLAWSON:** Here.

2 **DR. BRANCHE:** Robert Presley?

3 **MR. PRESLEY:** Here.

4 **DR. BRANCHE:** Wanda Munn, are you on the
5 line?

6 (no response)

7 **MR. GRIFFON:** She said probably one o'clock
8 so she --

9 **DR. BRANCHE:** Are there any other Board
10 members who have joined the meeting by phone?

11 (no response)

12 **DR. BRANCHE:** Is there anybody on the line
13 at all?

14 **MS. CHANG:** This is Chia-Chia Chang in the
15 NIOSH Director's Office.

16 **DR. BRANCHE:** Hey, how are you doing? Any
17 other NIOSH staff?

18 (no response)

19 **DR. BRANCHE:** Anyone from another federal
20 agency?

21 (no response)

22 **DR. BRANCHE:** Any member of Congress or
23 their representative?

24 (no response)

25 **DR. BRANCHE:** Any worker or workers'

1 representatives?

2 (no response)

3 **DR. BRANCHE:** Okay, Mark.

4 **MR. GRIFFON:** And SC&A, are you guys on the
5 line?

6 (no response)

7 **MR. GRIFFON:** John Mauro? No?

8 (no response)

9 **DR. BRANCHE:** Forgive me for not asking
10 about SC&A.

11 **FIFTH SET OF CASES MATRIX**

12 **MR. GRIFFON:** All right, we'll start with
13 the fifth set we're going to move into, and
14 we're probably going to go through some of our
15 same issues on remembering where we stand.
16 But my sense was that we had not as many large
17 issues outstanding on this, but I think we'll
18 do the same thing, run through them and if
19 there's nothing there, we'll just skip over it
20 fairly quickly.

21 I'm trying to find, Stu, you sent our
22 latest version just last week, right?

23 **MR. HINNEFELD:** There's nothing updated on
24 that.

25 **MR. GRIFFON:** But just so people have, so

1 we're working from the same document. Do you
2 have a date when you sent that out?

3 **MR. HINNEFELD:** It would have been the sixth
4 or seventh probably.

5 **MR. GRIFFON:** So around the sixth or seventh
6 of last week. Is this the fifth 20 case
7 matrix with OCAS initial response for April 11
8 --

9 **MR. HINNEFELD:** And then there's an SC&A
10 response. It was updated September 7th. I
11 don't think I did anything on it since then.

12 **MR. GRIFFON:** And then the other one is the,
13 the other thing you sent out was the fifth set
14 findings additional information. So it's a
15 smaller with just some issues on it, right?
16 So let's work with the large matrix to start
17 with. And we have 81.1 should be our first
18 one, right?

19 Kathy, you have an older version,
20 right?

21 **MS. BEHLING:** Yes, I have an older version.

22 **MR. GRIFFON:** But I think you'll be all
23 right.

24 **MS. BEHLING:** Do you want me to start then?

25 **MR. GRIFFON:** Yes.

1 **MS. BEHLING:** Eighty-one point one, this is
2 the use of the OTIB-004 is inappropriate for
3 compensable claims, and I think we've gone
4 through that.

5 **MR. HINNEFELD:** We've gone through that
6 history before.

7 **MS. BEHLING:** And 81.2, reviewer could not
8 reproduce modeled external photon doses from
9 uranium ingots. That's a Table 3 issue in
10 that OTIB-004, and I believe you revised OTIB-
11 004. We're up to now maybe Rev. 4?

12 **MR. HINNEFELD:** I know we've published Rev.
13 3. I don't know if there's a Rev. 4 yet or
14 not.

15 **MS. BEHLING:** Yeah, and I believe this has
16 been corrected in those tables.

17 **MR. HINNEFELD:** Yes, it was corrected in
18 Rev. 3.

19 **MS. BEHLING:** And 81.3, improperly converted
20 model photon doses to organ dose of interest.
21 Let's see here.

22 **MR. HINNEFELD:** Yeah, there was a mixture of
23 geometry supplied that kind of follows on to
24 the previous finding as well. The values in
25 the table were incorrect because there was a

1 mixture of geometry supplied. Plus we're
2 obliged to look at, and see if there's any
3 impact on these cases that were done
4 beforehand. If the new revision required
5 results in doses being higher than they were
6 previously, then we're required to evaluate
7 those.

8 **DR. WADE (by Telephone):** This is Lew. I'm
9 on just for your information. I'll be off and
10 on but just so you know. Thank you.

11 **MS. BEHLING:** John Mauro, are you on the
12 line?

13 (no response)

14 **MR. GRIFFON:** Just to go back, 81.2 I put in
15 procedures review, right?

16 **MR. HINNEFELD:** Well, further thoughts. I
17 think that may be on the review list but for
18 this particular finding the procedure has been
19 revised to address this petition.

20 **MS. BEHLING:** That's right. In fact, I'm
21 not even sure that this table exists in the
22 revised --

23 **MR. HINNEFELD:** I believe that's true.

24 **MS. BEHLING:** -- it's been replaced.

25 **MR. GRIFFON:** Okay, so the procedure was

1 revised and no further action.

2 **MS. BEHLING:** And no further action. And we
3 are reviewing even that revised procedure.

4 **MR. GRIFFON:** SC&A reviewing revised
5 procedure. What's the PROC number on the
6 final rev.?

7 **MR. HINNEFELD:** Well, it's OTIB-004, at
8 least Rev. 3.

9 **MR. PRESLEY:** This thing here has Rev. 2 on
10 it.

11 **MR. SIEBERT:** It's Rev. 3, page change 2 is
12 the present one.

13 **MR. GRIFFON:** All right, so 81.3 we're up
14 to?

15 **MS. BEHLING:** Eighty-one point three,
16 improperly converted modeled photon doses to
17 organ of interest. No, that one we just
18 talked about. There was some issues in OTIB-
19 004 where they used 25 percent isotropic as
20 opposed to 100 percent AP, and that, I
21 believe, has been taken care of or we'll be
22 looking at that issue --

23 **MR. HINNEFELD:** Yeah, our response at this
24 point would be the same as the one before.
25 That procedure, that OTIB has been revised to

1 address this one. That's our position.

2 **MR. GRIFFON:** But I also have something
3 about program evaluation report will be
4 reviewed.

5 **MR. HINNEFELD:** Yeah, in a case where --
6 well, I mean, you can look at -- we're
7 evaluating right now, this issue, the 100
8 percent AP issue and the PER expense of that,
9 applies to Savannah River which we've seen in
10 dose reconstructions here because the model
11 originally had a mixture of geometries.

12 And there are a handful of AWE sites
13 where it may be relevant; it may not. I mean,
14 when you go back and look at this and you
15 decide, okay, well, what's the next form of
16 the site profile, it may not be an overall
17 upward change that has to be addressed. So
18 the AWE sites may or may not show up on this
19 PER, but there will be an evaluation. If they
20 don't, it will be because there was a
21 determination that it wouldn't change.

22 **MS. BEHLING:** This is just a side issue if I
23 can ask a question about the PER process. I
24 assume that you have a database for the PER
25 process, and that if you had one individual

1 that it was affected by several PERs, you
2 would be able to identify them?

3 **MR. HINNEFELD:** Yeah, a database actually is
4 being built. It's kind of nifty, but it's an
5 application. It uses sort of the existing
6 database as an application of data, and I
7 guess, populates a few more fields. But yes,
8 when we evaluate a case that's affected by a
9 Program Evaluation Report, the first thing we
10 do is all the current practices are used on
11 that dose reconstruction.

12 So any other changes, like there are
13 multiple changes out there now where the PER's
14 not yet done. When the case comes up on any
15 one of the PERs, whichever the first ones
16 we're working on it right now, insoluble
17 plutonium, that's Super S plutonium is where
18 most of the effort is going, all the other
19 changes are incorporated into that. So it
20 gets recorded as being addressed and being
21 subject to all those other PERs, but it is now
22 done. This PER work on all those other PERs
23 is now done.

24 And so everyone, and when we do this
25 evaluation, really if there's more than one

1 PER, when we're looking at a set of claims
2 because we know that this PER affects it,
3 we're determining is there a chance that it
4 could change compensability, and therefore, we
5 have to rework it. If there are other PERs
6 that affect that one as well, the answer's
7 almost always, well, we have to rework it
8 because it just gets too complex to do the
9 analysis any other way.

10 **MS. BEHLING:** That was my question.

11 **MR. GRIFFON:** I mean, we can go through
12 these, some of these had no action before so I
13 don't think they're going to change, right?

14 **MS. BEHLING:** Right, and I don't have --

15 **MR. GRIFFON:** Eighty-one, I mean, even by
16 the case, is there anything else on 81? I
17 don't have anything else.

18 **MS. BEHLING:** No. I don't have anything.

19 **MR. GRIFFON:** Eighty-two is an SEC class,
20 right? So we drop that? This case fell into
21 an SEC class? It's a note I have. I just
22 wanted --

23 **MS. BEHLING:** Oh, I don't know.

24 **MR. HINNEFELD:** I can find out.

25 **MR. GRIFFON:** It's Harshaw. It must have

1 been early Harshaw.

2 **MR. HINNEFELD:** But, I mean, the findings,
3 the first several findings should have been
4 done on TIB-004.

5 **MS. BEHLING:** Right, these are all TIB-004
6 findings.

7 **MR. GRIFFON:** Okay, and then the last, 82.5,
8 is these overarching issues again, right?

9 **MS. BEHLING:** Yes.

10 **MR. GRIFFON:** The resuspension, ingestion.

11 **MS. BEHLING:** And I think that those will be
12 addressed in the OTIB-004 procedure review.

13 **MR. GRIFFON:** Or in one of those other
14 policy documents.

15 **MS. BEHLING:** Yes.

16 Let's see, same responses for 82.7,
17 response to 81.1. I don't think we have
18 anything down to, can we go into 84?

19 **MR. GRIFFON:** Eighty-two point six says
20 generic ingestion model. That's okay.

21 Eighty-two point seven --

22 **MS. BEHLING:** Goes back to whether OTIB-004
23 should be used for compensation.

24 **MR. GRIFFON:** Right, right, yeah, so if we
25 can go on to 83.

1 **MS. BEHLING:** Eighty-three, same issues that
2 we discussed in 81.

3 **MR. GRIFFON:** Okay, same as 81?

4 **MS. BEHLING:** Uh-huh. And let's see here,
5 83.4, modeling assumptions for doses from
6 external surface contamination may not be
7 claimant favorable. Again, this was discussed
8 under 82.5. So these are broader issues.

9 All the way down to 84.

10 **MR. GRIFFON:** Yup, we're up to 84. Now,
11 some of these --

12 John, are you on the line?

13 (no response)

14 **MR. GRIFFON:** Here's my question on which, I
15 had talked to John Mauro about a couple of
16 these cases which were AWE cases, and I felt
17 like they weren't given an advance review
18 treatment. And I think they should have been
19 because when we selected these cases, we kind
20 of said -- I'm not sure if this is one of
21 them, but a lot of these are basically mini-
22 site profiles because we may only have one
23 case from that site to review.

24 So even if it's a greater than 50
25 percent case, you know, this is also our

1 opportunity to do kind of a mini-site profile
2 so a more advanced review, even for a
3 compensable case, and I didn't think, I raised
4 a few of those. I forget what they are, but
5 John looked at those and SC&A agrees with
6 that. And I think they're going to reassess,
7 and I want to make sure John jumps in when
8 those come up.

9 **MS. BEHLING:** In fact, we do try to do that
10 on most cases. I guess the Harshaw case that
11 we were talking about, in fact, there was no
12 exposure matrix and we had, I think, about 37
13 references to a lot of older documents. And
14 we did look at those source documents, but I
15 don't think we did a lot of explaining in our
16 report as to the fact that we looked at those,
17 and we agreed that NIOSH's assumptions or if
18 we disagreed, we would have identified that in
19 the finding.

20 **MR. GRIFFON:** Right, because Harshaw was one
21 of them.

22 **MS. BEHLING:** Harshaw was one of them, yeah,
23 Harshaw was one of them and Bridgeport Brass,
24 I believe. And we're going to go back and
25 look a little closer at those.

1 **MR. GRIFFON:** So we should make a note that
2 even though this Harshaw-particular case was,
3 fell within the SEC timeframe, I question
4 whether the, is Harshaw the entire period in
5 SEC? Or how do we --

6 **MR. HINNEFELD:** No, Harshaw, the early years
7 is an SEC until those bioassay began. Harshaw
8 is under review, isn't it? Isn't the Board
9 reviewing Harshaw?

10 **MR. GRIFFON:** Are we reviewing the site
11 profile there? So that may be a moot point.

12 **MR. HINNEFELD:** Yeah, isn't that Gen
13 Roessler?

14 **MR. GRIFFON:** I thought that was Linde.

15 **MR. HINNEFELD:** Oh, maybe it is Linde.

16 **MR. GRIFFON:** She's got Harshaw, too?

17 **MR. PRESLEY:** Let me get on here, and I'll
18 tell you.

19 **MR. GRIFFON:** Linde is. I know she's got
20 Linde. I don't think Harshaw is in it.

21 **MR. HINNEFELD:** It's not.

22 **MR. GRIFFON:** Anyway, my sense was that if
23 it was not, if it was one of those, because we
24 specifically in the Board meetings a couple
25 times we've said, well, --

1 **MR. HINNEFELD:** Well, you're right. I think
2 actually the Harshaw --

3 **DR. WADE (by Telephone):** There's no Harshaw
4 review at this point in the site profile.

5 **MR. HINNEFELD:** It got, it was actually a
6 pretty recent, the Harshaw site profile.

7 **MR. PRESLEY:** The paperwork came through,
8 too.

9 **MR. GRIFFON:** And that's how I raised it to
10 John. I know this wasn't available when you
11 did this review on the fourth set, but this
12 may be the only partial case that we run
13 across so I think you should do a
14 quote/unquote mini site profile review under
15 that dose reconstruction review process.
16 Because that's kind of what we, when we
17 selected some of these cases we said, you
18 know, the reason -- We're not so interested in
19 this one case necessarily. We probably
20 haven't done this site at all, so we're going
21 to have to make sure we give a, sort of a
22 blush to that site.

23 **MR. HINNEFELD:** In order to accomplish the
24 intended objective it might be better to
25 select a Harshaw case now because --

1 **MR. GRIFFON:** Select another Harshaw case?

2 **MR. HINNEFELD:** -- because the site profile
3 for Harshaw, if I'm not mistaken, was only
4 recently completed. It was completed after
5 the SEC class determinations.

6 **MR. GRIFFON:** So it wouldn't have been used
7 --

8 **MR. HINNEFELD:** And so it would not have
9 been used earlier. It was not used on this.

10 **MS. BEHLING:** Yeah, I think it was not used
11 in this case. That I know.

12 **MR. HINNEFELD:** And it would be used on
13 cases that started after the SEC class or non-
14 presumptive cases is what the site profile
15 would be used for. So see if you say let's do
16 a detailed review of this dose reconstruction
17 in using the Harshaw site profile, the two are
18 pretty much unrelated. You could say let's do
19 a detailed review of the Harshaw site profile
20 which may be a different task. Or you can
21 say, well, if we selected a Harshaw case that
22 was done relatively recently, then it would be
23 done in accordance with the site profile.

24 **MR. GRIFFON:** You could be right, but the
25 one that was done earlier than the site

1 profile, better give you consistent results,
2 was the one after that, you know what I mean?
3 You did it before so it's not consistent with
4 the site profile, you've got a problem. I
5 don't think we're going to have that here.

6 **MR. HINNEFELD:** I don't think you'll find
7 any non-compensable cases that include
8 employment during the SEC class because I
9 don't think we had a way to do them, and so I
10 don't think there are any of them out there.

11 **MR. SIEBERT:** I believe that's why OTIB-004
12 was used.

13 **MR. HINNEFELD:** Yeah, OTIB-004 was used in
14 this case. So I don't think we'll see any
15 non-compensable ones then, but in terms of
16 dose reconstruction, this dose reconstruction
17 may be considerably different than what the
18 site profile if this person continued -- and
19 probably using TIB-004 it would be different.
20 See, there's no dose reconstruction here that
21 will -- this is a TIB-004 case -- that will
22 allow you to determine the adequacy of the
23 Harshaw site profile is where I'm going.

24 **MR. GRIFFON:** So we may have to select
25 Harshaw --

1 **MR. HINNEFELD:** Select a Harshaw case --
2 it's just a thought. I just don't see how
3 you're going to do it because you don't have a
4 dose reconstruction that addresses the Harshaw
5 that's done in accordance with the Harshaw
6 site profile.

7 **MR. GRIFFON:** Then our action may be to, you
8 know, and this is more of a program or a Board
9 action, it may be to recommend another Harshaw
10 case that's done using the current set --

11 **MR. HINNEFELD:** And since it's recent, there
12 may not be a finally adjudicated case
13 available right now.

14 **MS. BEHLING:** Right, although I do know that
15 in other AWE cases, in fact, I think
16 Bridgeport Brass was one of them, when we
17 worked on that case, although it was completed
18 using OTIB-004 methodology, at the time we
19 reviewed it, Bridgeport Brass did have an
20 exposure matrix available. So we did make
21 something of a comparison between those two.

22 **MR. GRIFFON:** Go ahead. I just wanted to
23 bring that up and see if John --

24 John, are you on the phone yet?

25 (no response)

1 **MR. GRIFFON:** No.

2 **MS. BEHLING:** Where are we?

3 **MR. HINNEFELD:** We were on 84.

4 **MS. BEHLING:** Eighty-four, okay, 84.1, data
5 used by NIOSH considered inadequate for
6 determining POC. Again, NIOSH is indicating
7 that this is a site profile issue, not a dose
8 reconstruction issue, and that it's going to
9 be discussed. Okay, because this is an AWE
10 again, and as John went through these AWEs, he
11 did identify areas where we're going to need
12 to look a little bit closer at that site
13 profile.

14 **MR. HINNEFELD:** So this would fit that
15 category, what we were talking about.

16 **MR. GRIFFON:** Yes.

17 **MS. BEHLING:** Yes.

18 **MR. HINNEFELD:** This one because I recognize
19 this site.

20 **MR. GRIFFON:** This is where I stopped when I
21 saw my note for ^. So this is one that I
22 think I'm going to put as an action SC&A to
23 examine site profile closer, whatever. SC&A
24 to conduct mini-site profile review.

25 **MS. BEHLING:** And quite honestly when I went

1 through this matrix, I only went back through
2 to recall things that I had responded to
3 NIOSH's response on. I didn't go through all
4 of these again, and I didn't bring that case
5 with me. I couldn't fit it in, so I'm not
6 sure I'm even aware of what site, but this is
7 Harshaw.

8 **MR. HINNEFELD:** No, this is Huntington.

9 **MS. BEHLING:** Huntington, I'm sorry.

10 **MR. GRIFFON:** And do we have that revised
11 site profile?

12 **MR. HINNEFELD:** I don't believe the revision
13 of the site profile is done yet.

14 **MR. GRIFFON:** It's not done, okay, because I
15 see a note on here to revise site profile to
16 subcommittee. So we're still waiting. That's
17 kind of an action for --

18 **MR. HINNEFELD:** Yeah, the site profile's not
19 yet done. Well, you know what? I should add
20 that to my list of stuff we have to do.

21 **MR. GRIFFON:** Yeah, that's why I'm raising
22 it. So SC&A can't do anything until we,
23 right? We're waiting --

24 **MR. HINNEFELD:** Well, it would be best to ^.

25 **MR. GRIFFON:** I mean, it just makes sense if

1 it's close.

2 **MR. HINNEFELD:** I know what the issue is and
3 who it's assigned to.

4 **MS. BEHLING:** Okay, it looks like finding
5 84.2, 84.3 and 84.4 are all pointing to the
6 fact that they're all tied to site profile
7 work.

8 And 84.5, procedural inconsistencies
9 regarding occupational medical dose. Again,
10 this is site profile.

11 I see the same responses next 84.6,
12 84.7, 84.8 and nine all reference response to
13 84.3, so that's covered.

14 Eighty-four point ten, I believe again
15 this is a site profile issue, same with 11 and
16 12.

17 Okay, 85, 85.1, reviewer questions
18 whether method for assessing photon exposure
19 from uranium slabs and plates is
20 scientifically correct and claimant favorable.
21 I believe this has again to do with whether we
22 select the 95th percentile value.

23 **MR. GRIFFON:** And I think you've got
24 something for us on this one, Stu, right?

25 **MR. HINNEFELD:** For 85.1?

1 **MR. GRIFFON:** Yeah, on your mini-list I
2 thought that was listed.

3 **MR. HINNEFELD:** Eighty-five one, actually
4 there's nothing has been provided. I mean,
5 there's a description of ^ analysis, but --

6 **MR. GRIFFON:** Oh, okay, because I say NIOSH
7 to provide written response or justification.

8 **MR. HINNEFELD:** But there's been nothing to
9 provide.

10 **MR. GRIFFON:** Nothing yet. Okay, I was
11 looking at your list. So that's just an
12 outstanding action, right?

13 **MS. BEHLING:** Eighty-five point two,
14 reviewer questions whether methods used to
15 reconstruct inhalation exposure associated
16 with resuspension are scientifically sound and
17 claimant favorable. This is an issue again --

18 **MR. GRIFFON:** Well, no, 85.2 I have SC&A is
19 in agreement on this particular application.
20 It's not really the broad one. You said SC&A
21 agrees resuspension based on wipe data is
22 appropriate. I think it wasn't clear whether
23 it was wipe data. There was some particular
24 issue.

25 **MR. HINNEFELD:** During the discussion, last

1 subcommittee discussion, John raised a point
2 of survey measurements, survey instrument
3 measurements, and we do have removal data. We
4 felt like based on removal data we'd have this
5 resuspension value in this instance was
6 appropriate.

7 **MR. GRIFFON:** And John agreed.

8 **MR. HINNEFELD:** And John said, well, there's
9 a survey measurement that's such-and-such. I
10 said, well, a total contamination survey would
11 be available for resuspension, the removal
12 survey was available for resuspension. And
13 John essentially acquiesced as I recall. So
14 that's the nature of that comment, and also
15 that comment's reflected in the mini-matrix
16 about this that we have on the mini-matrix the
17 response to address resuspensions in general.

18 **MS. BEHLING:** John Mauro, did you pick up?

19 **DR. MAURO (by Telephone):** Yes, I'm on the
20 line now.

21 **MS. BEHLING:** Okay, John, thanks. We've
22 started working on the fifth set, and some of
23 these initial questions have to do with the
24 AWEs, and I feel less than adequate to always
25 answer some of these. In fact, I don't know

1 if you just heard.

2 **DR. MAURO (by Telephone):** Yeah, I heard a
3 bit. I'm sorry. I joined you at one o'clock.
4 I was tied up with some other matters. The
5 only matrix I have in front of me now is the
6 Task Six because I assumed that that was where
7 you might need my participation. But I should
8 be able to help you out also with the fifth
9 set.

10 **MS. BEHLING:** Okay, because we were just
11 talking about reconstructing these inhalation
12 exposures and my matrix did not state that
13 SC&A agrees, but it was Stu's recollection
14 that you did concede this issue.

15 **MR. HINNEFELD:** On the specific site we're
16 talking about here, John, not the, there's
17 still the overall --

18 **MR. GRIFFON:** The global issue.

19 **DR. MAURO (by Telephone):** Which site was
20 this now?

21 **MR. GRIFFON:** Superior Steel. It was an
22 issue of, I mean, I have SC&A agrees as well
23 on this one. It was an issue of resuspension
24 but based on wipe data.

25 **MR. HINNEFELD:** Yeah, there's removal

1 contamination data from this location. And
2 while the approach may not have been based
3 originally on that resuspension of that real
4 contamination, we felt, we've done this
5 approach. There is removal data. It
6 certainly is consistent. The airborne we've
7 generated is certainly consistent with this
8 removal. That was our argument I believe in
9 the last subcommittee meeting.

10 **MR. GRIFFON:** My notes indicate you agree
11 with that, John.

