

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

convenes

THE SUBCOMMITTEE FOR DOSE RECONSTRUCTION REVIEW
OF THE

ADVISORY BOARD ON

RADIATION AND WORKER HEALTH

The verbatim transcript of the
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 June 10, 2008.

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NATIONALLY CERTIFIED COURT REPORTERS
404/733-6070

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June 10, 2008

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TRANSCRIPT LEGEND

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-- (sic) denotes an incorrect usage or pronunciation of a word which is transcribed in its original form as reported.

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

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

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

P A R T I C I P A N T S

(By Group, in Alphabetical Order)

DESIGNATED FEDERAL OFFICIAL

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MEMBERSHIP

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CLAWSON, Bradley

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GIBSON, Michael H.

President

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GRIFFON, Mark A.

President

Creative Pollution Solutions, Inc.

Salem, New Hampshire

MUNN, Wanda I.

Senior Nuclear Engineer (Retired)

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PRESLEY, Robert W.

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Clinton, Tennessee

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ADAMS, NANCY, NIOSH
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BRACKETT, LIZ, ORAU
BURGOS, ZAIDA, NIOSH
ELLIOTT, LARRY, NIOSH
FARVER, DOUG, SC&A
HINNEFELD, STUART, NIOSH
HOWELL, EMILY, HHS
KOTSCH, JEFF, DOL
MAURO, JOHN, SC&A
SIEBERT, SCOTT, ORAU

P R O C E E D I N G S

(9:30 a.m.)

WELCOME AND OPENING COMMENTS

DR. CHRISTINE BRANCHE, DESIGNATED FEDERAL OFFICIAL

1 **DR. BRANCHE:** Good morning. I'm Dr.
2 Christine Branche, and we're finally ready to
3 start. Could someone who's on the phone
4 please let me know that you can hear me?

5 **MR. GIBSON (by Telephone):** Yeah, I hear
6 you, Christine.

7 **DR. BRANCHE:** Thank you, Mike.

8 This is the meeting of the
9 Subcommittee on Dose Reconstruction. I thank
10 you for your patience. We had some airport
11 delays and now we're all ready to go. Would
12 the Board members who are here in the room
13 please state your names?

14 **MR. PRESLEY:** Robert Presley.

15 **MR. GRIFFON:** Mark Griffon.

16 **MS. MUNN:** Wanda Munn.

17 **MR. CLAWSON:** Brad Clawson.

18 **DR. BRANCHE:** Board members participating by
19 phone would you please state your names?

20 **MR. GIBSON (by Telephone):** Mike Gibson.

1 **DR. BRANCHE:** Are there any other Board
2 members?

3 (no response)

4 **DR. BRANCHE:** We do not have a quorum of the
5 Board so we can proceed.

6 NIOSH staff in the room please state
7 your names?

8 **MR. ELLIOTT:** Larry Elliott, NIOSH.

9 **MR. HINNEFELD:** Stu Hinnefeld.

10 **MS. ADAMS:** Nancy Adams.

11 **DR. BRANCHE:** NIOSH staff participating by
12 phone would you please state your names?

13 **MS. BURGOS (by Telephone):** Zaida Burgos.

14 **DR. BRANCHE:** ORAU staff in the room please
15 state your names.

16 **MS. BRACKETT:** Liz Brackett.

17 **MR. SIEBERT:** Scott Siebert.

18 **DR. BRANCHE:** ORAU staff by phone please
19 state your names.

20 (no response)

21 **DR. BRANCHE:** SC&A staff in the room, please
22 state your names.

23 **DR. MAURO:** John Mauro.

24 **MR. FARVER:** Doug Farver.

25 **DR. BRANCHE:** SC&A staff by phone, please

1 state your names.

2 **MS. BEHLING (by Telephone):** Kathy Behling.

3 **DR. BRANCHE:** Other federal agency staff in
4 the room, please state your names.

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

6 **DR. BRANCHE:** Other federal staff by phone,
7 please state your names.

8 **MR. KOTSCH (by Telephone):** Jeff Kotsch with
9 Labor.

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

11 Petitioners or their representatives,
12 would you please state your names?

13 (no response)

14 **DR. BRANCHE:** Workers or their reps please
15 state your names.

16 (no response)

17 **DR. BRANCHE:** Members of Congress or their
18 representatives please state your names.

19 (no response)

20 **DR. BRANCHE:** Any others who would like to
21 mention their names please do so now.

22 (no response)

23 **DR. BRANCHE:** Thank you.

24 Before turning it over I'd just ask
25 very strenuously that those of you

1 participating by phone please mute your
2 phones. We've come to understand quite
3 clearly that if you don't mute your phones,
4 then other people participating by phone
5 cannot hear. If you do not have a mute
6 button, then please use star six to mute your
7 phones. And be warned, we really can tell if
8 you haven't muted your phones. So thank you
9 very much.

10 Mr. Griffon.

11 **INTRODUCTION BY CHAIR**

12 **MR. GRIFFON:** Thanks, Christine.

13 The agenda's pretty simple for today.
14 We're going to discuss the sixth set of cases
15 which we have had initial discussions about.
16 And I think we're close to completing the
17 sixth set, actually, of discussions. And then
18 we haven't done the seventh set at all yet, so
19 we're going to initiate discussions on that.
20 We have NIOSH's responses. I hope everyone
21 got the seventh matrix. Stu sent that around
22 to everyone, and we'll start through that one.

23 The sixth set, as I said earlier,
24 there's a document, a 13-page Word document,
25 that SC&A put out with the remaining issues on

1 the matrix. And in that document there's also
2 a couple that in a later e-mail SC&A sent a
3 response for a couple items. And I inserted,
4 I took them out of the e-mail and inserted
5 them in the Word document.

6 So you may not have that version,
7 Doug.

8 But it's Doug's response in those
9 sections like in 107.4 on page two you'll see
10 --

11 **MR. HINNEFELD:** When did you send this,
12 Mark?

13 **MR. GRIFFON:** Wanda, when did I send it,
14 yesterday?

15 **MS. MUNN:** Yesterday.

16 **MR. GRIFFON:** Yesterday morning.

17 **MR. HINNEFELD:** Was I on it?

18 **DR. BRANCHE:** I can forward it to you.

19 **MR. GRIFFON:** Sorry, Stu, if I didn't put
20 you on there.

21 So, and then I would also refer back
22 to the matrix from our last meeting which was
23 in March, I think March 25th, 2008. And I
24 think I forwarded that to the work group as
25 well, the latest version that I had.

1 So these responses in the Word
2 document that we discuss I plan on updating
3 the matrix with whatever we conclude from this
4 set of discussions. And if anyone finds
5 anything in the matrix as we go through that
6 isn't captured in this document, I think we,
7 you know, we want to stop and grab that too if
8 we need further discussion.

9 **SIXTH SET OF CASES WRAP-UP**

10 So I guess the best way to proceed --
11 I'm giving Stu a chance to look at that. I
12 apologize. The best way to proceed probably
13 is to turn the table over to SC&A, and let
14 them start with 105.6, which is the top one on
15 your document.

16 **MR. FARVER:** I believe that was closed at
17 the last Subcommittee meeting.

18 **MR. GRIFFON:** It's going to be a quick
19 meeting. I'm just going to go along in the
20 matrix, too, and if there are people have the
21 matrix, you can review with me. If there's
22 any questions still remaining -- I do have a
23 question on 103.2. Going back on the matrix
24 there's a -- and this is just editing my
25 responses really.

1 I have a note in there for people who
2 have the matrix open, it says for this case
3 they used 14 of 22 years of employment, not
4 100 percent. It's not clear why. And this
5 is, I think, my note, maybe I should have
6 edited these before I forwarded them to
7 everybody.