12 **DR. MURO (by Telephone):** The basic approach
13 to, when all is said and done it's pretty
14 simple. In other words, there's going to be a
15 certain amount of radioactivity on surfaces.
16 If you have data, am I hearing what you're
17 saying that on this particular case you have
18 Superior Steel case I guess one of them.
19 That's part of the sixth set. You're saying
20 you have data on surface contamination? I
21 thought you worked with data that was from
22 Simonds Saw.

23 **MR. HINNEFELD:** I don't know how the model
24 was developed originally, John. But in our
25 initial response for this finding, we say

1 there are thousands of residual contamination
2 measurements is what we say. I don't know if
3 that's thousands of smear samples or
4 something. But, well, actually, I'm sorry.
5 That is, that may not be specifically for this
6 site. But they're talking about the types of
7 removal contamination that has typically been
8 observed in residual contamination periods.
9 And based on that this doesn't seem
10 unreasonable. I don't, Mark. I don't think
11 we're going to get anywhere on this today. I
12 think we may, both sides may, or I think SC&A
13 probably --

14 **MR. GRIFFON:** Take a closer look, right?

15 **MR. HINNEFELD:** Yeah, and just based on, you
16 know, the information, you know, what they did
17 here and how does it, maybe compared to
18 Bethlehem Steel, or similar to Bethlehem Steel
19 that if it worked there, it's okay here.

20 **MR. GRIFFON:** Stu, you provided a little
21 more information, too, in this response
22 document that I have, right? I mean, there's
23 --

24 **MR. HINNEFELD:** Yeah.

25 **MR. GRIFFON:** And Kathy I don't think has

1 that so I would say let's --

2 **MR. HINNEFELD:** Well, I thought I sent
3 everything to everybody.

4 **MR. GRIFFON:** It was just e-mailed last week
5 though. A couple of the e-mails had two
6 attachments so I don't know if, anyway I would
7 just say we're not going to resolve it
8 necessarily right now, but let's just flag it
9 as SC&A will follow up and look at your
10 response and go from there. How's that? So
11 that's for 85.2.

12 John, you don't have this matrix, huh?

13 **DR. MAURO (by Telephone):** No, the only one
14 I have in front of me now I just received. My
15 apologies, I only have the matrix for the
16 sixth set. I was assuming that that was the
17 area where I would be able to help out, but
18 I'll listen in. I should be able to pick up
19 on some of these because there's a lot of
20 recurring themes at these AWE sites.

21 **MR. HINNEFELD:** We've actually committed to
22 provide more technical response on this.

23 **DR. MAURO (by Telephone):** Which one was
24 that now?

25 **MR. HINNEFELD:** Eighty-five dot two, right?

1 Isn't that what we're talking about?

2 **MR. GRIFFON:** Yeah.

3 **MS. BEHLING:** John, Doug also just e-mailed
4 us that he sent the matrix to you.

5 **DR. MAURO (by Telephone):** The reason I'm
6 having a problem is I was out of commission
7 for many days with my computer and that's the
8 reason for my delay. Things are back online
9 again. I don't have this matrix you're
10 looking at, but which site are you referring
11 to now, which AWE site?

12 **MR. GRIFFON:** Superior Steel.

13 **DR. MAURO (by Telephone):** Okay, this is a
14 Superior Steel case in the fifth set?

15 **MR. GRIFFON:** Yes.

16 **DR. MAURO (by Telephone):** Okay, I can catch
17 up real quick. I'll just pull the volume and
18 take a look at that case. Superior Steel, if
19 I recall, had a matrix.

20 **MR. GRIFFON:** Why don't you take a look,
21 John, and we'll go ahead while you're looking
22 at that.

23 **DR. MAURO (by Telephone):** Okay.

24 **MR. GRIFFON:** The next couple are pretty
25 straightforward. Eighty-five three and four

1 are, I have handle in generic resuspension
2 model and generic ingestion model response,
3 right?

4 **MS. BEHLING:** That's right.

5 **MR. GRIFFON:** And then 85.5, there was no
6 response by NIOSH, but they have one in this
7 little matrix that we need to get a copy to
8 Kathy maybe.

9 **MS. BEHLING:** Yeah, maybe I have it. I
10 just, I don't remember seeing anything for the
11 fifth set.

12 **MR. HINNEFELD:** Eighty-five five we still
13 owe you some.

14 **MR. GRIFFON:** Oh, it just says provides, so
15 yeah, so NIOSH does owe a response.

16 **MR. HINNEFELD:** A lot of these, everything
17 on here we owe you technical information.
18 I've written some things here that are largely
19 notes to myself, you know, kind of capture
20 conversations --

21 **MR. GRIFFON:** I thought these were
22 responses, but they're really just updates.

23 **MR. HINNEFELD:** No, they're more so than
24 anything they're notes to myself to remind me
25 of what happened in the last --

1 **MR. GRIFFON:** Like an action list.

2 **MR. HINNEFELD:** Yes. And so we still have
3 not provided you any of the promised technical
4 information on these items.

5 **MR. GRIFFON:** So that's 85 three and four
6 are really the generic responses, and then
7 85.5 is a specific response for this, NIOSH
8 owes us.

9 John, did you get a chance to look at
10 that case?

11 **DR. MAURO (by Telephone):** Yeah, I'm looking
12 at it right now. Just give me a second. It
13 looks like, I'm looking at the case, and
14 Superior Steel, it looks like you made use of
15 Simonds Saw data to do submersion and
16 contamination exposures and that part of it
17 looked fine.

18 We're talking external now. We had no
19 comments on external exposure from submersion
20 or contaminated surfaces because you used the
21 data from Simonds Saw. And we concur that the
22 data from Simonds Saw certainly would be a
23 bounding condition for air concentrations and
24 contaminated surfaces.

25 **MR. GRIFFON:** No, specifically, we're

1 looking at 85.2, your finding --

2 **DR. MAURO (by Telephone):** I'm looking at 85
3 right now. Oh, we're moving on. Let me get
4 to the finding. I'm looking at the finding,
5 85.1, hold on, let me get to 85.2 if you can
6 just give me a moment.

7 **MS. MUNN (by Telephone):** Good afternoon,
8 folks, this is Wanda. I've been on and off.
9 This is the third time I've been on. I'm
10 working with a very touchy telephone.
11 Hawaiians are not well known for their high
12 technology on the beach, so I'm doing the best
13 I can here. I gather we're somewhere in set
14 five?

15 **MR. GRIFFON:** Yeah, the fifth set, we're on
16 case number 85 actually.

17 **MS. MUNN (by Telephone):** I sort of gathered
18 that, and since I have only a single phone
19 line, and I'm just outside the edges of their
20 wireless communication here, I have only my
21 laptop and what's on it. I don't have access
22 to anything on the web.

23 **MR. GRIFFON:** John, any luck --

24 **DR. MAURO (by Telephone):** I'm looking at
25 85.2?

1 **MR. GRIFFON:** Yeah.

2 **DR. MAURO (by Telephone):** And this has to
3 do with the resuspension of deposited
4 radioactivity.

5 **MR. GRIFFON:** Right.

6 **DR. MAURO (by Telephone):** Now there are two
7 aspects to that approach. One is how did you
8 come about with the amount of activity that
9 are on surfaces, and then there's the
10 resuspension factor. Now, right now I guess
11 from looking at the write up I'm trying to
12 see, it appears that the activity on surfaces
13 may have somehow been related to Simonds Saw
14 data or from actual empirical measurements.
15 I'd have to read it more carefully.

16 As opposed to, Stu, let me ask you, as
17 opposed to that deposition of 0.00075 meter
18 per second approach? See, my main concern
19 with the modeling of resuspension and
20 ingestion and surface contamination at AWE
21 facilities is a recurring theme that goes
22 toward the use of this deposition velocity of
23 respirable particles. Given that you know
24 what the airborne levels are from measurements
25 or from some default assumptions, then you

1 assume what's on surfaces is from those
2 particles falling at their terminal deposition
3 velocity for five micron AMD particles.

4 And my recurring theme on all of these
5 AWEs is that that really is not the way to
6 predict what's on surfaces. Now I guess my
7 question to you is on this particular one, was
8 the dust loading on surfaces based on
9 empirical data for that site or some other
10 default value?

11 **MR. GRIFFON:** That's what we're not sure on.
12 John, I think the answer is we're going to
13 have to have both sides kind of follow up on
14 this. Because in reading the NIOSH response
15 I'm not sure if this average is based on --

16 **MR. HINNEFELD:** Yeah, I'm not sure what it's
17 based on.

18 **MR. GRIFFON:** -- site data or broader data.
19 I think we need follow up.

20 **DR. MAURO (by Telephone):** The other half
21 which is clear though, where there is no
22 ambiguities, you used a resuspension factor
23 given the dust loading on the surfaces and the
24 Becquerels per meter squared, then you apply a
25 resuspension factor of one times ten to the

1 minus six per meter. Now, that's a pretty low
2 resuspension factor for an indoor working
3 environment. And I would have expected
4 something perhaps ten times higher.

5 **MR. GRIFFON:** I think that's covered in your
6 85.3 which we're saying needs to be handled in
7 their generic response to the resuspension
8 model.

9 **DR. MAURO (by Telephone):** Okay, that's
10 fine.

11 **MR. GRIFFON:** Yeah, so I think we're covered
12 there. Eighty-five two is really the one we
13 need follow up on on both sides.

14 **MR. HINNEFELD:** We do owe additional
15 information on that.

16 **MR. GRIFFON:** Okay.

17 **MR. GUIDO (by Telephone):** Hey, this is Joe
18 Guido. I can chime in here a little bit if
19 you want on Simonds.

20 **MR. GRIFFON:** On Simonds or this Superior,
21 but --

22 **MR. GUIDO (by Telephone):** Oh, I thought the
23 case was at Simonds Steel.

24 **MR. GRIFFON:** Superior Steel.

25 **MR. GUIDO (by Telephone):** Sorry. Let me go

1 back to mute.

2 **MR. GRIFFON:** Another follow up question on
3 this is, is there a matrix for Superior Steel
4 or a site profile or is it a --

5 **DR. MAURO (by Telephone):** Yes, Superior
6 Steel has a matrix.

7 **MR. GRIFFON:** So I'd ask, John, when we
8 review this 85.2 that you, you may have
9 already done it but make sure you consider
10 that matrix as well.

11 **DR. MAURO (by Telephone):** Yes, it turns out
12 just about every AWE site, it's pretty rare
13 that you have real data for real people. And
14 most of the time now there is a matrix out
15 there for most of the cases. And, yes, I
16 reviewed the Superior Steel matrix in order to
17 comment on this method. So every commentary
18 just about for every one of these cases that
19 we're looking at is based on a review of the
20 exposure matrix for that facility that stands
21 behind that case.

22 **MR. GRIFFON:** And this comment stems from
23 something I said a little earlier which I
24 think was before you got on line, John, which
25 is I had some questions about a few of the

1 AWEs that you reviewed where -- and we
2 discussed this -- whether they were what I
3 would call quote/unquote mini-site profile
4 reviews because they were likely the only time
5 we were going to select a case from that site.
6 And we had asked that they would be sort of an
7 expansive review given that we wouldn't run
8 across that again. And I think the example
9 before you came online was the Huntington
10 Pilot Plant.

11 Is that right, Stu? Is that the one?

12 **MS. BEHLING:** Yes.

13 **MR. GRIFFON:** Huntington Pilot Plant, so if
14 you've done this already for Superior, that's
15 fine, but it was just raised in that context.

16 **DR. MAURO (by Telephone):** Let me, for all
17 of these AWE cases that I reviewed or we
18 reviewed where it required us to review the
19 exposure matrix, and that's where I would say
20 the vast majority of them. The review of the
21 exposure matrix was one of, okay, did they
22 have, what I would say based on just looking
23 at the exposure matrix, adequate bioassay
24 data, adequate air sampling data to
25 characterize the potential for an internal

1 exposure.

2 And in the exposure matrix they
3 summarize the data they have, in some cases
4 quite a bit of data. And I stop at that
5 point, and I think I may have mentioned, and
6 in fact I sent you, Kathy and I sent you a
7 memo recently that sort of summarizes which
8 exposure matrices for AWE facilities that we
9 reviewed but not in depth and which ones we
10 reviewed in depth because they were assigned
11 to us as a task one.

12 But to say that the review that we
13 perform when we do a study like the Superior
14 Steel we're talking about, I don't go into the
15 original raw data. In other words I look at
16 the data that's summarized in the report, take
17 it at face value and ask myself the question
18 does this data capture the time periods and
19 the types of activities that are relevant for
20 this worker.

21 And usually lately the cases I've been
22 reviewing is the dataset appeared to be fairly
23 comprehensive, and more importantly, in
24 general, the exposure matrix adopts using the
25 upper 95th percentile of the dataset. So I'm

1 speaking in general now, and I can check
2 Superior Steel and see what was done there,
3 but in general, for many of the cases that
4 I've been reviewing, especially when we get to
5 the sixth set, I notice that it's becoming a
6 more common practice to use the upper 95th
7 percentile on the dataset. Now that being
8 said that's the extent to which -- and I look
9 at. I take the data on face value. We do not
10 go back and actually pull the raw data, let's
11 say off an O drive if it's available, and
12 check it. That's the kind of thing we do for
13 a site profile review. So that's why I call
14 it a mini review.

15 **MR. GRIFFON:** That's fine, John. I think
16 that's, I just want to make sure that we've
17 done that for some of these sites. So I'm
18 going to check in on that every once in
19 awhile, and if you've done it; you've done it.

20 **MS. BEHLING:** Yeah, and that's appropriate.
21 And, John, I do think that you actually, when
22 I review them, I sense that you go beyond just
23 the individual that we are assessing in this
24 particular case because I think your review
25 tries to also capture other populations of

1 workers out there. You indicated that you're
2 looking just only for this particular worker,
3 but I've seen, based on some of your reviews,
4 that they go beyond that.

5 **DR. MAURO (by Telephone):** Yeah, for
6 example, I'm looking at Superior Steel right
7 now, and actually put in the report the data,
8 so that's why the matrix doesn't really
9 capture. I actually say here's the data that
10 they have and how they used it. And now on
11 that basis I guess I walked away with a fairly
12 good sense that there was a lot of data that
13 was useful including breathing zone data Ted
14 collected.

15 And they used the upper 95th
16 percentile, I believe, to come to, they did
17 some curve fitting, we checked the curve fit
18 so we did a lot of work of processing the data
19 as you would in a site profile review. So I
20 guess we walk away that the dataset seemed to
21 be pretty comprehensive and the use of the
22 lognormal distribution to represent the data
23 seemed to be reasonable. And using the upper
24 95th percentile seemed to be claimant
25 favorable.

1 So on this case I guess, except for
2 the few points regarding the contamination on
3 surfaces and the resuspension factor, the
4 other aspects of the model, the direct
5 inhalation for example, seemed to be pretty
6 good.

7 **MS. MUNN (by Telephone):** This is Wanda.
8 I'm sorry to interrupt. I don't have a
9 question except what date is the matrix from
10 which we're working?

11 **MR. GRIFFON:** We have an updated one that
12 was sent around 9/7/07 that Stu sent out.
13 There were like two or three e-mails that same
14 day or within a day of each other.

15 **MR. PRESLEY:** Five or six.

16 **MS. MUNN (by Telephone):** I have the fourth
17 set of DRs from him, but that doesn't include
18 85 that you're talking about.

19 **MR. GRIFFON:** No, this is the fifth set.

20 **MR. HINNEFELD:** It's a separate message.

21 **MR. GRIFFON:** It should be labeled the fifth
22 20 case matrix with a string of dates on it
23 and the last thing says updated September 7,
24 '07 at the end of the file name. It's a very
25 long file name.

1 **MS. MUNN (by Telephone):** I changed it to
2 something else and cleverly changed it to
3 something that I can't easily locate now.
4 I'll find it by date then. Thank you.

5 **MR. GRIFFON:** All right, so 9/7, Wanda.

6 Yeah, John, and when I'm asking these
7 things about the mini-site profiles, I'm just
8 asking that you consider the scope, not
9 necessarily putting you on the spot right now
10 for an answer as to whether you think it was
11 adequate or not but just that the scope was
12 considered.

13 **DR. MAURO (by Telephone):** Well, I mean, in
14 this review, I'm looking at it now, this case.
15 You could see by the review. I don't know if
16 you actually have the hard copy in front of
17 you, but the big book, in it you can see the
18 data that we had and we compiled it all, and
19 out of that dataset they picked off the, of
20 the breathing zone and process air data, they
21 picked off the upper 95th percentile value
22 which seemed to be claimant favorable from the
23 point of view of the direct inhalation.

24 So, yes, we did review the data, and
25 we did score it such that that particular

1 aspect of the internal exposure, namely the
2 inhalation of airborne activity during the
3 metal working operations seemed to be claimant
4 favorable and scientifically sound. So I did
5 look at that data. But the problems resides,
6 the comments we had, the findings have to do
7 with the resuspension model, the deposited
8 radioactivity, not with the inhalation part.

9 **MR. GRIFFON:** Okay, and we have our actions
10 on that so we're set to go on that.

11 **DR. MAURO (by Telephone):** Yeah, and I did
12 review, I mean, I did look pretty closely at
13 the data itself in the site profile, tabulated
14 it, actually ran some curve fits to see where
15 the 95th percentile fell. So we did do a lot
16 of data processing, but we didn't actually go
17 back to the original source documents and the
18 original individual measurements that were
19 made that we would normally do for a site
20 profile.

21 **MR. GRIFFON:** Number 86.

22 **MS. BEHLING:** Yeah, we're going to move on
23 to 86. That's a Linde case I think, John, and
24 if you can support me on some of these, we're
25 just going through all of these findings at

1 this point.

2 The first finding on 86.1 is modeled
3 photon dose based on inappropriate method.

4 **DR. MAURO (by Telephone):** I'm going to
5 catch up to you. Again, I came prepared to
6 discuss the sixth set. I did not do any
7 homework and get ready for the fifth set, my
8 apologies. Let me take a look, and the first
9 case is what, 86.1?

10 **MS. BEHLING:** Right, this is --

11 **MR. GRIFFON:** Right, 86.1, I have SC&A in
12 agreement with this one as well.

13 **MS. BEHLING:** And Doug has also e-mailed you
14 the matrix.

15 **MR. GRIFFON:** What I'm going to do. I have
16 notes here, and if I have, like on 86.2 I have
17 NIOSH to provide full written response. What
18 we can do is if there's agreement on these,
19 I'm going to try to skim over them.

20 But I'm going to update this matrix
21 and e-mail it out to everyone. And obviously,
22 as always, if you have any disagreement with
23 what I've written in the response, we can edit
24 back and forth so nothing's written in stone
25 at this point, but just to get through the

1 matrix because I do want to get through the
2 sixth matrix as well. I'm going to kind of
3 skim over the ones where I say that there was
4 agreement at the last meeting. I don't want
5 to rehash everything here if that's okay.

6 **MS. BEHLING:** That would probably be the
7 best --

8 **MR. GRIFFON:** So 86.2 I have that NIOSH is
9 going to provide a written response. And I
10 think at this point, Stu, we don't have that
11 yet, right?

12 **MR. HINNEFELD:** No.

13 **MR. GRIFFON:** But you have that note as
14 well.

15 **MR. HINNEFELD:** I do have that note as well.

16 **DR. MAURO (by Telephone):** I see that. I'm
17 familiar with that. I just read it. I know
18 this case. If you want to talk about it,
19 fine. If you think that we can move on,
20 that's up to you.

21 **MR. GRIFFON:** No, I think we'll move through
22 it. I think we'll move through it.

23 Eighty-six three and four, or 86.3 is
24 a site profile issue we have here, and the
25 question is now -- okay, this might be, Linde

1 is on our list for site profile review,
2 correct?

3 **MR. HINNEFELD:** Yes.

4 **MR. GRIFFON:** So that's going to, I have
5 that this one should be deferred to the site
6 profile review under Gen Roessler's work
7 group.

8 **DR. MAURO (by Telephone):** Yeah, I think
9 that's important because, as I understand it,
10 for the Linde site profile review at our last
11 working group meeting NIOSH had mentioned that
12 they uncovered a large set of I believe
13 bioassay data for Linde. And that would
14 change everything because right now I don't
15 think they didn't have that data, those dose
16 reconstructions were done.

17 And so I think that it may be that
18 after looking at that bioassay data it may
19 need a substantial revision to the site
20 profile; and therefore, of course, it would
21 have a ripple effect on the cases that were
22 already reviewed.

23 **MR. GRIFFON:** Right, right, so that will,
24 we're not going to lose that but as far as
25 tracking, it's going with the site profile

1 review.

2 Eighty-six four I have no further
3 action, and then we're on to 87. Case 87 is
4 an MIT case. And this was, I guess the only
5 issue we have here is TIB-004 being used for a
6 compensable case.

7 **MS. BEHLING:** That's right.

8 **MR. GRIFFON:** And the other question, the
9 other note I had here was review TIB-004 to
10 see if appropriate to include MIT. In other
11 words is MIT a site that should be, and I
12 don't think it is in the appendix now of TIB-
13 004. So there's two problems here. Number
14 one, it was maybe used for a site that it
15 shouldn't have been for. Originally, I think
16 it probably, you didn't exclude it by the way
17 TIB-004 was written.

18 **MR. HINNEFELD:** I don't really know. I
19 don't recall. I think that during this period
20 when these TIB-004 compensables were done that
21 was applied. There were a couple decisions
22 that were done incorrectly. And so it may
23 have gotten, it may have ^.

24 **MR. GRIFFON:** So it's sort of the same
25 issues though that we did on 82, case 82 and

1 81. We have the same responses.

2 **MS. BEHLING:** And similar in when we go on
3 to 88 which is --

4 **MR. GRIFFON:** Eighty-eight, 88 is a NUMEC
5 case, right?

6 **MS. BEHLING:** -- same types of issues.

7 **MR. GRIFFON:** Same types of issues, right,
8 so we don't have to go through those.

9 **MS. BEHLING:** And 89 then we start with the
10 DOE sites. That first one is Savannah River.

11 **MR. GRIFFON:** Okay, go ahead, Kathy.

12 **MS. BEHLING:** The first one on 89.1 is what
13 we talked about this morning I believe, and
14 that was the issue of converting the recorded
15 photon dose to organ dose and the incorrect
16 DCF triangular distribution for the DCFs in
17 the workbook. And that has been corrected
18 with, I think, version one of the EDCW
19 workbook.

20 **MR. GRIFFON:** And I also have on here it's
21 the same thing, that PER review question,
22 right? So we can capture that in PER review.
23 The workbook's been revised, right?

24 **MS. BEHLING:** Right.

25 Eighty-nine point two, improperly

1 converted missed photon dose to organ dose.
2 Again, this is that LOD over two issue where
3 not assigning missed doses for anything that's
4 LOD over two. And we discussed that earlier.

5 Wanda, did you want to add anything to
6 that issue?

7 **MS. MUNN (by Telephone):** I was just going
8 to comment on that. You're fading in and out
9 badly on my almost antiquated telephone that I
10 have here.

11 **MS. BEHLING:** I'm sorry. I'll try to speak
12 up.

13 **MS. MUNN (by Telephone):** I don't believe
14 that it's you, Kathy. I think that it's
15 probably the system.

16 But I was going to mention, Mark, I
17 think I sent you a note, didn't I, about the
18 question of our taking under advisement the
19 concern about whether current workbooks cover
20 adequately instruction to the reconstructor
21 with reference to the timing of the change of
22 LODs for all of our sites?

23 **MR. GRIFFON:** Yes, yes.

24 **MS. MUNN (by Telephone):** I did send you a
25 note on that.

1 **MR. GRIFFON:** Yes, you did send me that
2 note. Yeah, you're refreshing my memory now,
3 yeah.

4 **MS. MUNN (by Telephone):** In the other group
5 we sort of came to the conclusion that this
6 particular issue is one that we probably
7 should be addressing in the subcommittee
8 rather than in a specific other work group.