8 I guess that's a placeholder for me.
9 I wasn't sure if we had resolution there on
10 that one. So if everybody can look back at
11 103.2. I'm looking at case 103, actually,
12 because 103.1 also has the question that would
13 be in my resolution column there.

14 Stu, do you have that?

15 **MR. HINNEFELD:** Well, I have our response.
16 Was this a compensated case?

17 **MR. GRIFFON:** 103.1 was a compensated case.

18 **MR. HINNEFELD:** So we just used a partial
19 and took as much dose as we needed.

20 **MR. GRIFFON:** That's why, okay.

21 **MS. MUNN:** Is that 103.2?

22 **MR. GRIFFON:** And then on 104.6, just to
23 catch us up to where this document starts,
24 104.6. I have in the resolution that NIOSH is
25 developing a white paper -- oh, okay. And it

1 says SC&A to check this, review this; I can
2 edit later. But that's that issue.

3 **MS. MUNN:** I'm sorry. That wasn't clear to
4 me.

5 **MR. GRIFFON:** Oh, the resolution there is
6 that NIOSH is developing the ingestion model,
7 but it's one of the generic models that
8 they're working on, and SC&A will review
9 after, once we see that model. We haven't
10 seen the model yet. So that's deferred to
11 that generic white paper.

12 **DR. MAURO:** Is that OTIB-0009, the generic
13 ingestion model?

14 **MR. HINNEFELD:** I don't recall.

15 **DR. MAURO:** Okay, because we did look at
16 that, and we do have a couple of things we'd
17 like to talk about, but that may be with the
18 Procedures meeting.

19 **MS. MUNN:** That was going to be my question.
20 Is this one of these things that --

21 **MR. GRIFFON:** No.

22 **MS. MUNN:** -- that is going to be officially
23 transferred?

24 **MR. GRIFFON:** That's a good question, Wanda,
25 because now I read that closer it says

1 provided by NIOSH and reviewed and accepted by
2 SC&A, and then SC&A to check this.

3 **DR. MAURO:** Yes.

4 **MR. GRIFFON:** So I guess you still had some
5 remaining questions --

6 **DR. MAURO:** I do. I have one --

7 **MR. GRIFFON:** -- and haven't fully accepted
8 --

9 **DR. MAURO:** -- but it's probably more in the
10 purview of Procedures because it's OTIB --

11 **MR. GRIFFON:** Is that an OTIB or is, what is
12 that?

13 **DR. MAURO:** Well, yeah, OTIB-0009 addresses
14 the ingestion pathway. And it's applied
15 universally now for all sites. And there's
16 still, Jim gave a presentation on it at one of
17 the Board meetings if you recall, and he
18 answered lots of our questions. It was a
19 multi-layered concern, but there's still one
20 particular aspect, the bottom line.

21 The one aspect that we're still a
22 little concerned with is, the bottom line when
23 you're finished with that ingestion model, and
24 you go through all the process, in effect,
25 you're saying that the worker is ingesting 0.5

1 milligrams per day of dust. When we look at
2 the literature on that, that really is way
3 down there in the literature. For example,
4 NCRP recommends 100 milligrams per day. EPA
5 recommends 50 milligrams per day.

6 There is evidence that 0.5 is a good
7 number, too, and there's reasons to believe
8 that the 100 number that has been adopted by
9 NCRP might be too high. So, and Jim explains
10 all this. Right now where we're coming down
11 is that given the fact of the 50 milligrams
12 per day and the 100 milligrams per day,
13 default ingestion rate recommended by NCRP and
14 EPA, you're two orders of magnitude lower than
15 the 50.

16 And I'm pretty familiar with that
17 literature, and it's down at the bottom end of
18 the edge of the experimental data. And I
19 guess I'd like to talk -- and that might be
20 the right number. Because Jim pointed out
21 that most of the way in which they measure the
22 amount of stuff -- it comes out in the feces
23 basically from ingestion -- Jim makes a very
24 good argument that probably most of that came
25 from inhalation. You inhale; you swallow.

1 And so what you're really saying is
2 not what was ingested; it was inhaled. And
3 that might be the case, but I guess right now
4 I guess I haven't made that leap yet where I'm
5 able to go from the 50 down to 0.5.

6 **MR. HINNEFELD:** Okay, I'll try to convey
7 that to Jim.

8 **MR. GRIFFON:** But wouldn't NCRP have known
9 that as well? I think --

10 **DR. MAURO:** No, there's a guy named
11 Calabrese who did a lot of the research on it.
12 He looked at all of his measurements, what he
13 measured. He measured silicon in fecal
14 material, and he said, okay, the only way that
15 silicon could have gotten there is from the
16 ingestion of soil.

17 It was soil, not radioactivity, the
18 inadvertent ingestion of soil or soot. And he
19 automatically assumed that when you see that
20 it had to be due to ingestion. But he didn't
21 factor in the possibility that, wait a minute,
22 a large fraction might have been from the
23 material that was swallowed after it was first
24 inhaled. And it's in there.

25 And so Jim makes that point very well,

1 but it does bring us down a factor of 100.
2 Now the funny thing about the whole thing it's
3 a little bit of a tempest in a teapot because
4 you still don't get very much of a dose anyway
5 because the ingestion dose, no matter, even if
6 you kick it up to 50 milligrams a day, it's
7 still going to be miniscule compared to the
8 inhalation dose. And so that's the story.

9 **MR. GRIFFON:** So do we want to, this is
10 deferred to the Procedures work group then?
11 Is that -- Wanda's saying yes?

12 **MR. HINNEFELD:** It's listed as a global
13 issue in Procedures.

14 **MR. GRIFFON:** Yeah.

15 **MR. HINNEFELD:** And so --

16 **MR. GRIFFON:** I'm not good at hand signals,
17 but I think Wanda's confirmed yes.

18 **MR. HINNEFELD:** If I understand it, there
19 will be a set of discussions on these global
20 issues. I mean, we've identified various
21 things as global, and there would have to be a
22 separate discussion. Whether it occurs here,
23 I think, at Procedures or wherever it occurs,
24 to go through these global issues and clear
25 them all out.

1 **MR. GRIFFON:** Because a lot of the cases
2 have had those findings.

3 **MR. HINNEFELD:** Right, and several, I think,
4 in the seventh group --

5 **MR. GRIFFON:** Right, come up again and
6 again. Resuspension is another one. All
7 right, for now I'm putting it in the
8 Procedures.

9 And then 104.7 it says OTIB-0053 is
10 under final review. Does that mean this is
11 also a Procedures question? Oh, this is the
12 recycled uranium.

13 **MR. HINNEFELD:** Yeah, what's the content,
14 what's the transuranic content of recycled
15 uranium? And it's the recycled uranium TIB,
16 which I think is still in review. And
17 similarly, there are a number of findings in
18 dose reconstructions that relate to this
19 topic. So however we reconcile that when that
20 OTIB is ready to be reviewed and discussed,
21 whichever format is reconciled in it, will
22 reconcile several findings from dose
23 reconstructions.

24 **MR. GRIFFON:** I guess for consistency that
25 is the procedure that will go to the

1 Procedures work group, right?

2 **MS. MUNN:** I'm sorry. I was writing. I
3 missed that. What is Procedures taking now?

4 **MR. GRIFFON:** The next one, 104.7 has OTIB-
5 0053, recycled uranium procedure.

6 **MS. MUNN:** We have that.

7 **MR. GRIFFON:** You have that already, right.