9 **MR. GRIFFON:** Well, I'm not sure if this
10 overlaps, but I think it overlaps with my
11 question of those DR guidelines. Because I
12 think the DR guides have that kind of
13 information in them. Am I right or wrong on
14 that?

15 **MR. SIEBERT:** Well, I'm thinking that this
16 issue got a little confused. This is the
17 discussion as to the TBD says 40 millirem for
18 the LOD and in one of the responses we
19 discussed the fact that one of the site
20 documents discusses a 30 millirem LOD,
21 correct?

22 **MR. GRIFFON:** Yeah.

23 **MR. SIEBERT:** Okay. As far as I'm able to
24 ascertain from all the claims that you guys
25 have talked about and examined, they all used

1 what was in the TBD for the LOD. So the fact
2 that we responded in one response saying we
3 have a document saying it was 30, that doesn't
4 get into the accounting of, we haven't used
5 anything other than 40 for that timeframe. In
6 the tools it's all been 40. What was used at
7 the time was 40.

8 I think it was just being pointed out
9 that there was some documentation from the
10 site from awhile back saying that it may be
11 perhaps as low as 30. However, there's been
12 no change in the decision to use 40 as the
13 LOD.

14 **MS. MUNN (by Telephone):** That was the
15 concern of the work group. That information
16 of this sort varies so much from one site to
17 the other that there was some concern that the
18 reconstructor would have to be unusually
19 familiar with a wide variety of sites and
20 processes in order to have some assurance that
21 the LOD that was being chosen for that
22 particular site at that particular time was a
23 good one.

24 **MR. SIEBERT:** Once again, the tool had
25 exactly what was in the TBD so unless the dose

1 reconstructor would have gone in and changed
2 that, there would have been no problem. And
3 in these cases there was no problem because
4 the tool used was what's in the TBD.

5 **MS. MUNN (by Telephone):** I guess what we
6 were looking for is reassurance that that's
7 the case in all sites. That there is
8 instruction in the TBD that will be adequate
9 for the dose reconstructor to understand when
10 any changes might have occurred.

11 **MS. BEHLING:** And, Wanda, one of the other
12 things that SC&A's doing is in reviewing the
13 site-specific workbooks, as I mentioned to you
14 during our conference call, the external dose
15 workbook for many of these sites has annual
16 tabs. That's where this LOD value is listed.

17 And during our workbook review for
18 these site-specific workbooks, I'm sorry,
19 external workbooks, we are looking at each one
20 of those tabs and trying to compare that to
21 what is in the site profile to ensure that
22 when the LOD value changes from 40 to 30 or
23 20, that that is correctly entered into the
24 workbook.

25 **MS. MUNN (by Telephone):** If that's already

1 being done then --

2 **MR. GRIFFON:** That should cover it.

3 **MS. MUNN (by Telephone):** -- it seems to me
4 that the concern of the other group was, it's
5 covered by your actions.

6 **MR. GRIFFON:** I think so, Wanda, yeah.

7 **MS. MUNN (by Telephone):** We'll just proceed
8 on the assertion that any difference that is
9 significant will be picked up by SC&A's
10 review.

11 **MS. BEHLING:** That's true. Yes, and we have
12 looked at that.

13 **MS. MUNN (by Telephone):** Thank you, Kathy.

14 **MR. GRIFFON:** Okay, so 89.3.

15 **MS. BEHLING:** Eighty-nine point three,
16 failure to properly account for all missed
17 photon doses. That's the issue we were just
18 discussing. Did I skip one?

19 **MR. GRIFFON:** No, we're at 89.3.

20 **MS. BEHLING:** Oh, I believe what I did
21 incorrectly is when I was talking about 89.2,
22 I referred to this missed, when I saw missed,
23 and it was actually that response that NIOSH
24 has, that does go to the DCF issue. Because
25 the DCF issue applies to both recorded and

1 missed photons. I'm sorry.

2 **MR. GRIFFON:** So we just talked about 89.3.

3 **MS. BEHLING:** We just talked about 89.3.

4 **MR. GRIFFON:** But 89.2 we covered before, so
5 we're all right.

6 **MS. BEHLING:** Eighty-nine point four,
7 improperly converted recorded neutron doses to
8 organ dose. Same DCF issue as with the
9 photons, both recorded and missed neutrons.

10 Eighty-nine point five, now, let's see
11 here. This is one that I did go back and look
12 at. Initially, SC&A's finding was that we
13 felt that NIOSH failed to account for all
14 missed neutron doses. And I believe when we
15 first went through this matrix, NIOSH came
16 back with a response and I believe at that
17 point I was asked to go back and look at this
18 again to see if I agree with that response.

19 And I really pored over this data for
20 quite some time, and I still believe -- and
21 you can see my write up here -- I still
22 believe that between '71 and '79 there is
23 enough of a doubt and enough of a
24 justification and for claimant favorability
25 just based on the information that I saw in

1 the Savannah River site reports, and it was
2 also supported, I believe, by some of the
3 OTIBs out there. It's difficult to determine
4 based on available records.

5 I also looked at the other data that
6 was in this person's files. And I said it
7 should also be noted that throughout both
8 these employment periods, the EE's external
9 doses are relatively high with high shallow to
10 deep dose ratios. And I also quote something
11 out of OCAS TIB-007 that states if an energy
12 employee was monitored for neutron exposure in
13 '71 or later, and they did not change jobs or
14 work areas, the EE should be considered to be
15 exposed to neutrons prior to 1971.

16 So the other thing I looked at, and as
17 Scott indicated earlier today, one of the most
18 difficult things that we encounter while
19 looking at these records is trying to place an
20 individual at a certain work location. And a
21 lot of times there are codes in these records
22 that will be an HP area code. And sometimes I
23 don't even know what the HP area code
24 represents.

25 I do have all the data that NIOSH, I

1 believe, has. However, if I can go down
2 through those records and see that that HP
3 area code hasn't changed and the department
4 code hasn't changed, then based on that I have
5 to assume that that person is still working in
6 that particular area. So just based upon
7 everything that I looked at, based on the
8 TIBS, I just felt between 1971 and 1979 the
9 individual should have had missed neutron dose
10 for this case contrary to what NIOSH's
11 response was. I don't know if NIOSH wants to
12 go back and revisit this or not.

13 **MR. GRIFFON:** What was the specific, I mean,
14 Stu, on your abbreviated matrix you say that
15 you are going to provide additional
16 information to support your argument, right?
17 So I think they conceded that action, but I'm
18 just going to ask you a follow up, Kathy.
19 What convinced you for '71 through '79; was it
20 job title or building information? I mean,
21 specifically, what, because I have a little
22 note here to myself saying that it seems
23 reasonable given the job evaluation.

24 **MS. BEHLING:** I based it on job title, based
25 it on neutron-to-photon ratios, and I guess

1 other data.

2 **MR. GRIFFON:** I mean, I think we, I mean you
3 could probably flesh out that job analysis a
4 little more because if NIOSH doesn't agree
5 with that --

6 **MR. SIEBERT:** This is an individual who was
7 a rigger that was assigned to travel and
8 transportation, and it's, I mean, Stu, we do
9 owe you a more specific response to this. But
10 I know we've looked at this in the last few
11 days and the person has, I think, ten millirem
12 in '74 and 20 millirem in '78 of assigned
13 neutron. And it's one of those should you
14 assign neutrons or not questions which is a
15 very valid question.

16 We looked at it on the claimant
17 favorable side and say if we had gone ahead
18 and assigned it, would it make a difference in
19 compensability just to determine if we really
20 needed to go further on that. And it's not
21 going to make a difference in compensability.
22 Actually, when you combine it with the other
23 things that we have to do for this case like
24 the LOD over two and the triangular
25 distribution, so on and so forth, the POC

1 case?

2 **MS. BEHLING:** Ninety is also a Savannah
3 River site case.

4 **MR. GRIFFON:** I have the responses all tie
5 back to 89, so I think we have the same
6 responses there, right? And 91 as well?

7 **MS. BEHLING:** Ninety-one, again, the only
8 one on 91 that I looked at a little bit
9 further is 91.5, and again, I looked at
10 NIOSH's response, and I looked at the
11 dosimetry data, and I still couldn't convince
12 myself that potentially there was some
13 exposure to neutron for several years I
14 believe.

15 **MR. GRIFFON:** So this is the same missed
16 neutron question?

17 **MS. BEHLING:** Yeah, same issue.

18 Ninety-one point six, again, this is
19 resolved on the onsite ambient dose, and we
20 have agreement. The same with --

21 **MR. GRIFFON:** Ninety-one seven is agreement.

22 **MS. BEHLING:** -- 91.7 is an agreement.

23 **MR. GRIFFON:** Ninety-one eight, I have a
24 question mark there, so I'm not sure where we
25 stand on that one.

1 **MS. BEHLING:** Failed to properly assign
2 missed tritium based on cited guidance.

3 **MR. PRESLEY:** It's the same as 89.3.

4 **MR. GRIFFON:** No, 91.8?

5 **MR. PRESLEY:** Yeah, over in the comments is
6 what it says here.

7 **MR. GRIFFON:** There's two paragraphs of
8 comments here, 91.8. The cited guidance was
9 apparently removed from the site profile some
10 time ago is what the comment I have from
11 NIOSH, starts that way.

12 **MS. BEHLING:** I have to go back and look at
13 this one. I believe what we were saying is
14 that they didn't calculate the missed tritium
15 dose using the references that they cited.
16 Their approach did not match what the guidance
17 indicated, I believe.

18 **MR. GRIFFON:** Well, let me put SC&A to
19 review further. I think the outcome of all of
20 this is that before the October meeting I'd
21 really like to focus on the fourth and fifth
22 set. We can start the sixth set today, but
23 let's put that on the back burner. Let's
24 focus on closing out the fourth and fifth.

25 **MR. HINNEFELD:** We have a lot to do on the

1 fifth. That's a lot to provide.

2 **MR. GRIFFON:** I mean, we may not even want
3 to open up the sixth set because then we're
4 going to have to go through the same process
5 again of remembering what we said. So I don't
6 know. Let's see. Let's go through the rest
7 of the fifth set, but I certainly want to try
8 to make some good strong headway on closing
9 these two out if that's possible.

10 **MR. HINNEFELD:** Well, again, we're working
11 on them but all this technical information in
12 the fifth on, we've not provided any yet.

13 **MR. GRIFFON:** Ninety-two is another Savannah
14 River case.

15 **MS. BEHLING:** Yes, and 92.1 is again this
16 failed to properly account for all missed
17 photon doses.

18 **MR. HINNEFELD:** Are these findings, you
19 know, in my little note to myself about the
20 additional technical information we're talking
21 about hierarchy of documents, and are these
22 cases where it looks like the dose
23 reconstruction was done in a particular
24 fashion like in accordance with a procedure
25 where the site profile would make it look like

1 it should have been done some other way? Is
2 that behind these? I guess maybe I could
3 figure it out if I go back and look through
4 all these things because --

5 **MS. BEHLING:** Overall or for just one
6 specific finding?

7 **MR. HINNEFELD:** These two findings we just
8 talked about, 91.8 and 92.1. Because in 91.8
9 we felt like, well, that guidance of the site
10 profile, 4.5.4, isn't in the site profile
11 anymore, but there's this other technique that
12 describes how to do it. And as I recall the
13 rejoinder to that was that 4.5.4 was out there
14 when this dose reconstruction was done.

15 **MS. BEHLING:** Yes.

16 **MR. HINNEFELD:** And the dose reconstruction
17 was done in this other manner. So that is the
18 kind of technical, you know, that's the kind
19 of explanation that I've got a note to myself
20 as what we need to provide is how come you're
21 able to do this other technique when the site
22 profile said, this one particular technique.
23 That's the nature. And I think 92.1 may be
24 the same kind of finding based on what,
25 because that's what I've got in my notes to

1 myself. I'm sorry, it's similar to 89.3.

2 **MS. BEHLING:** Okay, 92.1 goes back to the
3 LOD over two issue, so that does not have to
4 do with which procedure was being used so --

5 **MR. HINNEFELD:** Oh, no, no, no.

6 **MS. BEHLING:** -- no. But you are correct on
7 91.8.

8 **MR. GRIFFON:** On 91.8, yeah. You're correct
9 on that one.

10 **MS. BEHLING:** You're correct there. And
11 initially I do recall now that -- you've
12 prompted my memory -- that we indicated that
13 that section was still part of the SRS site
14 profile at the time that this dose
15 reconstruction was done. And we just thought
16 that would be the more appropriate approach to
17 calculating --

18 **MR. GRIFFON:** So, Kathy, for 92.1 do we have
19 a follow-up action? Because I have NIOSH will
20 provide written response. But if it's just
21 the LOD over two question, do we need, what's
22 the follow up?

23 **MR. HINNEFELD:** Well, this is the discussion
24 we had while, you know, our initial response,
25 our initial, initial response, said, well,

1 there's this other document that says LOD
2 should be 30.

3 **MR. GRIFFON:** Right.

4 **MR. HINNEFELD:** But as Scott pointed out,
5 well, even though there may be a document that
6 said that, you know, how it ended up in the
7 response we sent, the dose reconstructions
8 were never done with an LOD 30. And so it
9 sounds like there may be an additional, you
10 know, just going back, well, making sure if
11 the LOD is, I think we just need to go back to
12 the original finding and figure out ^.

13 **MS. BEHLING:** Okay, 92.2 was another issue
14 where I was questioning whether some neutron
15 doses should have been assigned. And I read
16 through NIOSH's response, and I agree with
17 their response, and I concede this issue.

18 **MR. GRIFFON:** So SC&A agrees.

19 **MS. BEHLING:** SC&A agrees.

20 Ninety-two point three --

21 **MR. GRIFFON:** And four I have as okay.

22 **MS. BEHLING:** Right, that's okay.

23 And five is the fission product.

24 **MR. GRIFFON:** The fission product question,
25 right?

1 **MS. BEHLING:** Yes.

2 **MR. GRIFFON:** So in case 93 now this is a
3 Fernald case?

4 **MS. BEHLING:** Yes, and this looks very
5 similar to the one we were just talking about,
6 again, this LOD over two issue. This value is
7 less than LOD over two. I don't know if
8 there's an issue of what the LOD value was on
9 this particular case or not because I see your
10 response is exactly the same as the previous
11 one.

12 **MR. GRIFFON:** I thought this was not
13 treating the --

14 **MR. HINNEFELD:** Not using LOD over two as a
15 missed dose, but rather using the recorded
16 value.

17 **MR. GRIFFON:** But I think the NIOSH, I think
18 basically, Stu, you said you agree; however,
19 you have large overestimates in the internal
20 that would more than cover this.

21 **MR. HINNEFELD:** Yes.

22 **MS. MUNN (by Telephone):** The key is in the
23 last sentence, too. This small difference
24 won't affect the compensability. When we have
25 these cases where what was done at the time

1 was covered by procedures at the time that no
2 longer exist, unless there's a serious
3 question of compensability, then there's a
4 question in the mind about how much effort
5 needs to be directed toward anything other
6 than that specific explanation. Do we need
7 more than that really, Mark?

8 **MR. GRIFFON:** No, I don't think so in that
9 case, in that example you just described. But
10 I mean here the only note I have is that NIOSH
11 should confirm, and it probably goes to a
12 later finding, NIOSH should confirm that the
13 internal was an overestimate. So we just, I
14 had a note to that effect, and I think that
15 was just a matter of SC&A looking at the IMBA
16 analysis, right? Or whatever, and making sure
17 --

18 **MS. MUNN (by Telephone):** Just looking at
19 the case file?

20 **MR. GRIFFON:** Yeah, but I don't think we
21 need any more on 93.1 if, in fact, there's
22 agreement there.

23 **MS. BEHLING:** There is agreement. And this
24 issue has now been taken care of in a later
25 version of the workbook. It's done

1 automatically, and the dose reconstructors
2 don't have to look at that issue.

3 Ninety-three point two, this was
4 occupational medical dose, failed to account
5 for all occupational medical doses. This has
6 to do --

7 **MR. GRIFFON:** This was a lumbar spine
8 screening question, and NIOSH was going to
9 check into that one.

10 **MR. SIEBERT:** I think we owe you a response
11 on that.

12 **MR. GRIFFON:** Okay. So that's still an
13 outstanding. It's a site-specific question,
14 right?

15 **MS. BEHLING:** Yes.

16 Okay, 94, 94.1.

17 **MR. GRIFFON:** I have no action on this.

18 **MS. BEHLING:** Right.

19 **MR. GRIFFON:** And no action on 94.2. And
20 95.1 is a Hanford case and SC&A to review.

21 **MS. BEHLING:** And I did, and after reviewing
22 NIOSH's response I'm in agreement with the
23 fact that they did not assign the neutron.

24 **MR. GRIFFON:** Okay, so SC&A agrees.
25 Progress, we like that.

1 **MS. BEHLING:** Ninety-five point two is an
2 onsite ambient dose cannot be verified --

3 **MR. GRIFFON:** I have okay.

4 **MS. BEHLING:** We're okay there.

5 **MR. GRIFFON:** Ninety-six one is a Portsmouth
6 case. I have SC&A in agreement with NIOSH's
7 response.

8 Ninety-six two, I have a question
9 mark. I think SC&A was going to re-examine it
10 and compare with NIOSH's implementation guide?
11 I'm a little fuzzy on this one.

12 **MS. BEHLING:** Yeah, that was one I did not
13 reassess. I guess I missed this one so I'll
14 look at that.

15 **MR. HINNEFELD:** Well, I have we owe you
16 something on that. Apparently, it relates to
17 the fact that the OCAS ID --

18 **MS. MUNN (by Telephone):** Photon dose.

19 **MR. HINNEFELD:** -- yeah, OCAS ID-1 says that
20 reported shallow dose can be used directly in
21 IREP without modification.

22 **MS. BEHLING:** Right.

23 **MR. HINNEFELD:** And we wanted to say, well,
24 maybe we shouldn't actually be saying that if
25 the, because the REF is different if it's a

1 photon that's causing that dose to be shallow
2 than if it were beta particles.

3 **MS. BEHLING:** Has this been corrected with
4 OTIB-017?

5 **MR. HINNEFELD:** I don't know.

6 **MR. GRIFFON:** So NIOSH does owe us a
7 response on this one.

8 **MR. HINNEFELD:** Yes.

9 **MS. MUNN (by Telephone):** I didn't hear what
10 Kathy was saying. Something faded off into
11 the atmosphere.

12 **MS. BEHLING:** I was just asking NIOSH if
13 this might have been corrected with the OTIB-
14 017 is one of the more recent shallow dose
15 calculation procedures. And that's a fairly
16 prescriptive OTIB, a little bit complex but
17 fairly prescriptive, and so it may have taken
18 care of this issue.

19 **MS. MUNN (by Telephone):** Hopefully, ^ and
20 what we really need is words saying the right
21 thing. Maybe that may be the most direct
22 solution to closing this one.

23 **MS. BEHLING:** Yeah, I believe NIOSH is going
24 to come back with a response on this.

25 **MR. GRIFFON:** Yeah, I don't think this is

1 going to be a difficult one though.

2 Number 99 I'm up to now. Is that
3 where we are?

4 **MS. BEHLING:** Yes.

5 **MR. GRIFFON:** Ninety-seven and 98 had no
6 findings. And number 99.1 has no action, no
7 further action. Same with 99.2.

8 Ninety-nine point three I have NIOSH
9 agrees; however, points out that it's an
10 overestimating approach. Is that accurate?

11 **MR. HINNEFELD:** I think that's probably a
12 colon or...

13 **MR. GRIFFON:** One we've seen before, yeah.

14 **MS. BEHLING:** To just go back to 99.1, now
15 again, this is a procedure that is an
16 overestimating procedure, and this is an OTIB-
17 008 and OTIB-010 issue. These are the two
18 procedures that have been revised, and they
19 still are on our list to review under this
20 procedures review matrix. These are two of
21 the ones that we have not reviewed the
22 revision of these yet.

23 **MR. GRIFFON:** Okay, I'll put TIB-008 review
24 under there, but no action for this case.

25 **MS. BEHLING:** I think I alerted you to that,

1 Wanda.

2 **MS. MUNN (by Telephone):** Yeah, right.
3 We're just waiting for your review, right?

4 **MS. BEHLING:** They have not been assigned to
5 us for review yet I don't believe. I think --

6 **MS. MUNN (by Telephone):** Wasn't that one of
7 the two that we discussed as per the request
8 of the full Board?

9 **MS. BEHLING:** I'm not sure.

10 **MR. GRIFFON:** I'm not sure either.

11 **MS. BEHLING:** John, do you remember?

12 **DR. MAURO (by Telephone):** The only
13 procedure that we have been explicitly asked
14 to review, I think it's the product procedure,
15 Wanda, we spoke about earlier. Other than
16 that we have not been assigned any new
17 procedures for review or we have not been
18 asked to review these two, I guess, six and
19 eight.

20 **MR. GRIFFON:** Eight and ten.

21 **DR. MAURO (by Telephone):** Eight and ten.
22 No, --

23 **MR. GRIFFON:** They've come up on a lot of
24 findings so we should probably -- Wanda, if we
25 didn't do it, we should have our Procedures

1 group recommend those.

2 **MS. MUNN (by Telephone):** I thought we had
3 discussed it, but I'll check my minutes and
4 see.

5 **MR. GRIFFON:** Okay.

6 **DR. MAURO (by Telephone):** Right now, Wanda,
7 based on my notes, the only authorization for
8 fiscal year 2008 regarding Task Three
9 Procedure Reviews right now is just that
10 fission product OTIB which I think is either
11 53 or 54.

12 **MS. MUNN (by Telephone):** I believe it was
13 54, and I requested that on the conference
14 call and it was approved.

15 **DR. MAURO (by Telephone):** Yes, and we are
16 working on that but that's it. That's the
17 only procedure that currently is active.

18 **MS. MUNN (by Telephone):** Yeah, and now that
19 I think about it, I think we kicked around
20 both eight and ten a little bit
21 conversationally but didn't take an action
22 item. That may have been an oversight. I'll
23 certainly make a point to include that on our
24 discussion agenda for the October meeting.

25 **MS. BEHLING:** And I still owe you an updated

1 table because there was actually five
2 procedures that NIOSH has published that we
3 have not reviewed, the revision or the new
4 one.

5 **MS. MUNN (by Telephone):** Right, I don't
6 have that table yet, but --

7 **MS. BEHLING:** Yeah, I'm going to send you an
8 update to that.

9 **MS. MUNN (by Telephone):** I won't need it
10 for another week, Kathy.

11 **MR. GRIFFON:** Okay, 99.4, are you up to?

12 **MS. BEHLING:** Yes.

13 **MR. GRIFFON:** And I have NIOSH agrees;
14 however, this has been changed.

15 **MS. BEHLING:** That's fine. That's fine.

16 **MR. GRIFFON:** And case 100 is an ORNL case,
17 and I have see case -- same findings as 99 for
18 those first three.

19 **MS. BEHLING:** Right, and four, I reviewed
20 NIOSH's response, and I do agree with them.
21 We were looking at the CATI issue here, and
22 after looking at the response and looking back
23 at the records and the CATI again, I agree
24 with NIOSH's response on this one.

25 **MR. GRIFFON:** And that's it. We got through

1 the fifth set, very efficiently I might add.
2 Why don't we take a ten minute break and come
3 back and go into the sixth set. At least
4 let's make a first run through the sixth set
5 and assign actions because I'm assuming we
6 will have some follow up on some of these.
7 But let's take a break now and get into that,
8 ten minutes.

9 **MS. MUNN (by Telephone):** I'll just stay on
10 the line and be here when you get back.

11 (Whereupon, a break was taken at 2:00 p.m.
12 and the meeting resumed at 2:15 p.m.)

13 **SIXTH SET OF CASES MATRIX**

14 **MR. GRIFFON:** We're back online now. We're
15 starting the sixth set, and I think I heard a
16 discussion that you guys both have that
17 matrix?

18 **DR. MAURO (by Telephone):** I do, yes.

19 **MS. MUNN (by Telephone):** I do, too.
20 Printed in hard form, amazing preparation.