8 Now, I'm up to case 105, but for case
9 105 -- I'm just trying to think how we're
10 handling this as far as closing out these
11 cases. Just for a first resolution I say that
12 the case is being reevaluated as part of the
13 PER review. That's fine, but where does that
14 put it in terms of closing our matrix? I
15 mean, do we wait until this is reevaluated?

16 I mean, that could take awhile, right,
17 Stu? I don't know what the schedule is.

18 **MR. HINNEFELD:** Yeah, the schedule on
19 reworks is fairly long because of the quantity
20 and the competing priorities. I would suggest
21 that this really speaks to the guidance, I
22 believe, that was available to do this task as
23 our response, I believe, says that -- unless
24 I'm misunderstanding where we're at.

25 **MR. GRIFFON:** Well, 105.1 is the one --

1 **MR. HINNEFELD:** The guidance in OTIB-0012
2 was published after this DR was completed.
3 And so at least that portion of the finding, ^
4 may be more familiar with this than I. At
5 least the view of the response is that this
6 error or this deficiency in this dose
7 reconstruction would not occur today because
8 the technical guidance today would tell them
9 to do something else.

10 **MR. GRIFFON:** Yeah, so that part of the
11 finding, I guess you're right, that says NIOSH
12 agrees. Workbook has been revised. And then
13 but then overall the cases being reworked
14 under PER review is the other part of that.
15 So I guess the finding is closed, but the case
16 is being reworked, right?

17 **DR. MAURO:** This is like when the in
18 abeyance problems we had on Task Three were.
19 In other words when you get to the point where
20 you agree the solution is in hand, but it
21 hasn't actually been put on the table.

22 **MS. MUNN:** Exactly. And if we're going to
23 follow the same policies in this Subcommittee
24 as we've established in Procedures, then this
25 is the big handful that we've sort of dumped

1 on Nancy to get us squared away in terms of
2 when closed is closed for the original group,
3 and how we transfer that knowledge and
4 tracking to another group. And do we even
5 have a PER?

6 **MR. GRIFFON:** Well, I think it's multiple
7 PERs is probably right. I don't know what
8 PERs affect this case, but sometimes it's --

9 **MR. SIEBERT:** It was returned to us in
10 January under the insoluble plutonium PER. So
11 it is being worked under that.

12 **MR. GRIFFON:** But as Stu has pointed out
13 before, if you rework it, you're going to
14 rework with all the current procedures, right?
15 So then the question is, I mean, the problem
16 is I think the finding, I don't know what the
17 status of this case was in terms of POC, but
18 if it was a close one, that's the issue. If
19 it's one of those that we, you know, the
20 finding NIOSH agrees, but did it impact the
21 case is still an open question. Then we have
22 to kind of see --

23 **MR. FARVER:** The finding looks like it was
24 more of a workbook issue. And it looks like
25 they corrected the workbook.

1 **MR. GRIFFON:** But I'm asking if the PER, you
2 know, if these multiple findings of case 105
3 could have affected the outcome, the decision,
4 basically. I guess that's what we can't
5 answer right now until you rework the case,
6 right?

7 **MR. HINNEFELD:** Right. Right now the
8 Subcommittee has heretofore only dealt with
9 closed cases that have been adjudicated. So
10 now we have a situation where there is a case
11 that came back from adjudication, has been
12 reopened, and is now active.

13 So, I mean, the consideration of
14 impact of these findings, they would be
15 considered, I mean, these findings would,
16 you'll have the impact of all of the changes,
17 these findings and any other changes that were
18 applicable to that case will be reflected in
19 the new adjudication, however it gets
20 adjudicated next.

21 So it's a little difficult probably to
22 say these findings led to the change in the
23 result for this claimant. Although
24 theoretically you could say, well, the sum
25 total of findings that have come out of the

1 technical review of the program have led to
2 that.

3 So at the time of comparison would
4 really be an adjudication because even though
5 we have a POC when we do the dose
6 reconstruction, it's not final until it's
7 adjudicated. And there could be things that
8 don't go the way we thought.

9 **MR. GRIFFON:** So it could be extended even
10 further.

11 **MR. HINNEFELD:** So, I mean, that's a long
12 wait. That'll be a long wait to hold this in
13 some sort of category like abeyance with just,
14 and you're just waiting for resources to
15 become available to finish the dose
16 reconstructions that are going to rework dose
17 reconstructions and then to work its way
18 through the adjudication process.

19 **MR. GRIFFON:** I don't think, I mean, I think
20 we can close out the individual findings. We
21 just have to put some sort of tracking on the
22 impact of the PER review on the final outcome
23 of the case. I think we can handle that.

24 **MR. HINNEFELD:** I think we should be able to
25 find electronically cases that were reworked

1 for PER that were reviewed by the Subcommittee
2 and the Board and match up those lists and say
3 electronically these cases were reviewed and
4 then subsequently gone through PER and the
5 outcome changed or did not. I think we could
6 probably do that electronically separate and
7 apart from tracking it here. I think all
8 those numbers are databased enough we can do
9 that.

10 **MS. MUNN:** I think we're going to be able to
11 do it, too. But this raises a question in my
12 mind as to how we in this Subcommittee handle
13 our tracking of it. It would make sense to me
14 when we have an issue like this one which
15 essentially has gone as far as we can take it
16 in the Subcommittee, it's now a PER issue.
17 And it seems to follow that we should identify
18 in our activities PERS as a separate item
19 other than the numbered item that they began
20 with so that we can close this item since we
21 can't -- as Stu points out, holding it in
22 abeyance is not really what we're doing. It's
23 out of our hands now. It's in the hands of
24 the review process for PERs. Don't we need a
25 category that says transferred to PER

1 subgroup?

2 **MR. GRIFFON:** We don't have a PER subgroup.

3 **MS. MUNN:** And track it electronically in
4 that way. It seems to follow to me.

5 Nancy, does that make sense to you?

6 **MS. ADAMS:** Yeah, but there is no group.
7 There is no entity.

8 **MS. MUNN:** No, I know, that's why I'm saying
9 it might behoove us to consider the
10 possibility of--

11 **MR. GRIFFON:** Having a PER subgroup.

12 **MS. MUNN:** -- a subgroup of the
13 Subcommittee. There aren't that many PERs.

14 **MR. GRIFFON:** Well, but it impacts a lot of
15 cases.

16 **MR. HINNEFELD:** It's a ton of cases.

17 **MS. MUNN:** They do impact a ton of cases,
18 but as Stu pointed out, there's the time
19 constraint involved here.

20 **DR. MAURO:** In theory, really defining what
21 the ultimate objective of this Subcommittee
22 is, now, if the ultimate objective is to do a
23 critical evaluation of some samplings of
24 adjudicated cases, and the outcome of that
25 sampling is, yes, we've identified certain

1 cases where we all agree that there's a
2 technical problem that is being addressed
3 under a new OTIB.

4 Or, yes, we agree and there's a
5 strategy that's in place to revisit it, the
6 question then becomes do you want the
7 Subcommittee then to reevaluate the new
8 protocol, for example, the new procedure.
9 Then in theory that would go to the Procedures
10 group. And is it the objective of the
11 Subcommittee to actually carry it to its very
12 end to see what happened to that case. What
13 did it reverse? Did it stay the same?

14 So I mean it's almost really a
15 definition of where the boundaries of, where
16 you would like the boundaries of the
17 Subcommittee's objectives to be. It could be
18 anywhere along this continuum. But I think we
19 haven't had this conversation before, and I
20 think it's important that at this point
21 because we're moving into that mode now.

22 We're moving away from debating the
23 technical merits. We're moving more into,
24 okay, we agree on the technical solution. Now
25 the question is what does it do to the DR for

1 that particular case and I don't think we've
2 had this, you know.

3 **MS. MUNN:** No, I don't believe we have in
4 this group. That's why I'm raising the issue
5 of a potential, either a subgroup or simply an
6 electronic category.

7 **MR. HINNEFELD:** This could be a periodic
8 report. I mean, if you want to know about
9 outcomes of reviewed cases that had been
10 reworked, if you wanted to know outcomes of
11 that piece of data, that could be a periodic
12 report that we could with just a little work
13 generate electronically.

14 **MS. MUNN:** Yeah, especially as long as the
15 electronic listing of what's precise about the
16 source of the information from this
17 Subcommittee.

18 **MR. GRIFFON:** In other words it could link
19 back to these particular ones that we reviewed
20 as well as the global. And I'm sure they can
21 make that, I mean, I'm sure we can figure that
22 out.

23 So I think that's a good idea. I
24 mean, I don't think it should hold up these
25 individual findings for this case so it's

1 going to be referred somewhere either into the
2 report or we might want to have a work group
3 established to sort of monitor that quarterly
4 report or whatever kind of report that NIOSH
5 would put out.

6 **MR. PRESLEY:** Could that be something that
7 Stu would report on at each of the full Board
8 meetings, or Larry or whoever's there?

9 **MS. MUNN:** Or every other one.

10 **MR. PRESLEY:** Or every other one, yeah.

11 **MS. MUNN:** Quarterly sounds like it will be
12 fine.

13 **MR. GRIFFON:** Yeah, quarterly's fine.

14 **MR. PRESLEY:** We don't need kind of
15 quarterlies.

16 **MS. MUNN:** Well, there's a great deal of
17 effort that goes into those PERS.

18 **MR. PRESLEY:** Every other one maybe.

19 **MS. MUNN:** Yeah, yeah. Certainly, quarterly
20 would be --

21 **MR. PRESLEY:** Quarterly would be good.

22 **MS. MUNN:** -- reasonable from my point of
23 view.

24 **MR. ELLIOTT:** We can do whatever you'd like,
25 every Board meeting or --

1 **MR. PRESLEY:** No. Every other Board meeting
2 I think would probably do it. Can't really
3 say quarterlies because we don't have
4 quarterlies.

5 **MS. MUNN:** No, so the real question here as
6 I see it is will we establish an electronic
7 corral for PERs where we can in our matrix
8 indicate that it's now become a PER, closed
9 for our purposes, and --

10 **MR. GRIFFON:** And I think we've kind of done
11 that.

12 **MS. MUNN:** -- and have an electronic box for
13 PERS that will be the source of Stu's
14 quarterly report.

15 What do you think, Nancy?

16 **MS. ADAMS:** Well, the question comes is I've
17 not seen the database that's been under
18 development for this group, and the question
19 is where does that field generate from? Does
20 it generate from this group's database and
21 link to Procedures?

22 **MR. HINNEFELD:** Which field are you talking
23 about?

24 **MS. ADAMS:** A field that would be --

25 **DR. MAURO:** We haven't talked about this

1 yet. In other words we've talked about
2 creating the field in this database that would
3 transfer over to Procedures. In other words
4 we all agree that, yes, for example, the
5 resuspension factor issue is a global issue.
6 There are other places where it keys back to
7 some procedure review, OTIB-0009, for example,
8 on ingestion.

9 So I think we carried the thought
10 process to that point where we see linkages
11 between what we're doing here and what's going
12 on at the Procedures. What we haven't really
13 talked about is this new window which says,
14 wait a minute, now we have a case where we
15 agree that there's a need for it to be
16 reopened and revisited as part of the PER
17 process. So that would be, if we were
18 inventing the matrix for this system, just
19 like we have a box in Task Three which has
20 abeyance, there would have to be a box now in
21 this thing, which might be a new kind of box,
22 called reopened or reevaluated --

23 **MR. GRIFFON:** Or PER.

24 **DR. MAURO:** --or PER.

25 **MR. GRIFFON:** I think we've said it already.

1 **DR. MAURO:** If it says PER, I don't know
2 what happens though. In other words whenever,
3 for example, the case we're talking about now
4 where I think because of OTIB-0012, I think
5 you said, we're going to have to revisit this
6 particular case. Does that automatically mean
7 that this case dropped into part of the PER
8 process?

9 **MR. HINNEFELD:** Well, I know this case
10 dropped into the PER process, and there were
11 several. Like Scott mentioned it was actually
12 returned to us for the Super-S Plutonium. So
13 I believe our database will keep track though
14 of the PERs.

15 There are -- somebody asked is this
16 the only time when this would happen in case
17 we get ^. A PER is not necessarily ^.
18 Frequently, there's new development on the
19 case. The DOL will tell us about additional
20 cancers or additional employment. And that
21 kind of a change, which we had really nothing
22 to do with, it was all done at DOL shop, would
23 cause a compensation change.

24 **MR. GRIFFON:** Would they distinguish between
25 what --

1 **MR. HINNEFELD:** I believe we can distinguish
2 those. I believe we can keep track of that.

3 **MR. GRIFFON:** That's all we need to know.

4 **MR. HINNEFELD:** I believe we can keep track
5 of that. I'll have to check and make sure.

6 **MR. GRIFFON:** If we can distinguish them
7 then we're all set. And the database we can
8 develop here can have a field that says it's a
9 PER review.

10 **MR. HINNEFELD:** I think our ability to keep
11 track of that started with our PER application
12 which did not start at the beginning. It
13 started a few months ago.

14 **DR. MAURO:** So in theory we could run a
15 sort. If we had the database in place we
16 could run a sort that says, okay, please list
17 all the cases that we designated as PER, and
18 we'd have a list of cases. And then at that
19 point a status report could be given. What's
20 being done with these? And some of them may
21 fall into a real PER and some --

22 **MR. HINNEFELD:** From some date, not from the
23 start of the program. From the date when we
24 adopted our PER application which is, like I
25 said, several months ago. From that date on

1 we can do that. I'm not sure about our plans
2 to populate the older PERs into that system.
3 I don't know if that's on the agenda or not.

4 **MR. GRIFFON:** Let me also say my hope is
5 that on the agenda today would not be the
6 database. I really do think, I think John
7 said, we're done with talking about the
8 technical merits of the findings. I think
9 that's what this Subcommittee's about, so I
10 hope we're not done with that or we can just
11 turn this into a tracking work group.

12 **MS. BEHLING (by Telephone):** Mark, this is
13 Kathy Behling. Can I just add one thing
14 before we get off the subject of the database
15 is not to belabor this, but we are, in fact,
16 we have a database just about complete. I'm
17 in the process of testing that database. And
18 this would be a perfect opportunity and time
19 for us to add a field to capture that PER.

20 That would be very easy to do, and
21 that would give NIOSH the opportunity to go in
22 and sort on the PERs in order for them to make
23 their presentation. So we're, in fact, I
24 haven't shared this with Nancy yet because
25 we're still testing it, and I wanted to be in

1 fairly good shape for the database before I
2 turned it over to her.

3 But we're very, very close to being
4 done, and we can introduce that in any format
5 that you want. But that's very easy to do and
6 we can provide that as a tool for NIOSH to use
7 for their presentation to the Board.

8 **MR. PRESLEY:** Who would input that data then
9 into the database? This is Bob Presley.

10 **MR. GRIFFON:** Who would input what data?

11 **MR. PRESLEY:** Who would put that where she's
12 having that new field? Who's going to
13 populate that thing? Is that going to be
14 something that NIOSH does or is that going to
15 be something that SC&A does?

16 **MR. GRIFFON:** Well, I think in our
17 Subcommittee process, we're telling them in
18 our resolution column, we're basically saying
19 if it's going to that area, like this one if
20 it's a PER review, it will be identified in
21 this discussion.