21 **MS. BEHLING:** Let me ask one question back
22 on the other matrices. When we have,
23 initially our finding is marked as under
24 review or the case ranking, should we be going
25 back and revising those under reviews to

1 something once we resolve those issues?

2 **MR. GRIFFON:** Yeah, and I'll work with you
3 on that.

4 **MS. BEHLING:** Okay, okay, just a side issue.

5 We start with the sixth set now.
6 John, I'm glad you're on because these first
7 couple cases are AWE cases and so I'm going to
8 ask for your input. Case 101 we had no
9 findings. That was a Bridgeport Brass case,
10 and again, I believe we did look at the
11 exposure matrix on this Bridgeport Brass case.

12 **DR. MAURO (by Telephone):** Yes, we did.

13 **MS. BEHLING:** And unless --

14 **MR. GRIFFON:** That was one of my questions.
15 And you did look at the exposure matrix?
16 Okay.

17 **DR. MAURO (by Telephone):** Oh, yes,
18 absolutely. That was the heart of the dose
19 reconstruction. It had bioassay data,
20 fluorometric measurements for uranium, and
21 they had film badge data that they used for
22 workers. And from that they built an exposure
23 matrix where they ^ off the 95th percentile
24 values for the bioassay data and for the film
25 badge data and used those as default values.

1 And as a result of that we thought that was an
2 appropriate approach to take for this dose
3 reconstruction.

4 **MS. BEHLING:** Okay, now we're going to move
5 on to a Harshaw case, which was our case 102.
6 And as I said this was Harshaw, let me see,
7 was this case compensated? It was
8 compensated, but I believe you still had
9 several findings here, John.

10 **DR. MAURO (by Telephone):** Yeah, we had two
11 findings. As indicated in the matrix the
12 first one was my inability -- by the way, this
13 case was based on actual film badge data.
14 There is an exposure matrix, Harshaw. Harshaw
15 does have an exposure matrix; however, in this
16 particular case there was real film badge data
17 and also bioassay data. And there was also
18 air sampling data. Now bottom line is the
19 first finding is when I tried to use the data,
20 the bioassay data, to reconstruct to check the
21 numbers for intake and doses, I have to admit
22 I had trouble doing it. I wasn't really able
23 to do it. Usually I'm able to do it, but not
24 in this case. And I could see that there was
25 a response here. Perhaps NIOSH could explain

1 the response a little bit to us.

2 **MR. HINNEFELD:** Well, I'll give it a try and
3 then Scott can correct anything I say that's
4 incorrect.

5 I believe what happened in this case
6 is that the individual data points for the
7 bioassay were not all weighted the same in the
8 ultimate analysis that was done that resulted
9 in the dose calculation. They essentially
10 under-weighted some of the later lower numbers
11 so that the excretion curve matched the data
12 data. So it was a fitting technique that the
13 dosimetrist used in order to get the excretion
14 curve to match the data.

15 So that's why it wouldn't be a
16 straightforward, and chances are, John, I
17 would not be able to reproduce this myself if
18 I were running IMBA because I don't do it that
19 often. But the internal dosimetrist at ORAU
20 who work on this all the time are a lot more
21 facile with that program than I am, and they
22 were able to get a better fit for the data by
23 making an adjustment on the weighting that's
24 provided for each of the data points. So that
25 would explain that difference there.

1 **MR. GRIFFON:** But here's an example once
2 again of why wasn't that, when you're doing a
3 unique fit like that, why wasn't that input
4 file retained and saved as part of the record?
5 I would think that should be.

6 **MR. SIEBERT:** And we agree that probably
7 should have been part of that.

8 **MS. BEHLING:** Can I ask a question here
9 about your fitting technique? Do you have
10 something -- I've probably asked this before,
11 and I know it's very difficult to do, but do
12 you have guidance for the dose reconstructors
13 as to try this approach first for your fitting
14 technique. Change your solubility, look at
15 your input dates, your potential intake dates.
16 Do you have any guidance to the dose
17 reconstructors? Are they just skilled enough
18 at this point that they look at the data, and
19 based on looking at that data they can
20 determine what needs to be tweaked?

21 **MR. GRIFFON:** It is an art more than a
22 science.

23 **MR. SIEBERT:** There's general information in
24 OTIB-060 which is the internal dose
25 reconstruction OTIB.

1 **MS. BEHLING:** Right, that's a new, fairly
2 new.

3 **MR. SIEBERT:** Yeah, that replaced the old
4 procedure that was out there. And some of
5 that generic-type information is in there, but
6 as I said, when you start getting to fitting
7 actual data, and you can't just use something
8 that is generic. It doesn't really fit that
9 well.

10 At that point really you are just
11 giving it professional judgment in where you
12 start to tweak. The individual who did the
13 case that we're talking about is one of the
14 more accomplished dosimetrists so they would
15 feel more comfortable doing some of these
16 tweaks. And I'm actually the one who went to
17 recreate what he did. And I got very --

18 John, don't feel bad about not being
19 able to recreate that. It took me some work
20 to recreate it as well, but I found a scenario
21 that's very close to it which is also
22 reasonable.

23 **MS. BEHLING:** And I guess as Mark has
24 indicated, this is where it would be so
25 helpful when we have to go back to these or

1 when this becomes a case that's being audited.
2 It really eliminates a lot of questions that
3 we might have if we could just have a few of
4 these types of files.

5 **MR. GRIFFON:** Well, then I guess the other
6 question, there is nothing procedurally that
7 tells the dose reconstructor what files should
8 be submitted as part of the case file or are
9 there? There might be. I don't know.

10 **MR. SIEBERT:** I don't believe it's
11 specified.

12 **MR. GRIFFON:** I mean, we know obviously the
13 final run that you're going to use to support
14 your dose estimate would be submitted, but --

15 **MR. SIEBERT:** But the actual dose estimation
16 run was in there. The fitting run wasn't
17 which --

18 **MR. GRIFFON:** And I'm reflecting back to the
19 one we discussed this morning, too, so I think
20 --

21 **MR. HINNEFELD:** Well, we'll have a
22 conversation about that. I think there's
23 somewhere between saving everything you tried
24 and what would be appropriate to have and just
25 only saving the bare minimum. So somewhere in

1 there.

2 **MS. MUNN (by Telephone):** So, Stu, you're
3 going to talk to SC&A?

4 **MR. HINNEFELD:** ORAU.

5 **MS. MUNN (by Telephone):** ORAU.

6 **MR. HINNEFELD:** I'm going to talk to ORAU.

7 **MS. MUNN (by Telephone):** To agree on where
8 that fine line is, right?

9 **MR. HINNEFELD:** Well, we're going to get
10 some ideas I think, and then we'll have it
11 available for conversation later on on what
12 kinds of things --

13 **MR. GRIFFON:** This is more of a general
14 issue than anything on this particular case.
15 And I think it relates to --

16 **MS. MUNN (by Telephone):** Do you track it
17 here though?

18 **MR. GRIFFON:** Yeah, dose reconstruction file
19 records retention, I guess would be the...

20 **MS. MUNN (by Telephone):** Well, that isn't
21 as specific as I would have stated it, but
22 yes, okay.

23 **MS. BEHLING:** Okay, John, do you want to go
24 on to --

25 **DR. MAURO (by Telephone):** Okay, I just

1 wanted to make sure everybody was through.

2 **MS. BEHLING:** Go ahead.

3 **DR. MAURO (by Telephone):** The second one,
4 102.2, the concern that I expressed here was
5 Harshaw, as you probably know, has a lot of
6 radium and thorium and other daughter products
7 from the uranium ore, the processing. And I
8 was surprised that there was no analysis of
9 the raffinates as part of the analysis.

10 But you may know by NIOSH's response
11 they correctly state that, well, listen, since
12 we compensated this person, there really was
13 no need to go to that extent, and I agree. In
14 other words, quite frankly, if I had the
15 presence of mind, I would realize that and it
16 was not necessary to analyze the raffinate
17 portion of the dose since he was already
18 compensated from the analysis that was done.

19 **MR. GRIFFON:** Here's my question of the
20 mini-site profile thing, and I think we
21 addressed it this morning, that we may have to
22 pick a separate case or decide to deal with a
23 Harshaw site profile review because, you know,
24 the reason to some extent for picking this
25 case was that we haven't picked one from this

1 site.

2 That was some of the rationale that we
3 use on some of the smaller sites. And now for
4 this particular case it wouldn't have an
5 effect, but on other Harshaw cases it may. So
6 we would like to see how it was treated. You
7 know, this case won't get us there, but we
8 want to review that. So the question came up
9 this morning is how do we make sure we review
10 that.

11 **DR. MAURO (by Telephone):** Mark, I read
12 through the site profile and the exposure
13 matrix for Harshaw, and it's fairly elaborate.
14 And you're correct. In this particular case
15 there was no reason for us to do what you
16 would call a mini-review. There may be other
17 cases coming down the pipeline where that
18 would occur or, of course, we could actually
19 perform a review of it if so desired.

20 **MR. GRIFFON:** Well, I think we made a
21 recommendation this morning when the first
22 Harshaw case came up that we should select
23 another Harshaw case. Because the first
24 Harshaw case actually fell in with the SEC
25 time period so we didn't have to go much

1 further on that one. And this one's over 50
2 percent, so I think we either need, the
3 recommendation was to either to pick another
4 Harshaw case or to assign the review of the
5 site profile to SC&A.

6 So I think we may, I'll bring that to
7 the October meeting as a possible subcommittee
8 motion, and then we can possibly bring it to
9 the full Board. But that's sort of where we
10 left it this morning. I don't think you were
11 on for that part.

12 **DR. MAURO (by Telephone):** Yeah, I missed
13 that.

14 **MR. GRIFFON:** Yeah, I think you missed that.

15 **MS. MUNN (by Telephone):** So did I. I would
16 think the most efficient and effective way to
17 address that would be to choose a case that
18 wasn't compensated.

19 **MR. GRIFFON:** And we should keep this in
20 mind, too, Wanda, when we do our overall case
21 selection because a lot of times we look and
22 say, we go down our list and say, oh, we
23 haven't done that site before. But if we
24 haven't done that site, and it's an
25 overestimating approach or something like

1 that, then we do this review, and we still
2 haven't done that site. You know what I mean?

3 **MS. MUNN (by Telephone):** It would be very
4 nice if you were keeping -- as Chair I know
5 you love to do these things anyway -- keep up
6 a specific list of less than generic questions
7 that we should consider the next time we do
8 case reviews.

9 **MR. GRIFFON:** I will try, and between this
10 and the Procedures group, I think we'll get
11 there.

12 **MS. BEHLING:** Okay, if we move on to case
13 103. This was Santa Susanna or ETEC or I
14 guess it has several names. I identified it
15 as a Santa Susanna case where they did a
16 partial dose reconstruction and it was
17 compensated.

18 And, John, do you want to --

19 **DR. MAURO (by Telephone):** Yeah, let me give
20 a quick overview.

21 It's a site that did a lot of things.
22 It had reactors, and it had rocket tests, and
23 it did all sorts of experimental work. So it
24 was a fairly complex site. There is no
25 exposure matrix on the NIOSH website as of

1 this date for Santa Susanna.

2 **MR. SIEBERT:** I'm sure there is.

3 **MR. HINNEFELD:** Yeah, there is.

4 **MR. GRIFFON:** There is now.

5 **DR. MAURO (by Telephone):** There is now?
6 Okay.

7 **MR. HINNEFELD:** Maybe not when this was
8 done. I don't know.

9 **MR. SIEBERT:** It was released I think about
10 four-to-six months after this case was done.

11 **DR. MAURO (by Telephone):** Okay. In this
12 case though the worker was monitored for
13 external exposure; and therefore, the external
14 doses were based on his external record, and
15 we have no comments on that. But he did not
16 have any bioassay data. And in this case what
17 was done was they used OTIB-018, which is one
18 of the procedures that I think are in the
19 queue for review during our Procedure meeting.

20 Wanda, are we going to be meeting on
21 that Tuesday morning? On October, what's
22 that, October 2nd?

23 **MS. MUNN (by Telephone):** We are indeed, and
24 I expect it will be most of the day.

25 **DR. MAURO (by Telephone):** And I think that

1 might be the first one on the agenda. So I
2 would say to the folks one of our concerns is
3 with the, what we call the OTIB-018-slash-
4 OTIB-033 approach to dose reconstruction for
5 internal emitters. And you could see there's
6 -- the degree to which you want to go into it
7 now or hold off on this as more of a generic
8 item. That's certainly up to you folks.

9 **MR. GRIFFON:** We can probably hold off on
10 it.

11 **MS. BEHLING:** If I can just ask a few
12 questions of NIOSH on this particular issue.
13 The OTIB-018 -- and the reason I'm asking this
14 question is we're saying -- it's sort of
15 strange on this particular case. On one
16 finding we're saying this may be too
17 conservative, too conservative to use for a
18 compensable case. On the other hand we're
19 saying you really need to -- in our mind when
20 you look at this OTIB-018 procedure, this is
21 looking at air monitoring programs at the
22 various facilities.

23 And just based on what we've been
24 seeing so far in our site profile reviews,
25 we're often questioning how, is the air

1 monitoring program at these various sites
2 adequate enough and is there enough BZA
3 samples being done as opposed to general air
4 sampling that you can really say with
5 confidence, yes, we can look at this site and
6 apply OTIB-018 to it.

7 I don't believe that OTIB-018 has any
8 kind of a listing of these are the facilities
9 that it can apply to. Because there was a
10 NUMEC study that was done. It was like a two
11 year study that they compared BZA samples to
12 general air samples, and there was quite a bit
13 of difference. And so you really do have to
14 question each individual facility and whether
15 their air monitoring program is adequate. And
16 so that's one aspect of the OTIB-018.

17 But I see in your response here that
18 you said that OTIB-018 was not necessarily
19 supposed to represent an overestimating
20 procedure. And I guess I'm still a little
21 confused because at one of the last meetings
22 it seemed very obvious to me, in fact, this
23 was done in this particular case, when you
24 combine OTIB-018, which is this air monitoring
25 procedure, with OTIB-033, 33 was written as a

1 separate procedure.

2 And it seems as if once you apply a
3 graded approach that's described in OTIB-033,
4 I got the sense that you could compensate with
5 the combination of those two procedures.
6 However, Liz corrected me stating that's not
7 the case. But right here is an example of a
8 case where that was done, and so --

9 **MR. GRIFFON:** And so this case was
10 compensated.

11 **MS. BEHLING:** This case was compensated. It
12 was compensated by using OTIB-018 with a
13 combination of 33 using a graded approach.
14 And I believe Liz did also stipulate that
15 early on they did use it for compensating, but
16 they're not doing that any more. So I was
17 just trying to get a more clear understanding
18 of TIB-018, TIB-033, how ORAU and NIOSH use
19 this especially in light of your response to
20 103.1.

21 **MS. BRACKETT (by Telephone):** Just to
22 respond on this particular issue of this
23 response because I wrote this response. I'm
24 not saying that it's not an overestimate. The
25 point was it's not necessarily an overestimate

1 for all cases. It's not an all encompassing
2 overestimate. It has limitations, and those
3 are detailed in the OTIB as part of what
4 potential for exposure a person could have and
5 still have this be applicable to. That was
6 the only point I meant there.

7 **MS. BEHLING:** Okay. Would you -- and again,
8 I'm just trying to get an understanding.
9 Would you use, would you ever use just OTIB-
10 018 to compensate or don't you try to even
11 make that distinction?

12 **MS. BRACKETT (by Telephone):** It should not
13 be used for compensable cases.

14 **MS. BEHLING:** Okay. And if it's coupled
15 with OTIB-033, it still should not be used for
16 compensable cases?

17 **MS. BRACKETT (by Telephone):** No, it's not
18 intended, it's still intended as an
19 overestimate for the cases to which it
20 applies.

21 **MR. HINNEFELD:** Has that always been the
22 case, Liz?

23 **MS. BRACKETT (by Telephone):** No.

24 **MR. HINNEFELD:** Okay, so that has not always
25 been the case.

1 **MR. GRIFFON:** This may be similar to TIB-004
2 where it was used --

3 **MR. SIEBERT:** It's the same idea as TIB-004
4 where it was older cases where we were prior
5 to a TBD release.

6 **MS. BEHLING:** I guess it's just sometimes
7 difficult for us to keep up with what is being
8 compensated and what isn't.

9 **DR. MAURO (by Telephone):** By the way, Liz,
10 that statement you just made is very important
11 for the conversation we're going to have I
12 guess on October 2nd. I did not realize that.
13 I interpreted OTIB-018-slash-OTIB-033 as the
14 tool to use for either compensation or denial
15 as your best effort at trying to do a
16 realistic internal dose assessment when you
17 don't have bioassay or air sampling data. And
18 your basically using the regulations, the MPCs
19 and the time period as the basis. But that
20 may go along way toward solving our concerns.

21 But I'm not sure because I know there
22 is some aspects to the use of MPCs and the air
23 sampling data that says that you have control
24 over the airborne dust loadings. And I think
25 that discussion is going to be interesting,

1 and I'm looking forward to it on the 2nd.

2 **MS. BEHLING:** Also, it just seemed logical
3 to me the fact that you would generate a
4 second OTIB, OTIB-033, to do this graded
5 approach. It seemed if you weren't going to
6 compensate, you would have put OTIB-018 and 33
7 it would be one procedure.

8 It just seemed more logical to me that
9 the reason OTIB-033 was designed was so that
10 it could be used for compensation. And
11 apparently, that was done because, in fact, we
12 have quite a few cases where they were
13 compensated using that approach. But, okay, I
14 think you've answered the question.

15 **MR. GRIFFON:** So the larger discussion will
16 occur in the other meeting on October 2nd I
17 guess.

18 Okay, 104.

19 **DR. MAURO (by Telephone):** Do you want me to
20 grab this, Kathy?

21 **MS. BEHLING:** Yes, go ahead.

22 **DR. MAURO (by Telephone):** Yeah, 104 is a
23 case with a worker at Superior Steel. There
24 is an exposure matrix. Superior Steel
25 basically rolled uranium and I believe thorium

1 also -- I'm not sure -- slabs of steel. It's
2 a metalworking facility. And there are two
3 comments here that have to do with dose, the
4 first one has to do with dose conversion
5 factors.

6 In effect what was done at the site
7 was here's a person working at the site where
8 he's exposed to airborne radioactivity and
9 also deposited radioactivity on surfaces. And
10 what was used was the exposure rates measured
11 at Simonds Saw for that pathway. And we think
12 that's a very conservative way to do it.
13 Simonds Saw did have very high levels of
14 airborne and deposited activity.

15 My observation was that they used,
16 that once you have the airborne, let's say,
17 dose in MR per hour, let's say, Roentgens, MR
18 per hour, that you convert that to the organ
19 dose by using the dose conversion factors in
20 Appendix B to OCAS-1. I was critical here
21 saying that, well, it looks like that they
22 used the isotropic dose conversion factor.
23 And in fact, your comment, when I read your
24 comment, I think I agree.

25 Kathy, it looks like the measurements

1 that were made here were from film badges
2 hanging from the rafters --

3 **MS. BEHLING:** Yes.

4 **DR. MAURO (by Telephone):** -- which is like
5 a point in space as opposed to worn on a
6 person's body. So I think the iso dose
7 conversion factors are the right ones to use,
8 and I was incorrect.

9 **MS. BEHLING:** That's correct. We conceded
10 that issue in the past, so yeah.

11 **DR. MAURO (by Telephone):** Okay, so we
12 withdraw this comment. They are correct. We
13 were wrong.

14 Now the second one, 104.2, I'm not
15 sure. I have to tell you I'm at a loss. As a
16 separate issue related to dose, on ambient
17 dose -- help me out a bit here. I'm not quite
18 sure what this refers to.

19 **MS. BEHLING:** Reviewer questions selection
20 of DCF based on ambient dose equivalent. This
21 also may be an isotropic issue which we have
22 also conceded. Because Stu had indicated that
23 they often hung from, not a post, but from
24 something in the environment. And so the --

25 **MR. GRIFFON:** Well, I don't think you can

1 both concede there because NIOSH is conceding
2 here, too, if I read their response correctly.
3 Because of the small, favorable impact, OCAS
4 proposes no action.

5 **DR. MAURO (by Telephone):** Give me one
6 second. Let me open up the book, and it might
7 help a bit.

8 **MR. HINNEFELD:** I believe this has to do
9 with the rem to organ dose DCF versus the
10 exposure to organ dose DCF. I believe that's
11 the origin of --

12 **MS. BEHLING:** Yes, it's not the isotropic.
13 It has to do with a DCF, whether you're
14 selecting HP-10 or you're selecting exposure.
15 So you can concede.

16 **MR. HINNEFELD:** Okay.

17 **MR. GRIFFON:** And, I mean, if I'm reading
18 this correct, I haven't looked at this closely
19 enough to know, or it's been awhile, but I'm
20 assuming that the dose conversion factors that
21 were used versus the one that should have been
22 used were very, not very far off and wouldn't
23 have affected the overall dose very much. Is
24 that what you're saying, Stu?

25 **MR. HINNEFELD:** I don't have them with me.

1 **DR. MAURO (by Telephone):** I think I see.
2 I'm looking at the book right now, and it has
3 to do with whether or not the readings that
4 were your starting point for determining the
5 dose, were they HP-10s or were they ambient
6 dose? Because which, in other words, when
7 selecting your dose conversion factor out of
8 Appendix B, you either use ambient dose versus
9 HP-10 dose. And I guess the comment was that
10 we weren't quite sure how that all worked.

11 It sounds like you've got the echo
12 going again. Hello?

13 **MS. BEHLING:** We're still here.

14 **DR. MAURO (by Telephone):** Okay, I heard all
15 sorts of echoes and funny noises. Am I okay
16 again?

17 **MR. GRIFFON:** Yeah, you're okay.

18 **DR. MAURO (by Telephone):** I don't know if
19 you heard my question.

20 **MS. BEHLING:** We did. We're just waiting
21 for Stu to concede.

22 **MR. HINNEFELD:** Yeah, my understanding is
23 that the finding gets to whether you use the
24 exposure to organ dose or rem to organ dose in
25 the dose conversion factor. And we believe

1 across that before, too, I think. So I don't
2 know.

3 One-o-four point seven we certainly
4 need a specific response on, the transuranic
5 question, and that's it. So I guess we're on
6 to 105.

7 **MS. BEHLING:** One-o-five, and I'm going to,
8 Doug, I think did this case, and so maybe I'll
9 let him go through some of these findings.

10 **MR. FARVER:** One-o-five point one,
11 improperly converted photon doses
12 inappropriate DCF ranges. And this has to do
13 with the triangular distribution ranges
14 max/mins like we've been talking about. And
15 this has all been corrected, I believe, in the
16 newer workbooks.

17 **MS. BEHLING:** The only note that I wrote
18 down here is I see in NIOSH's response that
19 you did go ahead and make a correction using
20 the AP geometries, but then you also went on
21 and made corrections to X-ray and shallow
22 doses. And we really didn't contest the X-ray
23 or shallow dose component of this. And I was
24 just curious as to what --

25 **MR. GRIFFON:** Well, I think this is a

1 question of falling under a PER, and if you're
2 going to do it, you re-do the whole case.

3 **MR. HINNEFELD:** So everything was being
4 done. All these changes were being
5 incorporated in with the PER evaluation that's
6 laid out here.

7 **MS. BEHLING:** Okay, that explains it.

8 **MR. FARVER:** One-o-five point two, similar,
9 improperly converted missed photon doses and
10 DCF ranges. That's the same thing with the
11 workbook.

12 One-o-five point three, this is the
13 LOD over two, failure to account for missed
14 photon dose, and once again this has been
15 addressed and it's been corrected in the newer
16 workbook.

17 One-o-five point four, same thing for
18 neutron DCFs, should have been corrected.

19 One-o-five point five, occupational
20 medical dose improperly converted to organ
21 dose.

22 **MR. GRIFFON:** Wait, 105.4, that was revised,
23 right? I just want to make my notes complete
24 here.

25 **MR. FARVER:** It's been changed in the

1 workbook.