22 And then the question of who edits, I
23 think, is the same question that Wanda has
24 brought up on her work. You know, who has
25 access to changing fields in the database that

1 I think that would be the same question we
2 have in the Procedures work group. Who's
3 going to be editing when?

4 So I think NIOSH will have to add
5 responses in, and the same way we're doing in
6 the Procedures work group. Both teams will
7 have access I imagine.

8 **MR. HINNEFELD:** I would suspect we would
9 inform the Subcommittee that this case is in
10 the PER. And the Subcommittee would authorize
11 that data entry. And whether we would put it
12 in or SC&A ^. The Subcommittee, I believe,
13 would authorize the status changes.

14 **MR. GRIFFON:** You'll identify, who
15 physically, I'm not sure.

16 **MR. HINNEFELD:** It's fairly straightforward
17 for us at that point.

18 **MS. MUNN:** So, Kathy, this new field you're
19 talking about is in a database that you're
20 setting up for the Subcommittee or another --

21 **MS. BEHLING (by Telephone):** For the
22 Subcommittee.

23 **MS. MUNN:** Okay, just wanted to verify that.

24 **MR. GRIFFON:** Hopefully, a very simple
25 ACCESS database that we can -- invest a lot of

1 time in.

2 Anyway, so we're almost up to the
3 first one that Doug identified. Back to the
4 case 105, and I think I finally am up to 5.6.
5 And you said that there's agreement on that,
6 and that's what I have, too.

7 So then, Doug, take over the next one,
8 107.4.

9 **MR. FARVER:** Okay, 107.4, reviewer believes
10 NIOSH's assumptions regarding internal dose
11 for uranium exposure are improper basically.
12 And then NIOSH issued a response, and then we
13 basically didn't agree with NIOSH's response.

14 And it really has to do with the type
15 of intake, chronic or acute, and then the
16 intake period, the time period. And we
17 thought it was better to do an acute intake
18 over a longer time period, which I believe was
19 mid-point. I'm trying to find the ^. So what
20 it comes down to it's a difference of how do
21 you choose the intake.

22 Complicating the factor is there's
23 only two bioassay samples. So you can look at
24 it many ways. It's not a big dose concern
25 because dose-wise it really has little effect.

1 I mean, it could triple the dose, but you're
2 tripling it from maybe six millirem to 20
3 millirem.

4 So it's not a high dose factor. It's
5 more of a method. And I guess we're to the
6 point where we understand each other, but we
7 just disagree with the approach.

8 **MS. MUNN:** This is 107 what?

9 **MR. GRIFFON:** 107.4, and I think I misstated
10 it in my matrix. I said that we had
11 agreement, but --

12 **MS. MUNN:** So that's what was confusing me.

13 **MR. GRIFFON:** Right, right, so I'm reading
14 that, too.

15 **MS. MUNN:** So that statement in red is
16 inaccurate.

17 **MR. GRIFFON:** Apparently, yes. I think I
18 assumed -- we've had this discussion on
19 chronic versus acute so many times, I assumed
20 the chronic was bounding. And I put the words
21 in SC&A's mouth here.

22 **MR. FARVER:** Well, I think it comes down to
23 the time period basically. Whereas we chose
24 the mid-point between a start date and the
25 employee's first sample, NIOSH chose a start

1 date of six months before the employee's first
2 sample, which is one factor that's going to
3 affect the dose.

4 **MR. HINNEFELD:** Well, just as an aside
5 because I have not actually seen your response
6 until today. You assumed an acute intake six
7 months before the first sample?

8 **MR. FARVER:** That's what you folks do.

9 **MR. HINNEFELD:** How far before the first
10 sample was that? How long? Do you know?

11 **MR. FARVER:** It looks like two years.

12 **MR. HINNEFELD:** What was the magnitude of
13 the intake in order to yield that bioassay
14 sample two years later?

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

16 **MR. HINNEFELD:** Well, I would like us to
17 take a look at it because it could very well
18 have been right. And like you said, it's a
19 small dose, but as a general rule we feel like
20 we are pretty favorable to the claimants in
21 our dose reconstruction techniques. And so if
22 this is a realistic scenario that we didn't
23 encounter, we may want to think about that.

24 **MR. FARVER:** Yeah, what it comes down to if
25 it's more appropriate to choose six months, if

1 it's appropriate to choose a mid-point, and
2 how do you make that determination.

3 **MS. BRACKETT:** There was no explanation
4 given in the dose reconstruction?

5 **MR. FARVER:** About why it was chosen as six
6 months? I don't believe so.

7 **MR. GRIFFON:** Yeah, I think the one part we
8 all agree on is it probably has little impact
9 on this case because it's a small magnitude of
10 dose. But nonetheless, I think it's in
11 understanding how you're doing DRs.

12 **MR. FARVER:** And then the chronic intake
13 stopped the day of the second bioassay sample,
14 which I don't know --

15 **MR. GRIFFON:** And then he continued to work
16 after that, right? Or whatever, it wasn't a -
17 -

18 **MR. FARVER:** It wasn't a termination sample,
19 correct. It's more method.

20 **MS. BRACKETT:** Right, the magnitude is of
21 some relevance though because if this were
22 closer to 50 percent, then more would be done
23 to look at what was favorable versus what
24 wasn't. You know, more effort would go into a
25 case that's going to be, where it's going to

1 have an impact.

2 **MR. GRIFFON:** Was this a -- I don't even
3 know the POC on this case.

4 **MS. BRACKETT:** Well, I guess I don't know.

5 **MR. FARVER:** I'm thinking it was about 35
6 percent.

7 **MR. GRIFFON:** Yeah, I think you're right. I
8 saw that in the note.

9 **MR. PRESLEY:** That's what you've got in your
10 write-up here is it's 30 -- POC it's 35.

11 **MS. BRACKETT:** And as we're talking I was
12 basing it on the six versus 20 millirem. That
13 wouldn't really impact much of anything.

14 **DR. MAURO:** So what I'm hearing is that I
15 guess at one point I felt that the way in
16 which you come at these problems, you have
17 bioassay data, a limited number of bioassay
18 data. And then you have to make some
19 assumptions regarding the intake regime that
20 resulted in observing that result.

21 My understanding was that the approach
22 that was the standard approach was to assume
23 what continuous intake -- correct me if I'm
24 wrong -- what continuous intake would result
25 in your observing that level prior to the time

1 in which the sample was taken. Or is it that
2 you assume that the intake was an acute intake
3 at one-half the time period between the two
4 points? Or do you do both? I mean, do you
5 check both?

6 **MS. BRACKETT:** No, it depends on generally
7 whether the results are positive or not. I
8 mean, standard approach is if nothing is
9 positive, you'd assume a chronic intake over
10 the time in which the person had a potential
11 for intakes, for exposure. And that would be
12 case-dependent.

13 The DR should look at location of
14 employment, job title, things like that. If
15 nothing changes throughout the employment
16 history, then it should be assumed that it was
17 chronic throughout the entire claimant
18 history.

19 **MR. GRIFFON:** I guess that's the question
20 here. Why wasn't it over the entire period?

21 **MS. BRACKETT:** Right, and that's why I was
22 asking if there was any rationale given. If
23 you look, sometimes if external dose changes
24 significantly, then you can say, well, it
25 doesn't look like there was a potential. But

1 there should be some discussion as to why
2 particular dates were selected.

3 **DR. MAURO:** This description you just
4 provided, is that written up in one of these
5 procedures?

6 **MS. BRACKETT:** I think it's in OTIB-0060.
7 There is some general discussion in that.
8 That's internal dosimetry, and it's just a lot
9 of guidance points for the dose reconstructor.

10 **MR. GRIFFON:** Well, I think it is worth, I
11 mean, even though it's a small, minute dose I
12 think I'd like to give Stu a chance to follow
13 up and see if on this case just why. Because
14 the fact that it is a low POC, you'd think
15 that you'd be overly, usually you're overly
16 claimant favorable. I would expect to see the
17 chronic over the entire job period unless
18 there's good reason not to. And then, so
19 maybe we should track that and understand that
20 basis a little better.

21 **MS. MUNN:** Well, I'm making a note there
22 that says it's an incorrect assumption here.
23 That SC&A does not agree, and although this
24 does not change the compensability of the
25 claim, Stu will look at this again to verify

1 the appropriateness of the method used.

2 **MR. HINNEFELD:** ^ OCAS ^.

3 **MS. MUNN:** I made these notes for myself. I
4 want to make sure I had it right.

5 **MR. GRIFFON:** So then we have 107.6, if we
6 can move on to that.

7 **MR. FARVER:** I believe we are waiting for a
8 response from NIOSH. We've got a second
9 response. They issued a response. We
10 responded, and then they were going to -- a
11 brief discussion is what it amounts to is why
12 PU-238 was not included in the calculation
13 from environmental doses, internal doses. The
14 initial response was, well, it was less than a
15 millirem, and they didn't need to include it.
16 And we came back with, well, you don't know
17 it's less than a millirem unless you do the
18 calculation, and there were no calculations
19 included.

20 **MR. GRIFFON:** Let me give Stu a chance to
21 think about that. I'm going to ask if we
22 could take a ten-minute break. We're having
23 trouble with Ray's equipment. He's getting
24 really bad feedback. I'm hearing it, so I
25 know he's hearing it. So we're going to try

1 to straighten out that.

2 Christine, can you tell those on the
3 phone --

4 **DR. BRANCHE:** Sure. We're going to take a
5 ten-minute break. It's now 10:17, and we'll
6 get back at 10:27.

7 **MR. GRIFFON:** Sounds good.

8 (Whereupon, a break was taken from 10:17
9 a.m. until 10:27 a.m.)

10 **DR. BRANCHE:** Hello, everyone, we're going
11 to start again. Could someone who's
12 participating by phone please unmute and let
13 me know that you can hear me?

14 **MR. GIBSON (by Telephone):** I hear you fine,
15 Christine.

16 **DR. BRANCHE:** Thanks.

17 Okay, Mark.

18 **MR. GRIFFON:** So 107.6, Stu, I'm putting
19 that on hold unless you have a response now.
20 I apologize --

21 **MR. HINNEFELD:** Well, I can tell you,
22 Scott's refreshed my memory a little bit here.
23 Scott has actually provided me some additional
24 information on this, so I haven't gotten to
25 the Board yet, or to the Subcommittee yet.

1 And I will provide that. He provided a file
2 with the calculation that shows the dose is
3 less than one millirem. We talked to the dose
4 reconstructor. The dose reconstructor says I
5 think I must have done that calculation in
6 order to say that. I just didn't include the
7 file or say that in the dose reconstruction.
8 So we can, it is, in fact, less than one
9 millirem. We can provide the file that shows
10 that --

11 **MR. GRIFFON:** Just to close it out we'll --

12 **MR. HINNEFELD:** -- and we all agree it
13 should have been commented in some fashion in
14 the dose reconstruction report.

15 **MR. FARVER:** Either that or the file
16 included. One or the other.

17 **MR. HINNEFELD:** Right.

18 **MR. FARVER:** Or both.

19 **MR. GRIFFON:** But we'll take a look at that,
20 but essentially I think it's going to show if
21 we're going to --

22 **MR. FARVER:** Well, it wasn't a question of,
23 we were aware that it was a question of
24 millirem, it's just it should have been
25 included, something, some mention of it or the

1 file.

2 **MR. GRIFFON:** I'm going down, the next one I
3 have in the matrix is 110.1 and then 110.2,
4 and they both indicate that NIOSH will provide
5 additional follow up. But I have that for
6 110.1 as well. And my note says inconsistent
7 treatment of blank data fields in dose
8 records. One is unmonitored versus when is
9 zero. And then it says NIOSH will provide
10 additional follow up on this.

11 **MR. SIEBERT:** You're talking about the
12 neutron response, right?

13 **MR. GRIFFON:** I have 110.1, which looks
14 likes the photon, and then also 110.2. Is
15 that the neutron?

16 **MR. FARVER:** Yeah.

17 **MR. GRIFFON:** My note said to follow up on
18 110.1 as well. Maybe I misunderstood that in
19 my --

20 **MR. FARVER:** Yeah, I thought 110.1 had been
21 resolved because based on their response, they
22 went back and recalculated?

23 **MR. HINNEFELD:** Yeah. But it looks like we
24 just said, look, you're right. It should have
25 been 15 additional zeros added to the 499 that

1 we already assigned. So it's a fairly small
2 change.

3 **MR. GRIFFON:** Okay, so that one's resolved.
4 And then I have 110.2 is the neutron one.

5 **MR. HINNEFELD:** And 110.2 again is in the
6 category where ORAU had provided a response
7 that I've not submitted to the, have not
8 evaluated so that's in a subcommittee. So I
9 guess if I can, I think if, yeah, we do agree
10 that it should have been assigned, the
11 unmonitored neutron dose should have been
12 assigned from '46 to '49, '51, '52 and '57.
13 So during these years we know this person may
14 have worked as a rover in the 100 Area.

15 So adding the neutron dose doesn't
16 change the compensability because when you
17 start taking out some of the favorability, for
18 instance, there was ambient was added during
19 the years when it really didn't need to be,
20 and so if you start taking the things out,
21 actually the POC over all doesn't change much
22 at all. But that's just ^ response. I still
23 owe you. I'll provide that to the
24 Subcommittee.

25 **DR. MAURO:** What site is this?

1 **MR. GRIFFON:** Hanford.

2 **DR. MAURO:** If I recall though there is some
3 question, the approach used for doing --

4 And you can please correct me if I'm
5 wrong, Doug.

6 --That's an issue on the site profile
7 regarding neutron dose. So if you have, not a
8 missed neutron dose, but a person who wasn't
9 monitored but should have been monitored, then
10 you're going to be filling in that neutron
11 dose using some type of coworker model for
12 neutron exposure. One that may be based on
13 some neutron-to-photon ratios or some other
14 factors. And I think that's an issue that's
15 very much on the table.

16 **MR. GRIFFON:** That's a site profile issue.

17 **DR. MAURO:** But I mean, --

18 **MR. GRIFFON:** Which one is this? We've got
19 to find out if this is a missed or unmonitored
20 situation.

21 **DR. MAURO:** I think he said it's an
22 unmonitored --

23 **MR. HINNEFELD:** I believe it's an
24 unmonitored.

25 **DR. MAURO:** -- this is just one-half the

1 MDL, but unmonitored is coworker model.

2 **MR. HINNEFELD:** Right, and the neutron-to-
3 photon ratio is being addressed, and I believe
4 that's --

5 **MR. GRIFFON:** In the site profile.

6 **MR. HINNEFELD:** Yeah, I know it's in the
7 site profile, but it's more than just the
8 Savannah River site profile. It's also being
9 addressed at Hanford. It's site-wide.

10 **DR. MAURO:** This is Hanford.

11 **MR. HINNEFELD:** Oh, this is Hanford?

12 **MR. GRIFFON:** Yes.

13 **MR. HINNEFELD:** Yeah, it is being addressed
14 there.