2 **MR. GRIFFON:** And the workbook has been
3 revised.

4 **MS. BEHLING:** Yes, rev. 1, rev. 1 of that
5 EDCW.

6 **MR. FARVER:** I believe I saw a new workbook
7 as well.

8 Medical dose, it looks like they chose
9 off the wrong table or chose the wrong organ,
10 chose for lungs instead of esophagus.

11 **MS. BEHLING:** I see no NIOSH response.

12 **MR. GRIFFON:** We don't have a NIOSH response
13 on that.

14 **MR. FARVER:** It just looks like they chose
15 the wrong value.

16 One-o-five point six, did not account
17 for internal doses from fission products.

18 **MS. BEHLING:** This is the same fission
19 product thing.

20 **MR. FARVER:** Is this the same one from
21 before?

22 **MS. BEHLING:** Yes. Or is it?

23 **MR. GRIFFON:** It's slightly different.

24 **MR. SIEBERT:** It's slightly different.

25 **MR. GRIFFON:** Yeah, I thought it was

1 slightly different. Maybe we can hear NIOSH's
2 response on this. We did recalculate it if I
3 look right here, yeah.

4 **MS. BEHLING:** Even the approach, I believe
5 that we, that you're using was improperly used
6 this time because you should have used
7 Ruthenium-106. Is that correct?

8 **MR. FARVER:** For both of them, I believe.
9 It was a twin cancer, two cancers. And I
10 believe it should have been used on both
11 organs, and I think that's what you're saying
12 here. You went back and recalculated it for
13 the skin.

14 **MR. SIEBERT:** Yeah, the skin was higher,
15 actually the ^ wasn't, but once again, you can
16 only really be exposed to one radionuclide so
17 you want to use one or the other.

18 **MR. FARVER:** I think that was more of a
19 consistency. And that's it for 105.

20 **MR. HINNEFELD:** I think what the summary of
21 our response here is that we agree that --

22 **MR. SIEBERT:** We should have used Ru-106.

23 **MR. HINNEFELD:** -- right. But the impact is
24 --

25 **MR. GRIFFON:** Is marginal, right. And on

1 105, because I have a couple notes asking
2 what, was this a close POC --

3 Kathy, do you know the POC on that one
4 offhand, 105? Was that close to --

5 **MR. FARVER:** Thirty-five point nine eight.

6 **MR. GRIFFON:** So it was a little lower.

7 **MR. HINNEFELD:** That's pretty far to go,
8 yeah.

9 **MR. GRIFFON:** So on, I don't expect, but I
10 would think you might want to review NIOSH's
11 response on that one. Have you had a chance
12 to digest that? Or are you satisfied with
13 that?

14 **MS. BEHLING:** On which?

15 **MR. GRIFFON:** One-o-five point, the last
16 one, 105.6.

17 **MR. HINNEFELD:** That's, well, our response
18 that we --

19 **MR. GRIFFON:** Yeah, we see your response,
20 yeah.

21 **MR. SIEBERT:** We agree there's no impact.

22 **MR. GRIFFON:** Although they say they did not
23 agree with the vocal cord, I mean, you're okay
24 with signing off on this or you want time to -
25 - I'm just asking. It seems okay to me, but I

1 just didn't know if you want to --

2 **MS. BEHLING:** And this is also an issue that
3 you're going to be addressing, this fission
4 product issue as we had talked about, is going
5 to be something that's going to be revisited
6 anyway with a tool and additional workbook,
7 but I don't know if you have -- I guess I'm a
8 little confused. I thought that our comment
9 had to do with that they did not use the
10 Ruthenium-106 or was that incorrect? Am I
11 wrong?

12 **MR. GRIFFON:** I think maybe look at this
13 response a little closer and come back because
14 you can't do it real time.

15 **MS. BEHLING:** Okay, if we want to go on to
16 106. This again is a Savannah River site
17 case, and let me just look at some of the up
18 front information. It was a best estimate.
19 It was compensated, and I think we're going to
20 see a lot of repeats on these findings so we
21 can get through them quickly. But 106.1,
22 again, improperly converted recorded photon
23 dose because of this DCF issue which we've
24 beaten to death.

25 One-o-six point two, same thing, DCF

1 issue applies to both recorded and missed
2 photons. And this discusses the missed photon
3 dose.

4 One-o-six point three, again, this is
5 the less than LOD over two value. And again,
6 SC&A is under the impression that we should
7 continue when we see these findings to
8 identify them even though these have been
9 discussed.

10 **MR. GRIFFON:** Yes. And we don't have to
11 spend a lot of time with them, but we can just
12 go through them once and we're off the --

13 **MS. BEHLING:** Okay. And the same thing
14 with, you know, I hear a lot, what kind of an
15 impact did that finding have. And even though
16 we recognize up front a lot of times that it's
17 going to have a very marginal impact, we're
18 under the impression we should still be
19 identifying this because there may be
20 procedural issues or something along those
21 lines. So it's not like we're trying to
22 nitpick. We're just trying to look at each
23 and every one of the findings.

24 One-o-six point four, let's see, this
25 is a fission product again. See here. Is

1 this different? Because I see here did not
2 properly account for all internal doses from
3 fission products.

4 **MR. FARVER:** Oh, this is where he had a
5 couple cesium whole body counts, and they
6 exceeded the fallout levels that were
7 documented in the TBD. And they did not
8 account for those.

9 **MR. GRIFFON:** This is a compensable case.
10 It's a compensable case. That was it. It's
11 the phrase down there about four paragraphs
12 down.

13 **MS. BEHLING:** Yeah, at the end. Okay, so
14 we're good with that.

15 **MR. GRIFFON:** We're on 107.1.

16 Wanda, are you out there?

17 (no response)

18 **MR. GRIFFON:** Wanda?

19 (no response)

20 **MR. GRIFFON:** John?

21 **DR. MAURO (by Telephone):** Yes, I'm still
22 here.

23 **MR. GRIFFON:** Wanda, are you there?

24 (no response)

25 **MR. GRIFFON:** Okay, 107.1.

1 **MS. BEHLING:** Again, this is another
2 Savannah River site case. Just to give you,
3 this was a best estimate, and this case was
4 not compensated. This was denied. We're
5 going to see the same things because in all of
6 these they're using these older workbooks,
7 either the version 0.015 or 0.021. It's not
8 until 1.0 that these have been corrected. So
9 the first two are the recorded missed photon
10 dose DCF issues, and 107.3 is the less than
11 LOD over two.

12 One-o-seven point four, okay, reviewer
13 believes NIOSH assumptions regarding internal
14 dose from uranium exposure are neither
15 scientifically sound nor claimant favorable.
16 Maybe NIOSH could explain their response, and
17 then we can --

18 **MR. HINNEFELD:** Well, over a monitoring
19 period, I mean, I think the nature of the
20 finding was how do you know that this was a
21 chronic intake? This looks consistent with an
22 acute intake quite a lot earlier than this.
23 And so our response is we believe it's chronic
24 just based on the relative results. I mean,
25 they're both relatively low. I think the

1 second one's higher than the first one. I'm
2 not sure either one's above LOD over two
3 level, and that they're spaced about a year
4 apart which is a routine, what you'd expect
5 for a routine sampling. So, but then we did
6 say, okay, if we did do an acute, and that
7 there would be very little change in the dose
8 between an acute way back here that then
9 resulted in this bioassay data, and a chronic
10 over the period of time that resulted in the
11 two bioassays. So that's the point. There's
12 almost no difference in whether it was an
13 early acute or a chronic over the time of
14 employment. And that based on, in my mind
15 really, the fact that the samples were about a
16 year apart, to me sounds like a routine
17 sampling.

18 **MS. MUNN (by Telephone):** Can anyone hear
19 me?

20 **MR. GRIFFON:** Yeah.

21 **MS. MUNN (by Telephone):** Well, I'm sorry.
22 I thought I was going to do something really
23 clever and get on my wireless and stick my
24 Tooth in my ear so that I could talk and move
25 at the same time. But apparently I just, you

1 couldn't hear me, and in trying to get you to
2 hear me, I cut myself off. So I'm not sure
3 where we are now. You were asking me a
4 question, and I wasn't answering because I was
5 trying to answer and nothing was happening.

6 **MR. GRIFFON:** I was asking if you were on
7 your surfboard. But we're on case 107 now,
8 107.4, Wanda.

9 **MS. MUNN (by Telephone):** Boy, that was
10 fast.

11 **MR. GRIFFON:** Yeah, we ran through some.

12 **MS. MUNN (by Telephone):** I left off 106
13 somewhere, where we were talking about more of
14 the same on the DCF.

15 **MR. GRIFFON:** Yeah, we're running into a lot
16 of the same kind of findings so we're able to
17 go through them fairly quickly.

18 **DR. BRANCHE:** You miss five minutes, you
19 miss your whole life.

20 **MS. MUNN (by Telephone):** Yeah, I think
21 that's it, so 107.

22 **MR. GRIFFON:** Yeah, 107.4 specifically.

23 **MS. MUNN (by Telephone):** Got it. Sorry to
24 interrupt, Stu. Thank you.

25 **MS. BEHLING:** I think what Stu was saying

1 sounds reasonable, but maybe we can just look
2 at this and I don't know if there's any --

3 **MR. GRIFFON:** Yeah, it seems --

4 **MS. BEHLING:** -- we can run these by
5 ourselves.

6 **MR. GRIFFON:** -- we've been doing this acute
7 and chronic before, but you can look at it for
8 this case.

9 **MS. BEHLING:** Yeah, we'll look at it again.

10 One-o-seven point five, dose data
11 entered into IREP incorrectly. And this is
12 just a matter of it should have been entered
13 electrons greater than 15 keV, and I believe
14 it was entered as electrons less than 15 keV.

15 **MR. GRIFFON:** And the net result would have
16 been lowering the POC, so it's not an issue,
17 but you're agreeing with the point.

18 **MS. BEHLING:** One-o-seven point six, review
19 questions why Plutonium-238 was not included
20 in the calculation of the environmental
21 internal doses. I see NIOSH's response was
22 that it was included in with the occupational
23 dose which, if it was, then I concede this
24 issue, and I'm sure it was, but I just want to
25 go back and look at that.

1 **MR. HINNEFELD:** Yeah, the thought process
2 here is that if the person has a monitoring
3 record for Plutonium-238, that bioassay
4 monitoring would show all of his intake
5 whether he received it from environmental
6 emissions or from ^, and it would be
7 incorporated in.

8 **MS. BEHLING:** Sure, and I agree with that.
9 I guess I just didn't realize, and sometimes
10 when you combine these entries into IREP, you
11 have to tease everything out, and I just may
12 have missed that one.

13 **MR. GRIFFON:** What was -- well, what was the
14 organ of interest for this case? I guess I
15 was surprised to see it would have resulted in
16 less than one millirem for these environmental
17 doses. It could have been, it depends on the
18 organ.

19 **MR. HINNEFELD:** Yeah, to any metabolic organ
20 or non-metabolic.

21 **MS. BEHLING:** Red bone marrow and prostate.

22 **MR. HINNEFELD:** It was probably the
23 prostate.

24 **MR. SIEBERT:** Well, remember, you're talking
25 only '77 through '81 that you would be

1 assigning environmental.

2 **MR. GRIFFON:** Four years of environmental?

3 **MR. SIEBERT:** Four years of environmental.

4 And I don't believe --

5 **MR. GRIFFON:** Per year they would have been
6 below one millirem?

7 **MR. SIEBERT:** They would have been very
8 small, and I believe the cancer diagnosis was
9 relatively soon after that, so I'm not
10 surprised it was less than one. I did the
11 calculations so I can tell you they're
12 obviously correct.

13 **MS. MUNN (by Telephone):** And one millirem
14 isn't likely to change it.

15 **MR. GRIFFON:** Well, that's reassuring. I
16 mean, I guess it's also part of the
17 environmental workbook review. We're
18 reviewing that site profile so, you know, it
19 comes up in the environmental side of our
20 review. So I'm not going to harp on it here.

21 **MS. BEHLING:** Yeah, and in fact, the
22 environmental workbook that you're using is
23 also a very nice workbook and is, I think,
24 very helpful to the dose reconstructors. It
25 seems to be an accurate, good workbook.

1 **MR. GRIFFON:** So you're going to --

2 **MS. BEHLING:** Yeah, I'm going to look at
3 that one one more time.

4 One-o-eight, DR did not include 1945
5 recorded dose of 20 millirem. It shows you
6 how closely we look at this data.

7 **MR. FARVER:** I think the point here is that
8 there was no 1945 dose in the IREP. It looks
9 like NIOSH's response is it was in the
10 workbook but was kicked out because it was,
11 the uncertainty? Dosimeter error was out of
12 range.

13 **MR. SIEBERT:** Right.

14 **MR. HINNEFELD:** Can you elaborate on that a
15 little bit?

16 **MR. SIEBERT:** I'm not necessarily the best
17 person to do that, and unfortunately, there's
18 no better person on the phone.

19 The way the Monte Carlo calculations
20 are worked with the OTIB-012 is if your errors
21 are outside of a range, such as I think it's
22 less than five percent or outside 130 percent,
23 something like that, we have to do additional
24 calculations to make sure. You get an error
25 message, and you have to do additional

1 calculations to get it within the appropriate
2 range. In this case the '45 fell outside the
3 range, and --

4 **MR. FARVER:** How would you identify what
5 that error range is for that dosimeter? Based
6 on the dosimeter?

7 **MR. SIEBERT:** It's based on the dosimeters
8 for that year and, yeah, it's rolled up
9 together. It's all information that's in the
10 tool, and the external dosimetry principal
11 external dosimetrist is really going to be the
12 better person to answer on that.

13 **MR. GRIFFON:** I think we should look at that
14 closer, just as a, not so much this 20
15 millirem but how that tool works and what it's
16 doing.

17 **MS. BEHLING:** And I have looked at that tool
18 to some extent, and actually what's nice about
19 that tool is it makes things a little bit
20 faster for the dose reconstructor because they
21 don't have to run the Monte Carlo each and
22 every time because they've gone into OTIB-012,
23 and they've run a range or an uncertainty, a
24 five percent uncertainty or they've done, as
25 he said, 130 percent uncertainty. And then

1 you can select from a table as opposed to
2 having the run the Monte Carlo. But this
3 error band for this dosimeter went outside
4 that range I believe is what you're saying.
5 Okay, that makes sense.

6 **MR. GRIFFON:** And you've reviewed TIB-012
7 and the workbook.

8 **MS. BEHLING:** Yes, yes.

9 **MR. GRIFFON:** Have we discussed that in the
10 Procedures review?

11 **MS. BEHLING:** I don't know.

12 John, do you know if OTIB-012 is in
13 Supplement 3?

14 **DR. MAURO (by Telephone):** I'm sorry, could
15 you repeat the question?

16 **MS. BEHLING:** OTIB-012, I know that we
17 looked at the OTIB-012 workbook along with the
18 procedure, and I don't think we've discussed
19 that yet.

20 And Wanda, you can help us out here,
21 too, because, but I believe that might be
22 either in Supplement, probably in Supplement
23 3.

24 **DR. MAURO (by Telephone):** Yeah, we have not
25 reached that point in the Procedure reviews,

1 no.

2 **MS. BEHLING:** But we have reviewed these --

3 **MR. GRIFFON:** So I'm going to defer this
4 because I don't think 20 millirem is worth us,
5 for the DR review here, I'm going to defer the
6 generic question about the TIB-012 workbook to
7 the Procedures review work.

8 **MS. MUNN (by Telephone):** I think that's
9 appropriate.

10 **MS. BEHLING:** I was going to say let's make
11 sure Wanda's hearing this.

12 **MS. MUNN (by Telephone):** You're right.
13 Twenty millirem is -- let's get realistic.

14 **MR. HINNEFELD:** Yeah, the other point is
15 this a compensable claim, isn't it?

16 **MS. BEHLING:** Is it?

17 **MR. HINNEFELD:** What number are we on?

18 **MS. BEHLING:** One-o-eight.

19 **MR. HINNEFELD:** Yes, it's a compensable
20 claim so we're going to have to do a lot more
21 work to figure that 20 millirem in. It's
22 already compensable.

23 **MR. GRIFFON:** We're not going to bother this
24 case.

25 **MR. FARVER:** I guess the concern was if

1 you're basically throwing out the 1945
2 dosimeter data because it's all out of range
3 or is it just this dosimeter result is, the
4 uncertainty is very high.

5 **MR. HINNEFELD:** Well, the uncertainty that
6 was available for '45 probably because there
7 were only a few readings I would guess. I
8 don't know.

9 **MR. SIEBERT:** I think there was only one.

10 **MR. HINNEFELD:** It makes it outside the
11 range for this tool where you don't have to
12 run Monte Carlos.

13 **MR. FARVER:** So essentially you'll be
14 pulling out all the 1945, whether it be one or
15 two dosimeters or --

16 **MR. SIEBERT:** We'd be throwing out all the
17 measured 1945. All the missed was --

18 **MR. FARVER:** Right, I'm just saying all the
19 measured would have --

20 **MR. HINNEFELD:** Well, it kicked out in this
21 case because the uncertainty has to be within
22 a certain range in order to use this shortcut.
23 Since we can't use that shortcut, we can put
24 it back in --

25 **MR. GRIFFON:** But you don't need to for this

1 case.

2 **MR. HINNEFELD:** But we don't need to.

3 **MR. FARVER:** But in this case you wouldn't
4 need to.

5 **MR. HINNEFELD:** Right, right. But there are
6 methods to put that dose back in.

7 **MS. BEHLING:** On to 109, no findings.

8 **MR. FARVER:** One-ten point one, that is DR
9 does not properly account for all the missed
10 photon dose and this has to do with blanks and
11 zeros and the way the data is entered into the
12 workbook.

13 **MR. GRIFFON:** What site is this? I'm sorry.

14 **MR. FARVER:** This is --

15 **MS. BEHLING:** Hanford.

16 **MR. FARVER:** Sometimes I have seen zeros
17 entered, and it works fine. Sometimes there's
18 blanks entered, as in this case, and it does
19 not work fine. It looks like a data entry
20 inconsistency.

21 **MR. GRIFFON:** And we don't know in this case
22 what was in the hard copy record. I mean were
23 they blanks or --

24 **MR. FARVER:** I think they were blanks, but
25 at that time I thought blanks could be zeros.

1 In other words it could still be monitored
2 because it gives a date, but it does not give
3 a result in there.

4 **MR. HINNEFELD:** I believe in our response we
5 agreed with the finding, don't we? Aren't we
6 on 110.1?

7 **MR. FARVER:** Yes.

8 **MS. BEHLING:** Yeah, you agree.

9 **MR. GRIFFON:** This whole thing is being
10 redone because it's Super S anyway.

11 **MR. HINNEFELD:** It's Super S so it's going
12 to be reworked.

13 **MR. GRIFFON:** So you're going to rework this
14 in accordance with the newest, latest
15 procedures of everything else, right?

16 **MR. HINNEFELD:** Yeah.

17 **MR. FARVER:** So I think that's probably been
18 addressed and corrected or is it in process of
19 being corrected?

20 **MR. HINNEFELD:** It will be corrected when
21 the case, the case is going to have to be
22 reworked. And so it will be corrected at that
23 time.

24 **MS. MUNN (by Telephone):** I have to ask this
25 question again because every time we go into

1 this zero badge reading thing I get back again
2 to this question of how frequently these badge
3 readings are because if we're talking about
4 monthly or bimonthly badge readings, we can
5 expect two or three of those a year because
6 they're not there. They're on vacation.

7 And it's never been clear to me
8 whether the dose reconstructor knows when
9 those vacation periods are and takes that into
10 account or whether we just go ahead and assign
11 the LOD over two because we decided we're
12 going to do that. Do we check?

13 **MR. HINNEFELD:** Well, if we know. Sometimes
14 you'll see a record that'll have a notation on
15 it, vacation. Sometimes you'll see that.

16 **MS. MUNN (by Telephone):** But most of the
17 time they just say zero, right?

18 **MR. HINNEFELD:** Or blank. In those
19 instances we generally consider a zero, that
20 they were monitored and missed, and there was
21 no result. Now --

22 **MS. MUNN (by Telephone):** So they get LOD
23 over two.

24 **MR. HINNEFELD:** -- so they have a couple
25 weeks of vacation. So if they were changed

1 weekly, and they have a couple or three weeks
2 of vacation, you'll have two or three episodes
3 where that will happen theoretically where
4 they weren't there that week. And based on
5 our interpretation you would record a zero for
6 their badge that week. This is in a context,
7 they're going to have 49 other readings that
8 year that are either going to be zeros and be
9 included in the missed or will have a measured
10 dose on it. So in light of 52 badge
11 exchanges, the three extras, if there are
12 three extras we put in there, you know, it
13 just doesn't matter that much I don't think.

14 **MR. GRIFFON:** That's right, not a big thing.

15 **MS. MUNN (by Telephone):** It's always
16 bothered me that the possibility of LOD over
17 two being assigned when I know people are gone
18 three or four weeks out of the year routinely
19 during the larger portion of those.

20 **MR. FARVER:** I think the point of this
21 finding was it's more of a consistency. Like
22 sometimes the workbook would have zeros in it.
23 Sometimes it'll have blanks, but the records
24 will all be blanks. I believe Hanford had
25 blanks in their records.

1 **MR. SIEBERT:** It depends on the timeframe.

2 **MS. BEHLING:** Exactly.

3 **MR. FARVER:** Some of the dose reconstructors
4 I believe or someone who was entering data put
5 in zeros for the blanks. In this case they
6 left the blanks. If there's blanks here, then
7 your algorithm won't work correctly to sum the
8 zeros.

9 **MR. HINNEFELD:** So this is 110.1. And the
10 finding really gets to is the data, it almost
11 sounds like it's the data entry, because the
12 data is entered by Data Entry.

13 **MR. FARVER:** Yes, I don't know who put the
14 zeros in instead of blanks.

15 **MR. HINNEFELD:** The dose reconstructors
16 don't normally populate those workbooks with
17 the data, the original reads. Those are done
18 by Data Entry people. And are their
19 instructions clear about when is a blank a
20 zero, and when is a blank a blank. Is that
21 it?

22 **MR. FARVER:** Yes. It's a consistency. Has
23 it been consistent throughout.

24 **MS. BEHLING:** And as Doug indicated, I think
25 early on in the Hanford records they indicated

1 you can have a zero reading, but it may show
2 up as a blank on the records. Now, what some
3 of the dose reconstructors do, in fact, to
4 highlight that zero in as opposed to the Data
5 Entry people, they'll put it in red to let us
6 know that that was their entry as opposed to
7 the data processors.

8 **MR. SIEBERT:** And it is the dose
9 reconstructor's ultimate responsibility to
10 make sure to validate what's going in the
11 tools.

12 **MS. BEHLING:** Right.

13 **MS. MUNN (by Telephone):** Well, it certainly
14 sounds conscientious to me to develop a
15 practice of putting in red. That would be
16 certainly would be helpful to SC&A, wouldn't
17 it? It would certainly be helpful to me if I
18 were reviewing that work.

19 **MS. BEHLING:** It is helpful, and some of the
20 dose reconstructors do that. And I think in
21 this particular case that's, Doug is
22 identifying the fact where there were blanks
23 in the records. There were blanks in this
24 workbook, and so we didn't know how to
25 interpret that.

1 **MR. FARVER:** But they probably should have
2 been zeros because you're summing algorithm
3 for summing zeros to calculate missed dose is
4 not going to work correctly if there's blanks.

5 **MS. MUNN (by Telephone):** Right.

6 **MR. FARVER:** So you would either change your
7 algorithm to include zeros and blanks.

8 **MS. MUNN (by Telephone):** And so this one
9 the ultimate, the bottom line here is this
10 particular case is going to be reworked.

11 **MR. GRIFFON:** Right, because of the Super S
12 part.

13 **MR. HINNEFELD:** But the second part of that
14 now, the note I'm taking now is that we need
15 to find out what kind of instruction is out
16 there for various sites for this time.
17 Whether the blank being on the record, when
18 does a blank mean zero, and when does a blank
19 mean blank?