15 **MR. GRIFFON:** But I mean it's in the site
16 profile in SEC review. They're discussing it
17 there, right? So we can, yeah.

18 **DR. MAURO:** The only reason why I bring it
19 up is because though you represent it as being
20 relatively modest because you can offset it by
21 reducing some other conservatism elsewhere,
22 our understanding is that depending on how the
23 neutron issue is resolved at Hanford, it may
24 not be so modest.

25 **MR. HINNEFELD:** Well, overall.

1 **DR. MAURO:** Right, right.

2 **MR. HINNEFELD:** But again, if the Hanford
3 neutron approach is changed, then there'll be
4 a PER to address all those.

5 **DR. MAURO:** We've got some layering going
6 on.

7 **MR. SIEBERT:** But as per the processes that
8 were in place at the time the dose
9 reconstruction was done, we agree they
10 probably should have counted him as an
11 unmonitored worker during some other years and
12 added the neutron dose. But per the timeframe
13 if we had done that, it would have no change
14 to compensability.

15 **DR. MAURO:** At that time -- interesting, how
16 do you, okay.

17 **MR. GRIFFON:** Just to go back to 110.1 for a
18 second, I was looking at the bottom of your
19 response, Stu, and it says that it should be
20 noted that they expect this claim to be
21 returned for Super-S. So I was wondering for
22 tracking purposes, am I going to put this as
23 one of these that's under PER review, likely
24 under PER review? Is this definitely under
25 PER review or --

1 **MR. HINNEFELD:** We're finding out.

2 **MR. GRIFFON:** All right. You can go ahead
3 and look at that while we move ahead.

4 What's our next one? 110.2 is
5 completed, right? Or we're waiting for their
6 response. Then we're up to 114 in your
7 document. I'm just going to scan through the
8 matrix and make sure that I don't have
9 anything else that...

10 110.3, just stop at 110.3 for a
11 second, Stu. I have a question on the matrix.
12 First of all, I don't have an initial NIOSH
13 response on that one, but then I have a note
14 that OTIB-0054 has been developed. NIOSH will
15 compare this case with OTIB-, or I guess using
16 OTIB-0054. I'm not sure what OTIB-0054 is.

17 **DR. MAURO:** Fission products.

18 **MR. GRIFFON:** Oh, it's fission products,
19 yeah. So this is a fission product, so I
20 mean, that TIB-0054 is being reviewed in
21 Wanda's work group, right?

22 **DR. MAURO:** We did. We found favorably
23 except that our problem is knowing when and
24 who should be assigned those -- think of it
25 like this. When you know, once you say, yes,

1 we're going to assign an OTIB-0054 fission
2 product dose to this person, the protocol
3 that's been adopted to do that based on, say,
4 gross beta analysis of the urine sample, that,
5 you know, we found favorably, and it's in our
6 report which we haven't reviewed yet but a
7 preview. One of our concerns though is that
8 how do you know whether you're going to, when
9 do you use it. How do you find the people?
10 How do you know you didn't miss some people
11 that you should have given it to that either
12 weren't, didn't receive -- you've got the
13 idea.

14 **MR. HINNEFELD:** So then with respect to have
15 we actually redone this with -0054, I don't
16 know that we have.

17 **MR. GRIFFON:** I think that's why I have that
18 note in there for this case, NIOSH will
19 compare this case using, you know, that's the
20 question. Is this case, is TIB-0054
21 appropriate? So it does go back to this case.
22 So I think I'll leave that as an action then,
23 Stu, for you on that.

24 Then I'm up to 114. And 114.2,
25 actually, I have no indication at all here.

1 Maybe I just missed it, but I also have no
2 NIOSH initial response on that one.

3 **MR. FARVER:** Where?

4 **MR. GRIFFON:** 114.2. Maybe that's why we're
5 --

6 **MR. FARVER:** We haven't received an initial
7 response.

8 **MR. GRIFFON:** Okay, that's in your list.
9 I'm sorry.

10 **MR. HINNEFELD:** I don't have it. I haven't
11 been able to provide it yet, but I will.

12 **MR. GRIFFON:** And then 114.3 is a neutron
13 thing again, right? Yes, and this is
14 basically location stuff I think.

15 **MR. FARVER:** Right.

16 **MR. GRIFFON:** In other words 114.3 for Y-12
17 I think it's determining if a person was in
18 neutron areas and when to assign neutron
19 doses, right?

20 **MR. FARVER:** Right, and as I recall the
21 discussion, what it finally came down to was
22 you had a few different tables of listing
23 neutron areas at Y-12, and they weren't
24 consistent. But I believe they represented
25 different timeframes, but it wasn't clear. So

1 depending on what document the dose
2 reconstructor went to, they would say neutrons
3 were available at this building or facility.

4 Now, I think our recommendation was
5 just put together one big table that has
6 timeframes on it and buildings so it's all in
7 one spot. And I believe that's been referred
8 to, under Task One site profile reviews. So
9 really there's no further action here.

10 **MR. GRIFFON:** Yeah, I did have, my first
11 note says NIOSH to further evaluate this case.
12 But I think we've gone as far as we can here.
13 Is that what we're saying?

14 **MR. FARVER:** Right, we've had some
15 discussions on it.

16 **MR. GRIFFON:** I mean, is there agreement
17 that it was done correctly? It's just a
18 question of how the site profile is -- I mean,
19 that they're contradicting documents but the
20 bottom line is they got it correct or we're
21 not sure? I don't --

22 **MR. FARVER:** It's another one of those iffy
23 situations, and I think really the important
24 part of this is that you come up with a
25 coherent table that lists the items correctly,

1 those facilities.

2 **MR. GRIFFON:** Yeah, this looks very similar
3 to, I think there's one in the seventh set
4 that's very similar to this. Maybe that's
5 where I'm remembering it from reviewing it on
6 the plane.

7 I mean, we definitely agree to defer
8 part of it to the site profile review process,
9 the neutron locations, looking at that
10 documentation and whether it's appropriate,
11 contradicting, whatever, review it there. Is
12 there any further work on this case? I guess
13 that's the question.

14 **MR. HINNEFELD:** I would guess that once we
15 decide what the correct listing of neutrons
16 is, then you'd see if this dose reconstruction
17 complied with the correct listing. So there
18 would be that still to check on once that's
19 done.

20 **MR. GRIFFON:** But theoretically, that should
21 be trackable if we're saying this is deferred
22 to the site profile review, then we track it
23 that way. And once we find the outcome in the
24 site profile review, we go back to those and
25 check, right? So, theoretically. So I'm

1 going to leave it as concluded then for site
2 profile review, right?

3 **MR. FARVER:** Yes.

4 **DR. MAURO:** In this assignment, like for
5 example previously we -- I hate to go back to
6 this, but I'm thinking about Kathy on the line
7 listening to building this machine -- so it
8 would be designated as transferred to site
9 profile?

10 **MR. GRIFFON:** Uh-huh. I mean, I think we
11 have, you know, three now obvious ones
12 transferred to Procedures work group,
13 transferred to site profile, and transferred
14 to PER review. Those are three obvious ones.

15 **MR. FARVER:** Now, if this new list of
16 locations and years comes up with maybe some
17 new facilities or dates when this employee was
18 working at a facility, well then it would
19 impact this case.

20 **MR. GRIFFON:** Yeah, and then that's when
21 we'd have to look at how the site profile
22 review team assessed that. What makes me
23 nervous on these is that that site profile
24 review team, I know it well because I think I
25 chair that work group. And we haven't met

1 since the SEC was over. So it's hard to get,
2 you know.

3 **DR. MAURO:** And we're not going to get the
4 records sold up with the classification so...
5 It's amazing how they all confound and come
6 together.