20 **MS. MUNN (by Telephone):** Right.

21 **MR. GRIFFON:** And when does a blank mean
22 something else, not recorded or whatever.
23 I'll put that down, too, your action for
24 NIOSH.

25 **MR. FARVER:** One-ten point two questions

1 whether or not the DR properly accounted for
2 missed neutron doses, and this goes back to
3 where the worker worked. And in our, under
4 our finding, we cite three instances. One
5 refers back to the technical basis document
6 saying that the 100 area and the 200 area and
7 400 areas were areas where there could be
8 neutrons.

9 And then we also cite that he had
10 plutonium urinalyses through his career which
11 could also be another indicator of potential
12 neutron exposure. And thirdly, there was a
13 record, although it was withdrawn, a pass
14 withdrawn two days later after it was issued
15 for the 105 KE building, which was identified
16 as a neutron area.

17 So although any one of these three
18 things would not be that significant, when you
19 combine them, you say you might have to look
20 at that and say, well, we might want to
21 consider this. And I see NIOSH's response,
22 and, yeah, I guess all we were saying was I
23 guess he could have been at different places
24 and got neutron exposure.

25 **MS. MUNN (by Telephone):** What was the

1 employment period for this employee?

2 **MR. FARVER:** Let's see, [Identifying
3 information redacted].

4 **MS. MUNN (by Telephone):** Okay, then he
5 wouldn't have had any, there wouldn't have
6 been any 400 area exposure for him then. It
7 would have all been elsewhere.

8 **MR. FARVER:** Okay.

9 **MR. GRIFFON:** Did anyone, is this person
10 alive or was it a survivor claim? Was there
11 any information on the CATI as to where this
12 person?

13 **MR. SIEBERT:** I think this person passed
14 away in [Identifying information redacted].

15 **MR. FARVER:** I don't believe there's much in
16 the CATI. And I guess what we're saying was
17 it was a non-compensable claim. He was
18 denied. You might want to look at this.
19 There's some indication that he may have been
20 exposed.

21 **MR. HINNEFELD:** Well, yeah, I mean, there
22 are indications of passes into the reactor
23 areas for a day or two or other areas for a
24 day or two. He was in, apparently worked in
25 the 200 area, REDOX and PUREX. PUREX

1 certainly is --

2 **MS. MUNN (by Telephone):** What was this
3 person's job?

4 **MR. HINNEFELD:** Boy, I don't have a job
5 title in front of me.

6 Scott, do you have it up there?

7 **MR. SIEBERT:** [Identifying information
8 redacted].

9 **MR. GRIFFON:** Have to be careful with too
10 many identifiers.

11 **MS. MUNN (by Telephone):** No, [Identifying
12 information redacted], well, that could mean a
13 lot of things, couldn't it, on that site.

14 **MR. HINNEFELD:** I mean the PUREX, that would
15 explain the bioassay.

16 **MS. MUNN (by Telephone):** Well, yeah. And
17 the PUREX would be the heavy duty possibility
18 I think.

19 **MR. HINNEFELD:** So I don't know. Looking at
20 the entirety of his record and the weight of
21 the evidence we felt like the indication of
22 neutron was relatively small. There wasn't
23 much indication that there was much
24 opportunity for neutrons based on the source.
25 Now, I don't necessarily say zero. We're kind

1 of stuck with, you know, we have a kind of
2 limited range of options, I guess, available
3 to us right now in terms of putting neutron on
4 here. Give him a missed neutron for every
5 month when it seems pretty clear and how you
6 fractionate what fraction of his work time?
7 Do you say, well, okay, during this time there
8 seems to have been maybe a potential?

9 **MR. FARVER:** Is there any coworker data?

10 **MR. HINNEFELD:** Well, not --

11 **MS. MUNN (by Telephone):** Coworker will say
12 the same thing.

13 **MR. HINNEFELD:** -- not divided to the extent
14 that it would add to this. I mean, if you
15 were going to have to do coworker by location
16 then again you need to know the location and
17 essentially how much time he was at the
18 location. The coworker dataset, most of the
19 coworker datasets are composites of everybody
20 monitored, and they address the entire
21 monitored population.

22 So there is a, I mean, I'm not sure if
23 there's a coworker set for ^ at Hanford or
24 not, but if there were, we'd essentially be
25 placing him at some point in the neutron

1 monitored population meaning that he was
2 exposed to the same degree as the population
3 that was routinely exposed. And kind of the
4 decision was that based on the evidence it
5 doesn't look like that was the case.

6 **MS. MUNN (by Telephone):** Well, the HPs were
7 pretty ^ about that most of the time on the
8 Hanford site.

9 **MR. GRIFFON:** Are there any, in the file,
10 were there any, I'm not sure for Hanford if
11 there are any job history or work history
12 cards, those kind of things? You don't have
13 those?

14 **MR. HINNEFELD:** I don't remember Hanford
15 very well. I don't know.

16 **MR. GRIFFON:** What I'd ask maybe is that
17 SC&A look at your response, take it back and
18 reconsider.

19 **MR. HINNEFELD:** And we can look again at the
20 kinds of, you know, where the evidence lies
21 and see if we can't say more than this. I
22 mean, this was pretty preliminary and,
23 remember, we're in Matrix 6 now where we just
24 put together --

25 **MR. GRIFFON:** Oh, I know; I know.

1 **MR. HINNEFELD:** -- initial responses. We
2 need to be able to flesh this out.

3 **MR. GRIFFON:** So maybe both sides can re-
4 look at this.

5 **MS. BEHLING:** Okay.

6 **MR. GRIFFON:** One-ten point three we're on
7 to, right?

8 **MS. BEHLING:** Yeah, no NIOSH response.

9 **MR. GRIFFON:** Yeah, right.

10 **MS. BEHLING:** Do you want us to go through
11 that? Is this the same --

12 **MR. GRIFFON:** Is this the fission products -
13 -

14 **MS. BEHLING:** -- fission product issue?

15 **MR. GRIFFON:** -- or is this a different
16 fission product question for Hanford? I'm not
17 sure.

18 **MR. HINNEFELD:** I would bet this would be
19 the fission product case that would be, this
20 would be more directly relevant to the
21 information provided the Procedures group than
22 the Savannah River cases we've looked at so
23 far. I would think it would be.

24 **MR. GRIFFON:** Well, there's no response. I
25 wasn't sure, that's all.

1 **MR. FARVER:** This has to do with selection
2 of Ruthenium-106 as the nuclide of choice and
3 references the Hanford radionuclide chooser
4 which chooses Cerium-144 as the favorable
5 radionuclide. So it's just a difference in
6 nuclides.

7 **MR. HINNEFELD:** So we still owe you answers.
8 It may not be that they were all internal.

9 **MR. FARVER:** My recollection on these two,
10 ruthenium and cerium, is that there's probably
11 not going to be a whole lot of difference in
12 dose.

13 **MR. GRIFFON:** All right, One-eleven point
14 one.

15 **MS. BEHLING:** One-eleven point one, I think
16 we've discussed this earlier. This was
17 failure to assign recorded photon dose
18 uncertainty and NIOSH has provided us with a
19 fairly extensive write-up as to when they use
20 a DCF of one as opposed to a mean DCF that
21 might be less than one. This is actually an
22 efficiency approach, and it's probably a
23 little bit more claimant favorable than using
24 the Monte Carlo approach. And we agree
25 provided that the cancers do have a mean or

1 low DCF value of less than one, and in this
2 case they did. This is a bladder. So, we're
3 okay.

4 **MR. GRIFFON:** So SC&A agrees with --

5 **MS. BEHLING:** We agree.

6 And 111.2, this is an overestimating
7 case at Hanford, and this was an OTIB-002, I
8 believe, the hypothetical internal dose. And
9 we're simply saying that they have a workbook
10 that they can use, and they could have
11 selected the actual -- I believe that's what
12 we're saying -- that workbook allows them to
13 select the bladder and the actual cancers as
14 opposed to using the colon as the highest non-
15 metabolic organ.

16 I think that's what we're saying. And
17 this is something we've discussed many times
18 before, and it's again an efficiency approach
19 that I believe that NIOSH uses. And even
20 though, I guess it's sometimes a little bit
21 confusing for claimants when they get these
22 dose reconstruction reports. It must just say
23 in there that they assigned a dose to the
24 colon as opposed to the actual cancer. It
25 does raise some flags for the claimant.

1 **MR. HINNEFELD:** Early on though the tool
2 first was developed in ^ --

3 **MS. BEHLING:** That's right.

4 **MR. HINNEFELD:** -- and we directed ORAU in
5 the meantime -- we've gone through this
6 several times.

7 **MR. GRIFFON:** So we've got that one.

8 **MS. MUNN (by Telephone):** This is closed.

9 **MR. GRIFFON:** Yeah.

10 One-twelve point one, is this a TIB-
11 018 question?

12 **MS. BEHLING:** This is a TIB-018 question.

13 **MR. GRIFFON:** So we've got that. It's going
14 to go to Procedures review, right?

15 **MS. BEHLING:** That's right.

16 One-twelve two, this is a Nevada Test
17 Site case, and we're on 112.2. Let's see,
18 this goes back, wait a minute, reviewer
19 questions use of very conservative internal
20 assumptions for minimizing dose
21 reconstruction. I believe this case was
22 compensated. And this again, yes, it was, and
23 this again is this combination of OTIB-018 and
24 OTIB-033, and it was used for compensation.

25 **MR. HINNEFELD:** So we've agreed to provide

1 additional on that or it goes into Procedures
2 or something.

3 **MS. BEHLING:** Right, it goes into
4 Procedures.

5 **MR. HINNEFELD:** This case probably got
6 caught up in the SEC class out there.

7 **MS. MUNN (by Telephone):** So --

8 **MR. GRIFFON:** It's going to go to you.

9 **MR. HINNEFELD:** The issue.

10 **MR. GRIFFON:** The issue, the TIB-018.

11 **MS. BEHLING:** Were you on the line when we
12 discussed that, Wanda?

13 **MS. MUNN (by Telephone):** Yes, sort of.
14 You're fading in and out, but I got that we're
15 going to discuss in Procedures this OTIB-
16 018/OTIB-033 issue.

17 **MS. BEHLING:** Yes, in fact, I think that's
18 next on the matrix for the Procedures review.
19 That's the one we started at.

20 **MS. MUNN (by Telephone):** Yeah, I think it
21 is, too. So has this particular finding that
22 we're looking at, this now goes away, right?
23 Because --

24 **MS. BEHLING:** You're going to move this onto
25 -- Mark?

1 **MR. GRIFFON:** Yeah, I think it gets moved.
2 Yes, I think it gets moved to the Procedures
3 review question.

4 **MS. MUNN (by Telephone):** All right.

5 **MS. BEHLING:** One-thirteen, this is a Y-12
6 case, and I'm just curious as to if it was
7 compensated or not. Let's look in the
8 background here. No, it was not compensated.
9 I don't get too much more details. The first
10 finding is inappropriate method used for
11 estimating missed dose due to
12 misinterpretation of procedure. This goes
13 back to the TIB-008 and TIB-010, which we're
14 ultimately, they have revised these
15 procedures, and we're going to ultimately,
16 hopefully, look at these.

17 **MR. GRIFFON:** Under Procedures review.

18 **MS. BEHLING:** Under the Procedures reviews.

19 **MR. GRIFFON:** And we'll bring them up.

20 **MS. BEHLING:** So that takes care of finding
21 one and two under 113. And finding 113.3,
22 improper organ selection for occupational
23 medical. And it sounds like NIOSH agrees.

24 **MR. GRIFFON:** Yeah.

25 **MS. BEHLING:** And 113.4, reviewer could not

1 reproduce internal dose derived from the
2 Maximum Internal Dose Calculation, okay. This
3 again, you have certain options on that
4 hypothetical internal dose, the OTIB-002, in
5 the combination of options, we couldn't come
6 up with this same dose that they did using
7 various combinations of internal dose.

8 **MR. GRIFFON:** You may want to look at their,
9 they selected the wrong tab it looks like,
10 right?

11 **MR. HINNEFELD:** And it was a colon because ^
12 cases.

13 **MR. GRIFFON:** I guess the other part of that
14 would be, to me the other part that jumps out
15 at me is the quality, the peer review. It
16 seems like that should have been something
17 that got caught in the peer review. Clearly,
18 Y-12's not a reactor, non-uranium site.

19 **MS. BEHLING:** Right.

20 **MR. GRIFFON:** So it happens, but --

21 **MR. HINNEFELD:** I think from a, by the time
22 it got to OCAS we could very well have just
23 passed it on and said, well, it's too high and
24 a non-compensable case, and we're going to
25 send it on. We've been known to do that on to

1 OCAS.

2 **MR. GRIFFON:** But how do we know that? How
3 do we track that? How do we know if the QA
4 system or peer review system's working? Do
5 you know what I'm saying?

6 **MR. HINNEFELD:** Yeah, I understand exactly
7 what you're saying.

8 **MR. GRIFFON:** Or if it's just a pass
9 through. Is there any documentation that
10 would say like the peer reviewer, we reviewed
11 this. We found that this error was made;
12 however, it didn't have any consequences so we
13 --

14 **MR. HINNEFELD:** I don't think you'll
15 consistently find that. There may be some
16 notes made by some people.

17 **MR. GRIFFON:** Are the peer reviewer's notes
18 included in the dose record or no? Are they
19 collected anywhere? The peer review comments
20 --

21 **MR. HINNEFELD:** The peer review forms are
22 filled out on the ORAU team side, and those
23 are documented and saved over there, but
24 they're not submitted with the record. Our
25 reviewers can fill out, are periodically or

1 randomly required to fill out the checklist
2 that's attached to our procedure and can
3 choose to pick ^, so they could choose to fill
4 out the checklist and make that notation on
5 that checklist at the time they ^. I don't
6 know that I would say that that's done every
7 time. Somebody may have seen this and said,
8 well, it's ^ going to be compensable. This
9 error's on the high side. We want to get
10 cases out ^ and not bother to make that.

11 **MR. GRIFFON:** I just think that's the kind
12 of thing that, you know, you have three
13 signatures on something, and you have the
14 public getting these eventually getting all
15 their records and saying, Y-12, you're telling
16 me I'm in a non-uranium site. What's wrong
17 with this system?

18 **MS. MUNN (by Telephone):** Well, we've talked
19 from the very beginning about how to set up an
20 assurance program for tracking what's been
21 done and what hasn't been done. If we don't
22 have a method for picking up or going to a
23 record somewhere internally looking at it to
24 see what conversations are -- not
25 conversations, but what correspondence has

1 taken place between NIOSH and OCAS with
2 respect to these cases that we've reviewed,
3 then we're asking for trouble because we'd
4 have to go back to the individual case to see
5 whether the closure was as we had expected it
6 to be. Am I not correct? Don't we need a
7 device somewhere where there is at least a
8 notation, if not a copy, of the communication
9 with ORAU?

10 **MR. GRIFFON:** I guess that's what I'm
11 asking, yes. Is there some documentation of
12 what the peer reviewer did other than their
13 signature on the final DR report?

14 **MS. MUNN (by Telephone):** Other than our
15 having to go back to that specific case report
16 to see it. That's the issue for me.

17 **MR. GRIFFON:** I'm pretty sure I've seen
18 collections of, now, I don't know if there's
19 any database with all your peer review
20 comments. I don't think there's anything like
21 that, no.

22 **MR. HINNEFELD:** There is, if we review and
23 comment and return a case, there is a record
24 of that communication. There is a record of
25 that communication. If we review a case and

1 see an error, I mean, these could be
2 arithmetic errors of ten millirem in a year or
3 something.

4 And see, an arithmetic error that's
5 not going to affect the outcome of the case.
6 Or if it's an overestimate, you know, it's a
7 mistake on the high side and not a compensable
8 case, we say, okay, well, we want to get cases
9 done and give people answers, so we're going
10 to approve that. There won't necessarily be a
11 record of that decision made so that's where
12 we are now.

13 **MS. MUNN (by Telephone):** Yeah, and I'm not
14 sure I'm talking about the same thing, Stu.
15 What I'm talking about is the kind of
16 communication that you just mentioned where we
17 looked at a case which had SC&A reviewed the
18 case. We had a finding and the decision was,
19 yes, there was an error, but it didn't affect
20 the outcome of the case. And if I, what I
21 think he said, you said, in cases like this
22 it's not uncommon for you to communicate this
23 information to ORAU that an error was ^ in
24 this case. NIOSH agreed that it was an error,
25 and no rework is necessary because, for

1 whatever. Did I hear you say that?

2 **MR. GRIFFON:** I think --

3 **MR. HINNEFELD:** I'm not 100 percent sure.
4 Are you talking about if there's an SC&A
5 finding on a case?

6 **MS. MUNN (by Telephone):** Yeah.

7 **MR. HINNEFELD:** And we, NIOSH, say, oh yes,
8 that is, in fact, a valid finding, and it's,
9 but it doesn't affect the outcome. Do we feed
10 that information back to ORAU?

11 **MS. MUNN (by Telephone):** Yeah.

12 **MR. HINNEFELD:** Yeah, they get these
13 matrices all the time.

14 **MR. GRIFFON:** Because they work on these
15 findings so they know.

16 What I was talking about, Wanda, more
17 was the internal peer review process that if a
18 case is done, nothing to do with SC&A getting
19 involved at all or the Board.

20 **MS. MUNN (by Telephone):** Yeah, I understand
21 that, but what I'm trying to say is we have
22 two different, rather disparate forms of
23 communication which in my mind would
24 constitute good quality assurance. If we, if
25 the Board members could at some juncture look

1 at a file and cross-check it against some
2 particular case we were concerned with and
3 say, yes, this was done as we expected it to
4 be. Yes, this peer review was done. Yes,
5 this line of communication was with ORAU was
6 done.

7 It just seems, I guess the bottom line
8 here is unless the completed matrix, what we
9 end up with at the end of this process is
10 going to have clear definition on it that
11 these communications took place. And there is
12 no place in my mind that we can look at it to
13 see that the follow up has been done. Am I
14 missing something?

15 **MR. GRIFFON:** I think I see what you're
16 saying. I mean, yeah, I think that is clear
17 because ORAU is working with Stu, I think, to
18 do the NIOSH responses, so they get this
19 matrix all the way through. And I think any
20 program actions we designate at the end of
21 this are going back to ORAU as well. So if we
22 say, yes, NIOSH agrees with the comment;
23 however, no changes need to be made to the
24 case, then they get that communication. But
25 also, if NIOSH agrees and a rework of the

1 internal dose has to be done, ORAU's getting
2 that communication as well.

3 I think that's correct, right, Stu?

4 **MR. HINNEFELD:** Yes.

5 **MR. GRIFFON:** So I think they get all this
6 communication as far as the cases we're
7 reviewing. I don't think, I think that does
8 happen, Wanda.

9 **MS. MUNN (by Telephone):** Well, I guess I
10 continue to be concerned, but perhaps it's
11 because I don't see any truly finalized
12 program action comments on any of our matrices
13 yet, and we've been at this now for a few
14 years. So I don't have a vision of what our
15 completed matrix for the set that we chose for
16 our quality assurance review is going to show
17 us. Does that make sense to me?

18 **MR. GRIFFON:** It may make sense to you, but
19 --

20 **MS. MUNN (by Telephone):** Perhaps I need to
21 write that question out and just pass it
22 around at the next meeting. Thank you.

23 **MR. GRIFFON:** Let's plod back through our
24 matrix here. We're almost done, 113.5 I have.

25 Is there any follow up on 113.4? It

1 looks like a missed selection. I didn't know
2 if you wanted to, you said you were unable to
3 reconstruct. Do you want to look if you --

4 **MS. BEHLING:** No, this is fine because it
5 just doesn't have, here again, it's an
6 overestimating case. It just doesn't have a
7 big impact on the case.

8 **MR. GRIFFON:** But it raises that QA question
9 --

10 **MS. BEHLING:** But it does raise that QA,
11 exactly, it does.

12 **MR. GRIFFON:** But no further action on this.

13 **MS. BEHLING:** No, further, no.

14 Okay, we can move on to 114, and case
15 114 is also a Y-12 case. And this was an
16 overestimating approach again, and the case
17 was denied. First finding. This first
18 finding is no uncertainty assigned for
19 recorded photon dose associated with a 1996
20 skin cancer. It was just in this dose
21 reconstruction report I believe.

22 The dose reconstructor clearly
23 indicated that up until 1980 he was going to
24 apply a correction factor of 30 percent, 1.3,
25 and from '80 on he was going to apply 1.15.

1 And he did that for all, for everything that
2 we could see in the IREP except for this one
3 year. And I believe NIOSH agrees with that?

4 **MR. HINNEFELD:** Yes.

5 **MS. BEHLING:** And not that it has an impact,
6 but it is we just, you know, we identified.

7 And 114.2, NIOSH failed to account for
8 all missed photon dose. I believe this, is
9 this another LOD over two issue? Let me see.
10 And I see NIOSH doesn't have a response to
11 this. I see, there were only nine zeros. I
12 might have even done this. When I look
13 through the records, I saw 19 zeros.

14 Yeah, it's coming back to me now. But
15 I think in the workbook there were only nine
16 zeros identified between 1961 and 1981. And
17 again, in the earlier years, we're looking at
18 ^. It's not a big dose issue, but it was just
19 a discrepancy between what I found in the
20 records, and what I found in the workbook, and
21 what was actually used in the missed dose
22 calculation.

23 **MR. GRIFFON:** This may be a similar to that
24 data entry guidance, whether they got
25 appropriate guidance.

1 **MR. SIEBERT:** Actually, I don't think it
2 really is. When you're talking about 19 zeros
3 that you found, I think they were ten deep and
4 nine shallow.

5 **MS. BEHLING:** Is that right?

6 **MR. SIEBERT:** So nineteen, you would only be
7 dealing with ^ together for OTIB-017.

8 **MR. GRIFFON:** So maybe you should both re-
9 look at that because we don't have a NIOSH
10 response, but both --

11 **MS. BEHLING:** I'll look at that then. You
12 may be right.

13 Okay, 114.3, reviewer questions
14 whether NIOSH should have assigned missed
15 neutron dose. And maybe NIOSH can give us
16 your response here.

17 **MR. GRIFFON:** Yeah, you're quoting this Y-12
18 facility report. And I questioned this in
19 your response. The report states that workers
20 with a notable neutron exposure potential --
21 I'm not sure how that's defined, notable.
22 This goes back to the question of were the
23 highest exposed monitored kind of thing that
24 we've come across many times I guess. Notable
25 could be very different than significant, you

1 know, in terms of --

2 **MR. HINNEFELD:** Why don't we take another
3 shot at this?

4 **MR. FARVER:** Also, is this similar to what
5 we discussed earlier in the fourth set about
6 the worker in 9212?

7 **MR. GRIFFON:** Yeah.

8 **MR. FARVER:** They only had it in certain
9 locations?

10 **MS. BEHLING:** Uh-huh.

11 **MR. HINNEFELD:** Let me see what I can, maybe
12 take another shot at this.

13 **MR. GRIFFON:** So it's another 9212 Building
14 issue here.

15 **MS. BEHLING:** Okay, we'll move on to 114.4,
16 NIOSH did not properly account for all
17 occupational medical. I believe I recall that
18 the CATI report indicated that the energy
19 employee may have had in some cases two X-rays
20 per year. And I believe --

21 **MR. GRIFFON:** And so Alpha four and five
22 people you're saying did receive two X-rays
23 per year?

24 **MR. HINNEFELD:** And we agree that for the
25 first part, apparently there are several parts

1 to this one, the first part we agree that the
2 two X-rays should have been assigned.

3 **MR. SIEBERT:** That's really only applicable
4 while the Calutron was in operation. This
5 person was hired after that. So even though
6 we could do two, and it would not affect the
7 compensability, if I remember correctly, it's
8 not really appropriate for this person if they
9 weren't there during the Calutron timeframe.

10 **MS. BEHLING:** I see, okay.

11 **MS. MUNN (by Telephone):** Yeah, so that
12 one's okay, closed.

13 **MR. GRIFFON:** Well, we've got multiple parts
14 here, Wanda. We're trying to --

15 **MS. BEHLING:** Yeah, there are several issues
16 here.

17 **MS. MUNN (by Telephone):** Well, if he's not
18 a Calutron worker...

19 **MR. GRIFFON:** Yeah, he was in those
20 buildings but not during the Calutron time
21 period is what you're saying basically.

22 **MR. HINNEFELD:** I hate to come down on the
23 other side of the CATI.

24 **MR. GRIFFON:** That's not what your response
25 says though, yeah.

1 **MR. HINNEFELD:** The CATI says that he had
2 two a year.

3 **MS. BEHLING:** Yes. That's why we initially
4 identified this as a finding. But then
5 there's also some other issues. And I guess
6 this also brings up the issue of the fact that
7 we need to be looking closely at these CATI
8 reports. And if we're not going to agree with
9 what was stated in the CATI report, I think
10 there needs to be some kind of an explanation
11 as to why we didn't consider maybe two X-rays.
12 Just more of an explanation just for the
13 claimant's benefit.

14 **MR. GRIFFON:** Well, let me get -- so, Stu,
15 are you, it seems like you're not sure on the
16 first one yet.

17 **MR. HINNEFELD:** I'm not so sure, well, as
18 the response is written --

19 **MR. GRIFFON:** Yeah, it seems like you're in
20 agreement --

21 **MR. HINNEFELD:** But now if this person
22 wasn't really an Alpha Calutron worker because
23 he was hired after the Calutron was shut down,
24 then the question is, well, what do you do
25 about a CATI that says that he got two X-rays

1 per year. He specifically says I got two per
2 year.

3 **MR. GRIFFON:** And you've got the person
4 saying that.

5 **MR. HINNEFELD:** Yeah, and what do you do in
6 that case if the PBD says one per year or
7 doesn't say that? So to me I think there's a
8 little discussion on our side about that much.

9 **MR. GRIFFON:** I agree, yeah.

10 Now the second issue, let's go through
11 these one by one maybe, because the next
12 paragraph says the second issue.

13 **MS. BEHLING:** I believe the second issue had
14 to do with pulling incorrect doses. And
15 again, we're talking about small doses here,
16 but it was pulling incorrect doses from the
17 wrong column of the OTIB-006. He pulled from
18 the wrong years I believe. The DR used the
19 dose value of 3.2 E-3 from the '70 through
20 1985 column instead of the correct value of
21 6.4 E-3 from the pre-1970. This is for 1969.

22 **MR. GRIFFON:** And NIOSH seems to be saying
23 you used the Y-12 TBD, not TIB-006, right?

24 **MS. BEHLING:** Okay, so I'll have a look at
25 that.

1 **MR. GRIFFON:** SC&A's got to check that.

2 **MS. BEHLING:** And the third issue --

3 **MR. GRIFFON:** Pre-hire and termination X-
4 rays.

5 **MS. BEHLING:** What was NIOSH's response on
6 that?

7 **MR. HINNEFELD:** It had to do with a timing
8 issue because of the person's short period of
9 employment. You have a pre-hire. You have an
10 annual, and you have, and then if you also do
11 a term, you've got three in just a few months
12 if I'm not mistaken.

13 **MS. BEHLING:** Why don't I look at this one
14 also?

15 **MR. HINNEFELD:** Yeah.

16 **MS. BEHLING:** The second part of this.

17 **MR. PRESLEY:** Stu, did you all, were you
18 able to get in his medical records and look
19 and see if the X-ray reports were in those
20 medical records?

21 **MR. HINNEFELD:** I don't know.

22 Do you know, Scott, did we get --

23 **MS. MUNN (by Telephone):** The bottom line
24 then the claim remains non-compensable.

25 **MS. BEHLING:** Well, I guess to complete our

1 matrix I guess for the second and third --

2 **MR. GRIFFON:** Of course, we're not looking
3 at POC, but --

4 **MS. BEHLING:** -- but I'll just go back and
5 look at it.

6 **MR. HINNEFELD:** Well, the answer's in our
7 response. I mean, our response says it all.
8 Nowadays we would have given a few more. So I
9 think in all totaled it wouldn't affect the
10 outcome.

11 **MR. GRIFFON:** Right.

12 One-fourteen point five.

13 **MS. BEHLING:** One-fourteen point five,
14 again, this is the issue associated with the
15 CATI report. And the first issue was this X-
16 ray issue that we just discussed. And then
17 also I believe two potential incidents that
18 were discussed in the CATI report, internal
19 and external incidents, but we didn't feel
20 that NIOSH had properly addressed them.

21 And again, a lot of times this is just
22 adding some words to that section of the DR
23 report that indicates that you did look at
24 this and what your justification was for not
25 assigning additional doses.

1 **MR. GRIFFON:** Was this person, was this
2 person, I mean, I got the impression from the
3 last comment that it was a short period of --

4 **MR. HINNEFELD:** I was wrong. I was
5 confusing it with something else.

6 **MR. GRIFFON:** Okay, because I was going to
7 say, this suggests that it's a long, many
8 bioassays it says.

9 **MR. HINNEFELD:** I was confused.

10 **MS. BEHLING:** 'Fifty-four through '62 and
11 '69 through '82.

12 **MS. MUNN (by Telephone):** Sounds like more
13 than one period of employment.

14 **MS. BEHLING:** And again like I said this --

15 **MR. GRIFFON:** Response for external dose
16 will be supplied later it says, right? But
17 for the internal you think the bioassay can be
18 used to bound it basically is kind of what
19 you're saying?

20 **MR. HINNEFELD:** Yeah.

21 **MR. GRIFFON:** Which we've accepted in the
22 past.

23 **MR. HINNEFELD:** But the wording, it may be a
24 fact that the dose reconstruction should
25 specifically say that this incident, any dose

1 from this incident will be included in --

2 **MR. GRIFFON:** Yeah, and we've had that
3 finding before.

4 **MS. BEHLING:** And so I assume though that
5 you did look to see that this incident, that
6 bioassays were being taken during the time of
7 this incident.

8 **MR. HINNEFELD:** Well, it said if there were
9 bioassay taken after the incident --

10 **MS. BEHLING:** After, sure after.

11 **MR. HINNEFELD:** As a general rule it's going
12 to bound -- the dose reconstructor is going to
13 bound the --

14 **MR. GRIFFON:** Here's a question to get at
15 Wanda's earlier comment when you follow up on
16 this because we had that in the first set of
17 cases. We'd had the comment about even if the
18 bioassay data can be used to bound, that you
19 should at least, if it's mentioned in the
20 CATI, you should at least include it in your
21 DR report that we've considered the incidents
22 that you da-da-da. Now, I don't know when
23 this case was done, but if it was a later
24 case, then that DR report template was
25 revised, right? So I don't know, I'm

1 wondering if it should have been included.

2 **MR. HINNEFELD:** It sounds like it should.
3 If there's not a description of these events
4 in the dose reconstruction, they should have
5 been there. The dose reconstructor should
6 have said this dose reconstruction encompasses
7 any dose that would have been received in this
8 incident that was described.

9 **MR. GRIFFON:** But you know what I'm getting
10 at.

11 **MR. HINNEFELD:** But I know what you're
12 getting at.

13 **MR. GRIFFON:** To see if our findings are
14 actually being carried through.

15 **MR. HINNEFELD:** I suspect this was an older
16 case.

17 **MS. BEHLING:** June of 2005 we started to put
18 that into our summary report as to when you
19 did this case, June 2005.

20 **MR. GRIFFON:** June 2005, so that would have
21 been right around when we were talking about
22 this. When you follow up, just follow up on
23 that as well.

24 **MS. BEHLING:** Okay.

25 **MR. SIEBERT:** Well, it is mentioned in the

1 dose reconstruction report.

2 **MR. HINNEFELD:** What's it say?

3 **MR. SIEBERT:** According to the interview,
4 the individual was involved in an incident
5 unknown time. Well, it is in the CATI as
6 unknown time. It described what was in the
7 CATI, but it states they were monitored for
8 internal dose throughout their employment and
9 intakes would have been detected.

10 **MR. GRIFFON:** So you covered it. That's
11 good.

12 **MR. SIEBERT:** So it is in there.

13 **MR. GRIFFON:** Good to know the system works.
14 So in the Y-12 response for external
15 incidents you're going to get a response for
16 that?

17 **MR. HINNEFELD:** Yeah, we're not, our
18 response ^.

19 **MR. GRIFFON:** So for the first part do you
20 agree that the internal would be bounding? Do
21 you want to look at that?

22 **MS. BEHLING:** I wrote down that I'd look at
23 that. I'm sure it is. I just want to verify.

24 Case 115, this is K-25, Y-12. This
25 was a best estimate, and it was compensated.

1 And we had just an insignificant finding that
2 in 1987 this shallow dose was entered into
3 IREP twice. I'm sure it doesn't have any
4 impact.

5 **MR. HINNEFELD:** We even made out what the
6 impact is. It doesn't change anything.

7 **MR. GRIFFON:** Very minor, but again a QC
8 question.

9 **MS. BEHLING:** And we can move on to 116, and
10 this was an X-10 case.

11 **MR. GRIFFON:** We've got TIB-008 right off
12 the bat.

13 **MS. BEHLING:** So it must have been an
14 overestimating case, so we know that that's
15 finding one and two will be taken care of by
16 the Procedures review.

17 Finding three, improper organ selected
18 for estimating occupational medical dose.
19 Again, this is probably just not selecting the
20 actual organ as opposed to selecting the
21 highest --

22 **MR. HINNEFELD:** There was a practice at the
23 time just pick the highest one off the chart.

24 **MS. BEHLING:** Right, and 116.4 again is the
25 Maximum Internal hypothetical internal dose

1 workbook and --

2 **MR. GRIFFON:** It's been corrected.

3 **MS. BEHLING:** Yes, the same thing there.

4 One-seventeen, this is ANL West, and
5 here again, this is a TIB-018 and TIB-033
6 discussion.

7 That's next, 118. Let Doug handle
8 this.

9 **MR. GRIFFON:** Hold on one second if you
10 could. I just want to make some notes here.

11 **MS. BEHLING:** Although I see NIOSH hasn't
12 responded to this one.

13 **MR. GRIFFON:** Now we went by 117.1 kind of
14 fast there. Was it TIB-018/TIB-033?

15 **MS. MUNN (by Telephone):** Thank you again.
16 Got it.

17 **MR. GRIFFON:** Yeah, that's for Wanda mainly,
18 but there's a lot more words here, and I
19 wonder if this is a different issue. I didn't
20 get a chance to really digest it.

21 **MS. BEHLING:** Okay.

22 **MR. GRIFFON:** Did everybody read the NIOSH
23 response? Is this the same thing?

24 **MS. BEHLING:** I believe this goes to the
25 heart of the question that I had asked earlier

1 as to --

2 **MR. GRIFFON:** Oh, yeah, it does, compensable
3 claims.

4 **MS. BRACKETT (by Telephone):** Now this is
5 slightly different than the others because I
6 believe what the response is saying is that
7 this case was done prior to, or I guess just
8 shortly after OTIB-033 was issued and that the
9 dose reconstructor used a different value than
10 what was in OTIB-033. It was a judgment case,
11 and they just went ahead and applied this
12 without using OTIB-033 specifically.

13 **MS. BEHLING:** I guess we were saying that we
14 were expecting to see a reference to OTIB-033.
15 I understand. So they used a graded approach,
16 but they didn't necessarily follow TIB-033.

17 **MS. BRACKETT (by Telephone):** The graded
18 approach somewhat preceded the development of
19 OTIB-033. They started applying that while
20 the OTIB was in development, so it was kind of
21 a concurrent event.

22 **MR. GRIFFON:** Okay, that clarifies it.

23 **MS. BEHLING:** Yeah, that answers that.

24 **MR. GRIFFON:** So do you need to look back at
25 that to make sure --

1 **MS. BEHLING:** No.

2 **MR. GRIFFON:** -- that it's consistent with
3 TIB-033 or no? I mean, is there any case
4 consequences here or can we defer the whole
5 thing to the Procedures review is what I'm
6 asking.

7 **MS. BEHLING:** I'll look at it. I'll look at
8 it. I don't think there are any case
9 consequences, but I will just look at it.

10 **MR. GRIFFON:** Thank you, Liz.

11 **MS. MUNN (by Telephone):** That's if we need
12 to do, Kathy?

13 **MS. BEHLING:** Pardon me? I'm sorry.

14 **MS. MUNN (by Telephone):** You'll get back to
15 us if we need to consider it further.

16 **MS. BEHLING:** Yes, I will.

17 **MR. GRIFFON:** Yes, yes, otherwise it will
18 just go to the Procedures review, and you'll
19 take care of it.

20 **MS. MUNN (by Telephone):** Thank you so much.

21 **MR. GRIFFON:** One-eighteen.

22 **MR. FARVER:** One-eighteen, 118.1.

23 **MR. GRIFFON:** We don't have any NIOSH
24 response.

25 **MR. FARVER:** There's no NIOSH response so

1 you just want me to go through these pretty
2 quick?

3 **MR. GRIFFON:** Yeah, at least what set are we
4 at?

5 **MS. BEHLING:** INEEL.

6 **MR. FARVER:** The first finding has to do
7 with the reliability of recorded photon dose
8 which gets to the film dosimeter that was used
9 in 1958 and so forth. And there's some
10 discussion in the dose report about that, in
11 the case report. So we'll wait for their
12 response.

13 One-eighteen point two, and let's see,
14 point three, point four, point five, those all
15 have to do with there was a period of time
16 when the employee worked at ANL West for about
17 13 years. And there's no records, whether
18 they do not exist or what, but there were no
19 records. So whether this is complete
20 neutron/photon dose we just don't know.

21 **MR. GRIFFON:** Now we're on 118.5? Is that
22 where you're at?

23 **MR. FARVER:** Yes.

24 **MS. MUNN (by Telephone):** At least that's
25 where I put my note. I hope that's where we

1 are.

2 **MS. BEHLING:** That's where we are.

3 **MR. FARVER:** This is another one where
4 they're all chronic intakes improperly
5 accounted for because there's a time period of
6 12 years that you can't verify.

7 **MR. GRIFFON:** So it's the --

8 **MR. FARVER:** So this all goes back to the
9 records. Number six, the 1958 internal dose
10 appears low.

11 **MS. BEHLING:** There was an incident.

12 **MR. FARVER:** This was an incident that
13 happened, right, --

14 **MS. BEHLING:** Hans worked on this, yes, on
15 this portion. I remember. And this incident
16 was documented quite well I think in the
17 records. But Hans was still, I think,
18 questioning some of the information that was
19 in there.

20 **MR. HINNEFELD:** We're still preparing our
21 response. That was SL-1, wasn't it?

22 **MR. GRIFFON:** Yeah, it was SL-1 in '58.

23 **MS. MUNN (by Telephone):** This guy was it
24 SL-1?

25 **MR. HINNEFELD:** Well, we don't know.

1 **MR. GRIFFON:** We don't know.

2 **MR. HINNEFELD:** We're trying to decide.
3 This is in 1958, so I mean, people who weren't
4 there at the accident. It's my understanding
5 a lot of people actually had to respond during
6 recovery and had to work in that area.

7 **MS. MUNN (by Telephone):** I thought those
8 people were covered like a blanket.

9 **MR. GRIFFON:** Yeah, they certainly were
10 monitored during recovery.

11 **MR. HINNEFELD:** If that's the incident we're
12 talking about, there's a lot of information
13 about it.

14 **MR. FARVER:** There were a lot of records.

15 **MR. HINNEFELD:** We haven't written our
16 response.

17 **MR. FARVER:** Then the last finding, 118.7,
18 unclear whether all the data is adequate for
19 determining the POC, asked to go back to the
20 missing records. So most of those findings
21 were just about the missing records.

22 **MR. HINNEFELD:** Was it internal or external
23 missing from ANL West or both?

24 **MR. GRIFFON:** Both.

25 **MR. FARVER:** Both, I believe. I don't think

1 there was anything from ANL West. I don't
2 know if there were asked and didn't respond or
3 they weren't asked and didn't respond.

4 **MS. MUNN (by Telephone):** They must be
5 somewhere.

6 **MR. GRIFFON:** Okay, 119, we're getting
7 there, page 32.

8 **MS. BEHLING:** I'm going to let Doug do this.
9 He worked on this case.

10 **MR. GRIFFON:** We're going to take a five
11 minute comfort break. We're getting close,
12 but we've got more than five minutes' work
13 here so give us a five minute comfort break
14 and stay out of the big waves, Wanda.

15 **MS. MUNN (by Telephone):** I will be right
16 here.

17 **MR. GRIFFON:** Let's keep it to five because
18 people have flights, so we're going to keep it
19 short. Thanks.

20 **DR. WADE (by Telephone):** Okay, this is Lew;
21 I'll be here.

22 (Whereupon, a break was taken from 4:00 p.m.
23 until 4:05 p.m.)

24 **MR. GRIFFON:** Wanda, are you there?

25 **MS. MUNN (by Telephone):** I am.

1 **MR. GRIFFON:** As promised we're back quickly
2 so you can get back to your activities. Yeah,
3 case 119.1.

4 **MR. FARVER:** And this is a Mound case.
5 We're switching territory. Reviewer questions
6 appropriateness of photon energy, and I guess
7 if you look at the NIOSH dose report it says
8 basically he worked everywhere.

9 We couldn't really tell, so we made
10 certain assumptions. And in our review we
11 looked at it and said, well, if you look at
12 the bioassay data, and you look at some of the
13 processes and what he was bioassayed for, and
14 some of the dosimetry data, you can probably
15 make a good timeline. And so that was our
16 point.

17 **MR. GRIFFON:** Well, the first one I have is
18 photon distribution. Am I looking at the
19 wrong one?

20 **MS. BEHLING:** No.

21 **MR. GRIFFON:** Questions the appropriateness
22 of the --

23 **MS. BEHLING:** Yeah, photon energy
24 distribution.

25 **MR. HINNEFELD:** Because where they go --

1 **MS. BEHLING:** Yeah, that's based on
2 location.

3 **MR. FARVER:** And there's NIOSH's response
4 basically, and this was a compensable case.

5 **MR. GRIFFON:** It was a compensable case.

6 **MR. HINNEFELD:** Yeah.

7 **MR. FARVER:** So what they're saying is,
8 yeah, it would have increased it but --

9 **MR. HINNEFELD:** Actually, it would have
10 decreased it a little bit.

11 **MR. FARVER:** Decreased it.

12 **MS. BEHLING:** And I guess again, and correct
13 me if I'm wrong here, but sometimes is it
14 also, as I said, one of the things we're
15 supposed to be looking at is consistency
16 issues.

17 **MR. GRIFFON:** Yeah.

18 **MS. BEHLING:** And for some best estimate
19 cases they go through hoops to identify as
20 much as they can where a person worked and all
21 the various details. And other times in this
22 case they gave the 32-50 which is, I think, an
23 unfavorable assumption, and they didn't try to
24 break things down. And it was just, again,
25 difference in dose reconstructors, and the way

1 they approach these things.

2 **MR. FARVER:** Everybody okay with that?

3 **MS. BEHLING:** Are you ready to move on,
4 Mark, or --

5 **MR. GRIFFON:** No, I mean, you raise a good
6 point there though, the consistency question.
7 I didn't realize it was a best estimate, too,
8 not minimizing, it's a best estimate approach.

9 **MR. HINNEFELD:** It's partial, isn't it? Our
10 response indicates that we didn't include the
11 missed dose for the period '63 to '77.

12 **MS. BEHLING:** I guess you said reasonable
13 estimate so --

14 **MR. FARVER:** Yeah, this was strange because
15 it didn't say best estimate like they usually
16 do. They said reasonable estimate.

17 **MR. GRIFFON:** Well, again, do you know, Stu?
18 Can you tell? Scott, the full internal done
19 as well?

20 **MR. HINNEFELD:** Our initial response says
21 that this was an underestimating efficiency
22 approach. That it omits the missed dose for
23 the period 1963 to 1977.

24 **MR. SIEBERT:** Right, this is definitely not
25 a best estimate.

1 **MS. BEHLING:** It was not?

2 **MR. GRIFFON:** So it's compensated, and it's

3 a --

4 **MS. BEHLING:** Reasonable estimate.

5 **MR. GRIFFON:** -- underestimate or whatever.

6 **MR. FARVER:** I think it started off one way,
7 and then got changed to a second attempt.

8 **MS. BEHLING:** Could be.

9 **MS. MUNN (by Telephone):** And in what time
10 period did we do this DR?

11 **MR. HINNEFELD:** April of '05, Wanda.

12 **MS. MUNN (by Telephone):** 'O-five, so some
13 things have changed since then in any case.
14 If it's a consistency issue, then is it a
15 little difficult to evaluate based on what
16 today's approach would be in any case?

17 **MR. GRIFFON:** Well, if it's an
18 underestimating approach, there's not a
19 consistency issue really. I think it's if
20 it's a best estimate approach, we want to make
21 sure we're consistent in the sharpness of the
22 pencil so to speak. If you're scrutinizing
23 one set of cases more than another set of
24 cases, then we have issues. But in this case
25 I don't think it's a best estimated set,

1 underestimate.

2 **MS. MUNN (by Telephone):** And that was going
3 to be my question.

4 **MS. BEHLING:** It's identified as a
5 reasonable estimate. But as Doug said, I
6 think they recognized that this was going to
7 be compensated, and then maybe approached it a
8 little bit differently.

9 **MR. GRIFFON:** So I think, I mean, if I can
10 summarize on the first one, NIOSH is saying
11 you may have a point here with your finding;
12 however, it's a minimized approach and even if
13 we did what you recommended, it would have
14 resulted in, what, a lower? Is that what you
15 said, Stu? It would have actually lowered the
16 --

17 **MR. HINNEFELD:** The work locations would
18 have lowered it finally, but there's missed
19 dose that was not included in the dose
20 reconstruction that wasn't because it wasn't
21 needed. That would then, if it went down so
22 far that it would have to ^ to 30 percent, we
23 would have to go back and add in that missed
24 dose. But it was quite a lot larger and then
25 this changed this down.

1 **MR. GRIFFON:** So you didn't need to sharpen
2 the pencils to the point of looking at job
3 locations and stuff because you already were
4 on a minimizing approach. You were already
5 tripped over, right? Is that --

6 **MR. HINNEFELD:** I think probably what
7 happened was, I think there's a good chance,
8 like Doug's correct. That they started
9 working it now knowing how it was going to
10 turn out. Got it above 50 percent, and said,
11 oh --

12 **MR. GRIFFON:** Should have been, yeah.

13 **MR. FARVER:** And I think it started off,
14 like you said, one way and then got changed to
15 another at the end. And that's why the term
16 reasonable estimate's in there probably
17 instead of best estimate.

18 **MR. HINNEFELD:** Or even underestimate.

19 **MR. GRIFFON:** So how, for the first one,
20 point one, is there agreement but it doesn't
21 affect the case?

22 **MR. HINNEFELD:** Yes.

23 **MR. GRIFFON:** Okay, that's what I wanted to
24 hear.

25 **MR. FARVER:** One-nineteen point two, the DR

1 does not properly account for 1964 photon
2 dose. It looks like it was a typo. The data
3 was entered off by a decimal place. They have
4 180 millirems instead of 1.8 rem.

5 **MS. BEHLING:** It doesn't impact the
6 compensability.

7 **MR. HINNEFELD:** We agree.

8 **MR. GRIFFON:** I guess a QA question. I'm
9 not sure we can find every line item, but it
10 is a QA question again in my mind. It doesn't
11 affect this case obviously.

12 **MR. FARVER:** One-nineteen point three, the
13 neutron energy distribution appropriateness,
14 goes back to the work location we just talked
15 about.

16 **MS. BEHLING:** Uh-huh, same as one.

17 **MR. GRIFFON:** Can you do point three again?
18 I'm sorry. What's the disposition on that?

19 **MR. FARVER:** It's the same as the earlier
20 about the work location photons.

21 **MR. GRIFFON:** So no action.

22 **MS. MUNN (by Telephone):** It's agreed, okay.

23 **MR. HINNEFELD:** If I'm not mistaken, our
24 response even accounted for the fact that the
25 neutron didn't change as well when we did our

1 recalculation.

2 **MR. GRIFFON:** At any rate, no action.

3 **MS. BEHLING:** Yeah, no action.

4 **MR. GRIFFON:** And 120, last case.

5 **MS. BEHLING:** Another Mound site. This is a
6 best estimate.

7 **MR. FARVER:** One-twenty point one, recorded
8 photon dose not properly converted to organ
9 dose from 1968 to '77. This has to do it
10 looks like the way they figured uncertainty,
11 review uncertainty. It's two findings, 120.1
12 and 120.2. It has to do with their
13 calculational methods. This goes back to the
14 wording of the dose report.

15 They'll put tables in with the dose
16 conversion factors, and then they'll calculate
17 an effective dose conversion factor. And in
18 the text they'll say the dose, the DCF
19 effective was the factor applied to the
20 measured and missed doses for the dose
21 reconstruction. And then they go do a Monte
22 Carlo calculation which, of course, changes
23 their DCFs. It's not that what they did was
24 wrong. It didn't match what they said.

25 And then 120.2 has to do with the

1 organ dose uncertainty.

2 **MR. GRIFFON:** How do we, what's our action
3 for the first one? Is there --

4 **MR. HINNEFELD:** I think in our response to
5 the case we agree with the finding, and it may
6 be we shouldn't report those effective DCFs
7 and the tabulation of them in the report the
8 way we did.

9 **MR. FARVER:** Or put in the report that
10 because you're doing a Monte Carlo
11 calculation, DCFs may differ.

12 **MR. HINNEFELD:** This kind of runs to the
13 issue we run into with the how much, what are
14 you going to tell the claimant, and what's
15 going to mean something to them. And there
16 are only a handful of claimants that would be
17 described a Monte Carlo combination of a
18 normal distribution type distribution, only a
19 handful of them. So we tend to shy away from
20 writing that the way the dose reconstructor
21 report is currently ^.

22 **MR. SIEBERT:** And it actually was mentioned
23 in this dose reconstruction report in the next
24 paragraph saying that Monte Carlo techniques
25 were used which incorporated error from

1 dosimeters as well as uncertainty in the range
2 of DCFs. So it is mentioned in there.

3 **MR. GRIFFON:** So it is in there.

4 **MR. FARVER:** So in which case I would just
5 take out that one sentence about saying that
6 the effective DCFs were applied to the
7 measured. Just delete that one and go on with
8 your Monte Carlo explanation.

9 **MS. MUNN (by Telephone):** Well, if you try
10 to explain something like Monte Carlo methods
11 to a non-technical person, the very use of the
12 term Monte Carlo leads them to believe that
13 you are essentially rolling dice. It's
14 probably, I agree it's not wise to undertake
15 that kind of explanation.

16 **MR. GRIFFON:** Can I ask NIOSH if they could
17 review their boilerplate language regarding
18 that issue and give us a response on that?

19 **MR. FARVER:** And a lot of times it's an item
20 or sentence, you're just deleting it.

21 **MR. GRIFFON:** Yeah, yeah.

22 **MR. HINNEFELD:** And we still have in our
23 mind, you know, we haven't had anybody to work
24 on the simplification or change of the dose
25 reconstruction report to write a section for

1 the claimant and a section for the Health
2 Physicist. That's still on the table.

3 **MS. BEHLING:** Although I have, in fact, I
4 was going to ask you if you have revised your
5 templates because I just saw a dose
6 reconstruction report that has a paragraph in
7 there, very nice worded paragraph, that tries
8 to explain to the claimant, we conducted this
9 dose reconstruction using this methodology;
10 however, if you were to get a second cancer, I
11 saw there's some new wording put into that,
12 nice wording, that tries to explain.

13 **MR. HINNEFELD:** Well, ^.

14 **MS. BEHLING:** Right. Some of these
15 assumptions will not apply potentially if you
16 get a second cancer.

17 **MR. HINNEFELD:** Yes, we have done that which
18 is that goes into an overestimating case where
19 if we've got an overestimating case because it
20 has happened a number of times that people
21 will then develop a second cancer and come
22 back and the overestimating approach doesn't
23 work any more. And so we do a best estimate,
24 and their total POC goes down even though
25 they've got two cancers. They tell me what in

1 the heck's going on. So because of that exact
2 situation is why we've developed that. Thank
3 you. I appreciate your compliment. I don't
4 think I wrote that one unfortunately, but I
5 appreciate the compliment.

6 **MS. BEHLING:** But I did start to see that in
7 some of the newer...

8 **MR. GRIFFON:** So yeah, we'll put that in
9 there.

10 **MR. HINNEFELD:** And again, it kind of fits
11 with our continuing struggle to write a dose
12 reconstruction that's comprehensive and
13 explanatory but that doesn't overwhelm and
14 also communicate with the public. And I just
15 think the way you do it, you've got to do it
16 in sections. You've got to write one section
17 for the public and the other section to
18 explain to the Health Physicist. I just don't
19 think, when you try to blend it all together,
20 it doesn't work very well for anybody.

21 **MS. MUNN (by Telephone):** No.

22 **MR. GRIFFON:** One-twenty point two.

23 **MR. FARVER:** One-twenty point two, now this
24 is a little tricky. This has to do with using
25 a dosimeter uncertainty and applying it to

1 summation of dosimeter results. Apparently
2 all the individual results from '68 through
3 '77 were lost. They just have annual totals,
4 but when they calculated the uncertainty, they
5 used Table 6.20 out of the TBD which lists
6 photon dosimeter relative uncertainty based on
7 a dosimeter. Now it doesn't say that the
8 dosimeter was exposed over an annual period or
9 anything like that.

10 But we're just questioning is it
11 appropriate to take an individual dosimeter
12 uncertainty and apply it to what is known to
13 be a group of dosimeters without propagating
14 the error through. In other words if it's a
15 monthly frequency, should we take and divide
16 his annual by 12? Would it propagate the
17 error that would be associated with each
18 monthly?

19 **MS. MUNN (by Telephone):** In the total
20 number of dosimeters are you talking about all
21 the same type of dosimeters being used during
22 that timeframe?

23 **MR. FARVER:** No, we're talking about the
24 dosimeter results were missing, individual
25 dosimeter results.

1 total dose, and we know the frequency,
2 exchange frequency. We maximize the missed
3 dose by saying all badges but one read zero,
4 and the one audited dose came in as one badge.
5 So that's normally what we do. So if we did
6 that in this case, then what we felt like
7 we've done is we've given then the most
8 possible missed dose.

9 The measured dose total is going to be
10 the same because it's the annual dose that was
11 reported. You put that on one badge. And if
12 you put it on one badge, then this would be
13 the uncertainty calculation. I think that's
14 how, I don't know if that was done in this
15 case or not, but that's typically what we try
16 to do.

17 **MR. FARVER:** I guess the rub is if you do
18 it, assuming it's all one dose, then you're
19 going to have to give them missed dose for the
20 other time periods which is what you did. I
21 believe that's okay. It was just --

22 **MS. MUNN (by Telephone):** It seems to me
23 that would be about as claimant favorable as
24 you can get.

25 **MR. FARVER:** I guess this goes back to

1 wording again. It wasn't stated. It wasn't -
2 -

3 **MR. HINNEFELD:** Wasn't described.

4 **MR. FARVER:** It wasn't clear. And that's
5 okay. It might be something to put in the TBD
6 to clear it up.

7 **MR. HINNEFELD:** Yeah, and it's again, you
8 know, how much information do you want to tell
9 the claimant.

10 **MR. FARVER:** Well, and that's why I said it
11 might be the place to put it in the TBD if
12 this is what you're going to do for those
13 years.

14 **MR. HINNEFELD:** And I think they're, I'm not
15 sure what IG-1 says about that. I think it
16 even says, I think the directions in our
17 Implementation Guide Number One that says if
18 all you have is annual totals, you pretty much
19 have to assume that all the badge exchanges
20 were zero except for one and put all the dose
21 on that one badge exchange, and then give them
22 missed for the remainder of however many
23 cycles there were during the year.

24 **MS. BEHLING:** And that certainly seems
25 claimant favorable.

1 **MR. GRIFFON:** How do you determine, in this
2 particular case how do you know that they were
3 monitored for all -- say, it's a monthly
4 exchange. How do you know if they were
5 monitored for every month?

6 **MS. BEHLING:** You don't.

7 **MR. HINNEFELD:** In this case we wouldn't.

8 **MR. SIEBERT:** It's just a claimant favorable
9 assumption.

10 **MR. GRIFFON:** But how do you know it's
11 claimant favorable?

12 **MR. HINNEFELD:** If there was something that
13 was, if they were unmonitored and exposed.
14 Well, I don't know. I mean, we could research
15 practices. I don't know what the site profile
16 says about --

17 **MR. GRIFFON:** I don't know the
18 circumstances, particular years.

19 **MR. HINNEFELD:** Certain sites were badged
20 religiously certain years because of security
21 credentials and --

22 **MR. GRIFFON:** Well, I guess the question
23 comes up --

24 **MS. BEHLING:** ^ unmonitored.

25 **MR. HINNEFELD:** Well, if you're talking if

1 they were unmonitored and exposed so that
2 their total is incorrect for the year.

3 **MR. GRIFFON:** Or just how did you validate
4 that the, was there any validation that your
5 totals were accurate, that the annual totals
6 made any sense?

7 **MR. FARVER:** I don't think that there was a
8 way. I think they just had totals for a year
9 like on a dose report, 1967. There was not
10 individual dosimeter results.

11 **MR. HINNEFELD:** So the question can we, what
12 can we do, or can we validate what, there
13 wasn't, there were unmonitored people who
14 would be exposed, measurably exposed.

15 **MR. GRIFFON:** How many years was this, when
16 this practice?

17 **MR. FARVER:** Twelve years or thereabouts.
18 Twelve years.

19 **MR. GRIFFON:** A 12 year time period, I mean,
20 maybe --

21 **MR. FARVER:** I mean, it states in the TBD
22 that the records were lost and all they had
23 was the annual doses which is fine. And it
24 just might be a matter of adding a statement
25 to the TBD saying in that case this is what we

1 do.

2 **MR. HINNEFELD:** And to your, you know, find
3 out about what we can about practices.
4 There's a pretty extensive dosimeter history
5 from them, big, internal ones, internal ones,
6 external ones. There are actually two of
7 them. So it could very well be that there are
8 documents in there that document practices
9 that would give us confidence that would allow
10 us to conclude that monitored people were
11 exposed.

12 **MR. SIEBERT:** Different document, same
13 series.

14 **MR. HINNEFELD:** And there's a lot of worker
15 now though essentially a low dose, low
16 external dose job ^.

17 **MR. GRIFFON:** I agree that it would be, in
18 the scenario you presented, I think it would
19 be certainly claimant favorable, but I just go
20 back to that data question. So that's sort of
21 a, I mean, that is a site profile question
22 more than a case question I guess.

23 **MS. MUNN (by Telephone):** It is. It's also
24 another one of the you can't prove what didn't
25 happen. All you can prove is that you have an

1 annual dose for this individual. And the
2 kindest thing one can possibly do in a case
3 like that is what they're telling us they did
4 which is give them all the missed dose except
5 for one case and devise one case as being the
6 source of the entire dose for the annual
7 period. It can't get any better than that for
8 the claimant, can it?

9 **MS. BEHLING:** If there was, possibly in the
10 early years they did group badging where one
11 individual was given a badge for an entire
12 group. If something like that would be stated
13 in your site profile, then that's something
14 that we would possibly approach this a little
15 bit different. Because rather than assigning
16 missed dose, you might want to assign a
17 coworker dose.

18 I don't know how you determine that,
19 but you could at least go back and say what
20 were the practices. And that's what NIOSH is
21 stating that they're going to do is go back
22 and look at Mound and look at the, because
23 they have a lot of data for that site, to see
24 what were the practices, dosimetry practices
25 being performed at that time.

1 **MS. MUNN (by Telephone):** But by 1968 that
2 type of thinking was pretty well by the
3 boards, was it not?

4 **MS. BEHLING:** Well, probably, you're
5 probably right.

6 **MS. MUNN (by Telephone):** I think '68 to '77
7 is a fairly active and fairly comprehensible
8 knowledge base for how to approach badging and
9 dosimetry.

10 **MR. GRIFFON:** And I also think it's a period
11 where they -- well, two things. I think they
12 were switching from film to TLD, a lot of
13 sites.

14 **MR. HINNEFELD:** Probably.

15 **MR. GRIFFON:** They were tending to monitor
16 more people than less, most of the sites were
17 at that time.

18 **MS. MUNN (by Telephone):** Absolutely.

19 **MR. GRIFFON:** So my sense would be that a
20 lot of people were probably being monitored
21 that probably didn't even need to be monitored
22 during that time period, but again, I'm just
23 saying show me. Can we prove it in any way?
24 Can we back it up?

25 **MR. HINNEFELD:** We'll see what we can find.

1 internal dose model assumptions were used in
2 calculating Plutonium-238 dose. One of the
3 things that NIOSH mentions is they incorrectly
4 normalized the data. It was already at 24-
5 hour samples so you wouldn't need to normalize
6 the bioassay data.

7 **MR. GRIFFON:** So you're saying you'd use the
8 date for a polonium exposure instead of a
9 plutonium exposure?

10 **MR. FARVER:** You'd have to, the date was
11 incorrect, yes.

12 **MR. HINNEFELD:** They had the wrong date.

13 **MR. FARVER:** Wrong date, it's two separate
14 incidents.

15 And then the other question --

16 **MR. GRIFFON:** And so these were, this is a,
17 I mean, these doses were changed by about 17
18 percent you're saying, they increased, the net
19 result on this correction was about a 17
20 percent increase in doses?

21 **MS. MUNN (by Telephone):** It didn't change -
22 -

23 **MR. GRIFFON:** It didn't result in the POC
24 going over it. This was a less than 50 case
25 I'm assuming.

1 **MS. BEHLING:** It was denied.

2 **MR. FARVER:** And the other concern was --

3 **MS. BEHLING:** It was at 48 percent.

4 **MR. GRIFFON:** It was at 48 percent?

5 **MS. BEHLING:** 48.18.

6 **MR. GRIFFON:** But these changes didn't
7 affect that.

8 **MR. FARVER:** The other concern --

9 **MR. GRIFFON:** Wait a second. I'm waiting
10 for a response. That was a planned delay.
11 Scott's looking it up, I think.

12 **MR. SIEBERT:** Yeah, it did not change the
13 compensability essentially.

14 **MS. MUNN (by Telephone):** But it is going to
15 go back for additional reconstruction, right?

16 **MR. HINNEFELD:** Well, at this point I don't
17 think it is.

18 **MR. GRIFFON:** I mean, I see these edits
19 indicating changes, increases in dose. Your
20 response?

21 **MS. BEHLING:** Well, let's see, 17 percent of
22 what, of what dose?

23 **MR. GRIFFON:** Yeah, they're fairly small,
24 but I mean, it's only going from 1.8 rem to
25 two rem.

1 **MR. HINNEFELD:** Yeah, rather than look at 17
2 percent, look at there's a 300 millirem on one
3 change and 100 millirem on the other so that's
4 not a --

5 **MR. GRIFFON:** Well, I didn't realize it was
6 at 48 point something so even a small change
7 could --

8 **MR. FARVER:** The other part of that finding
9 that I don't see in the response has to do
10 with, it appeared that NIOSH only considered
11 the PU-238 results up to 1981, and there were
12 21 results between '81 and '92 that did not
13 appear to be considered in their dose
14 estimates.

15 **MR. HINNEFELD:** I should have sent last week
16 an IMBA run that supports this.

17 **MR. GRIFFON:** That's what I was going to
18 ask. If you haven't, if you can provide --

19 **MR. HINNEFELD:** I don't seem to have it on
20 my computer, but I believe I sent that with
21 these initial responses.

22 **MR. GRIFFON:** So I'm going to put NIOSH will
23 provide IMBA run. If you have already, just
24 let us know where.

25 **MS. MUNN (by Telephone):** Stu did send some

1 plutonium information. I remember putting it
2 in my file.

3 **MS. BRACKETT (by Telephone):** And those
4 later samples were included when the case was
5 reassessed.

6 **MR. HINNEFELD:** Yes.

7 **MS. BRACKETT (by Telephone):** Tom LaBone did
8 the fit actually for the reassessment.

9 **MR. FARVER:** Well there's a good question
10 right there.

11 **MS. MUNN (by Telephone):** I thought you
12 actually sent even the worksheet. I thought -
13 -

14 **MR. HINNEFELD:** I intended, there is, a file
15 was prepared that supports this that shows
16 this refitted plutonium with the correct date
17 and using all the bioassay data and fitting
18 the curve. Like I said, the curve was forced
19 to fit the data and --

20 **MR. GRIFFON:** You may have. There was one
21 separate IMBA file sent with the e-mail.

22 **MR. HINNEFELD:** And I intended to attach it.
23 I intended to attach it.

24 **MR. GRIFFON:** That was it.

25 **MR. FARVER:** I just don't recall seeing that

1 data considered in the original file.

2 **MR. HINNEFELD:** It was not in the original
3 dose reconstruction. It was not in the
4 original dose reconstruction. It was to
5 support this initial response.

6 **MR. FARVER:** Okay, so I was correct, and I
7 didn't see it the first time.

8 **MR. HINNEFELD:** Yes. That is correct. It
9 was not there.

10 **MS. MUNN (by Telephone):** But you sent that
11 on the seventh.

12 **MR. HINNEFELD:** Okay, it was on that e-mail?

13 **MR. GRIFFON:** You're right, Wanda. There
14 was an IX file, yeah. I guess we're going to
15 pull up and make sure, but meanwhile we have
16 one more here?

17 **MR. FARVER:** One more is 120.6, NIOSH does
18 not properly address the identified incidents.
19 And it just, there was a lot of information
20 about the incidents that happened, and it
21 seemed to be minimized in the dose
22 reconstruction. How's that?

23 **MR. HINNEFELD:** And we agree.

24 **MR. FARVER:** And when I see things like
25 that, I tend to question did the dose

1 reconstructor tend to look at all the records.

2 **MS. MUNN (by Telephone):** And so the action
3 is what?

4 **MR. GRIFFON:** That's what I was going to
5 ask.

6 **MR. SIEBERT:** We know the dose reconstructor
7 did look at the records because he used the
8 polonium --

9 **MR. FARVER:** He used the wrong date.

10 **MR. SIEBERT:** -- incident date instead of
11 the plutonium. He may not have looked at it
12 as closely as he could have.

13 **MS. BEHLING:** And he didn't include all of
14 the bioassay so --

15 **MS. MUNN (by Telephone):** So a better
16 description is going to be written? What?

17 **MR. HINNEFELD:** Well, at this point we don't
18 intend to rework the dose reconstruction so,
19 no, it should have been addressed. I don't
20 know --

21 **MR. GRIFFON:** Wait, wait, I'm confused
22 because you did rework the dose
23 reconstruction, didn't you?

24 **MR. HINNEFELD:** Yeah, we did rewrite a new
25 dose reconstruction report to send to the

1 claimant. The value of writing this
2 description is to make sure the claimant knows
3 that we heard them, and we know this, and we
4 know these incidents occurred, and we should
5 have described them. That's why it should
6 have been in the dose reconstruction report.
7 But at this point there's nothing makes us
8 write a new dose reconstruction report and
9 send it to the claimant. It would probably
10 confuse everybody quite a bit because the case
11 is adjudicated.

12 **MS. MUNN (by Telephone):** There's no
13 purpose. It should have been done better and
14 no action, right?

15 **MR. GRIFFON:** Right.

16 **MR. FARVER:** Probably your resolution would
17 be that this one's going to fall under your
18 peer review procedure because we looked it up,
19 and it does have information there about did
20 you check the CATI.

21 **MR. GRIFFON:** Well, it is another, I think
22 these last two findings come under the QA
23 cycle again --

24 **MR. HINNEFELD:** Well, I think there are a
25 number of things --

1 **MR. GRIFFON:** -- the dates of the incident -

2 -

3 **MR. HINNEFELD:** -- there are enough errors
4 here that we'd say, yeah, you're right that we
5 need to think about what are we doing here,
6 and are we being too casual by saying, well,
7 it's not going to affect the case and let it
8 go. It could be that's being too casual
9 because it really hurts your credibility when
10 ^ because some of them are going to be found.
11 And this kind of thing, some mistakes like
12 that can be found by any reader, and those
13 really, really hurt your credibility.

14 **MS. MUNN (by Telephone):** We just want to do
15 better next time.

16 **MS. BEHLING:** Well, the dose reconstructor
17 that did this, will this be brought to that
18 person's attention?

19 **MR. HINNEFELD:** I can make sure that happens
20 if you like.

21 **MR. SIEBERT:** Also, do the individual who
22 re-did the work and worked with Tom, so they
23 are well aware.

24 **MR. HINNEFELD:** So it was brought to their
25 attention.

1 **MS. BEHLING:** I'm just curious because I
2 thought that earlier we indicated that a dose
3 reconstructor would be reassessing this, but
4 it may not have been the individual --

5 **MR. SIEBERT:** It was the individual.

6 **MR. GRIFFON:** Just to verify, Stu, I have
7 the file pulled up so you did e-mail it on
8 9/7. I hope you got those.

9 **MR. FARVER:** I didn't get them.

10 **MS. BEHLING:** I know I got them.

11 **MR. HINNEFELD:** Doug, are you on Procedures
12 from now on as far as you know?

13 **MR. FARVER:** No, not as far as I know.

14 **MR. GRIFFON:** This isn't Procedures though.

15 **MR. HINNEFELD:** Dose reconstruction. Honest
16 to god, I'm sorry. These meetings all look
17 the same. It's you and Wanda and me, and I
18 talk all day.

19 **MR. GRIFFON:** Okay, I think it's a wrap.
20 Anything else to add before --

21 Wanda, my intention is to bring these
22 back to the October meeting with our focus
23 being on the fourth and fifth set to try to
24 close them out as best we can. There's still
25 some, quite a few responses, not that many in

1 the fourth set, but some of them are fairly
2 technical, but we want to try to close out the
3 fourth, and if possible, the fifth and put the
4 sixth set on the back burner for NIOSH right
5 now just from a workload standpoint. But we
6 would like to address those at the October 3rd
7 meeting, the 9:30 morning meeting for the
8 subcommittee.

9 **MS. MUNN (by Telephone):** Is there a
10 possibility that we can utilize our matrix
11 section section to put some notations about
12 the discussion today and what actions we're
13 expecting?

14 **MR. GRIFFON:** Yeah, you missed that, too,
15 earlier. I said that I was going to update
16 the, especially the fifth matrix. I'll
17 definitely get an update on the actions for
18 the fifth matrix so everybody's on the same
19 sheet of music. A lot of them have been
20 closed out so the matrix will indicate that.
21 And we'll have a fresh matrix to look at with
22 the program action column filled in.

23 **MS. MUNN (by Telephone):** That would be very
24 nice. What would be nice when we closed an
25 item if we could gray the background on that.

1 It would save every, certainly save me a great
2 deal of grief.

3 **MR. GRIFFON:** I can do that, too. We should
4 have a few gray lines. I will do that.

5 **MS. MUNN (by Telephone):** That's helpful,
6 thank you.

7 **DR. WADE (by Telephone):** Thank you all very
8 much, just a yeoman job.

9 **MR. GRIFFON:** Thanks, Lew.

10 All right, I think we're adjourned.
11 (Whereupon, the meeting was adjourned at 4:45
12 p.m.)

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

I, Steven Ray Green, Certified Merit Court Reporter, do hereby certify that I reported the above and foregoing on the day of Sept. 12, 2007; and it is a true and accurate transcript of the testimony captioned herein.

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

WITNESS my hand and official seal this the 28th day of February, 2008.

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