7 **MR. GRIFFON:** We're not going to solve that
8 here. Let's just move on.

9 And I have 114.5. Did you have that
10 one as your next one or no?

11 **MR. FARVER:** We had 114.4, but we agreed to
12 their response.

13 **MR. GRIFFON:** Oh, okay, that's good.
14 Agreement on that one.

15 And 114.5. This is more substance
16 here.

17 **DR. BRANCHE:** We closed 114.4 at the last
18 meeting.

19 **MR. GRIFFON:** Right.

20 **MR. FARVER:** 114.5, they issued a response,
21 and then we issued a response. And we had
22 talked about it, and I believe we're waiting
23 for something from NIOSH.

24 **MR. GRIFFON:** And that's what I have. I had
25 SC&A provided a follow-up response on, I left

1 out the date.

2 **MR. FARVER:** And it has to, just to
3 summarize it, the employee submitted 50 urine
4 samples over a certain time period, but when
5 they assessed the dose, they used coworker
6 data. Didn't feel it was very appropriate to
7 use coworker data when you have actual data.

8 **MR. GRIFFON:** And it looks like a fair
9 amount of actual data, yeah.

10 **MR. FARVER:** Well, 50 samples.

11 **MR. SIEBERT:** Is that 114.5?

12 **MR. FARVER:** 114.5.

13 **MR. SIEBERT:** I see CATI information
14 considering X-rays and incidence --

15 **MR. GRIFFON:** Oh, we have the wrong number.

16 **MR. SIEBERT:** -- 114.5.

17 **MR. PRESLEY:** Well, you go down into this in
18 this SC&A response, and it picks that up.

19 **MR. GRIFFON:** That's right because in the
20 top of yours, you indicated we agree with the
21 X-ray part; however, the other part is the
22 question.

23 **MR. FARVER:** I think when I started going
24 back and looking at your response, that's when
25 I found out they were using coworker data.

1 **MR. HINNEFELD:** I think we should have
2 another response coming that I haven't sent to
3 the Subcommittee yet.

4 **DR. MAURO:** Was this denied? Using coworker
5 data when there were zeros. My assumption is
6 you would probably overestimate it.

7 **MS. BRACKETT:** Is that the case? Was it all
8 zeros?

9 **MR. SIEBERT:** No.

10 **MS. BRACKETT:** I wouldn't have thought it
11 was.

12 **MR. PRESLEY:** Every now and then you're
13 going to get something like this.

14 **MR. GRIFFON:** On page 11 you show some of
15 the data anyway, right? You've got excerpts
16 of part of the data. Anyway, okay, so I'll
17 highlight that one for further follow up.

18 **DR. MAURO:** Just for my own edification,
19 when it's convenient to automatically, let's
20 say, trigger a workbook that assigns coworker
21 automatically, and you know that by doing that
22 you're going to overestimate the intake for a
23 person who may have had a few, or in this case
24 not so few, urine samples. Would you do that
25 as an efficiency method when you know that the

1 person's going to be denied anyway? What I'm
2 asking is, is it possible that this happened
3 because it was an efficiency method.

4 **MR. SIEBERT:** It may have.

5 **MS. BRACKETT:** Right, that's what I was
6 wondering because this is something that we've
7 discussed a few times that we have talked
8 about, although in the case of people with all
9 negative results that you could assign
10 coworker in place of them. Because I looked
11 at the coworker results versus the MDAs. But
12 it kind of jumps around for different sites,
13 so we kind of rescinded that as a blanket.

14 It could be done on an individual site
15 basis if the DR looked at what the MDA for the
16 method is versus what the coworker results
17 are. So it's not a generic, blanket
18 efficiency method, but it could be used if
19 that comparison were done and that would be
20 claimant favorable.

21 **DR. MAURO:** And that would be a judgment
22 made by the dose reconstructor at the time. I
23 guess he would just have to explain that in
24 the dose reconstruction how he did that.

25 **MS. BRACKETT:** Yes, it's probably something

1 that I should do on the generic, on a site-by-
2 site basis, and issue guidance to the DRs.
3 But right now it would have to be on an
4 individual dose reconstructor basis. And for
5 Y-12 I think that we probably are above the
6 MDA for the coworkers. So in general it would
7 be claimant favorable.

8 **DR. MAURO:** Sure, without a doubt.

9 **MS. BRACKETT:** Of course, that's depending
10 on, well, if the person's results were all
11 listed in ^.

12 **DR. MAURO:** All what his results are, of
13 course.

14 **MR. GRIFFON:** So we're on to our next one.
15 117.1 is the next one, and I'm just going to
16 check through the matrix. If anyone sees
17 anything else before that, let me know.

18 (no response)

19 **MR. GRIFFON:** Okay, then, 117.1 it is. And
20 basically, I think NIOSH is supposed to
21 provide a follow-up response on this one.

22 **MR. FARVER:** This one?

23 **MR. GRIFFON:** Yeah.

24 **MR. FARVER:** No, this was one that we
25 responded back to and this is one -- where are

1 we at?

2 **MR. GRIFFON:** 117.1.

3 **MR. FARVER:** I'm sorry. I'm ahead of you.
4 No, I believe we talked about this and concur
5 with their response.

6 **MR. GRIFFON:** Okay.

7 **MR. FARVER:** Really what it comes down to is
8 they were told to get it done and follow their
9 directive.

10 **MR. GRIFFON:** Explain that to me. I have a
11 little note here that I don't understand,
12 truncated it to 25 percent. I'm not sure.
13 I'll take that out, but I want to understand
14 why I put it.

15 **MR. FARVER:** I don't know what that note
16 means. Response was about, should have been
17 referenced, and an OTIB should have been
18 referenced. And NIOSH comes back with they
19 were issued a letter, oh, OTIB-0033 was
20 published, completed in May and published in
21 April. Dose reconstructions done in May and
22 OTIB-0033 was published in April. So it's
23 closed.

24 **MR. HINNEFELD:** Yeah, I believe this was
25 when, you know, prior, this was about the time

1 we issued our ^ the DRs that are two years old
2 ^ using the techniques available. And so
3 acting in accordance with that instruction
4 there were some, they essentially pulled this
5 OTIB-0033 approach which they'd been kicking
6 around, but maybe the dose reconstructor you
7 know with the time he originally drafted it
8 didn't know if it was going to be available or
9 not, so he just went ahead and used the
10 approach without referencing the OTIB. And so
11 the timely proximity thing and was related to
12 our direction to go do these cases now.

13 **MR. SIEBERT:** And it's a comp case.

14 **MR. HINNEFELD:** And it is a comp case.

15 **MR. GRIFFON:** It is a comp. I think my
16 reference was, it says something here that a
17 smaller fraction of the TIB-0018 intakes were
18 applied than recommended by TIB-0033.

19 **DR. MAURO:** You used 0.25 as your adjustment
20 factor? I heard 25 percent. So you applied
21 the 25 percent to the MPCs.

22 **MR. HINNEFELD:** And it's still compensable.

23 **DR. MAURO:** And it's still compensable.

24 **MR. GRIFFON:** Right, that why I knew it made
25 sense at one point.

1 Moving on I have 118.1 as unresolved.

2 Is that --

3 **MR. HINNEFELD:** I have received those
4 initial responses from the contractor, but I
5 haven't reviewed them.

6 **MR. GRIFFON:** All of 118, actually, right?

7 **MR. HINNEFELD:** Yes.

8 **MR. GRIFFON:** So they're on hold still.

9 Then 119.1.

10 **MR. FARVER:** 119.1 basically, well, there
11 was a little concern regarding, I guess, work
12 location and how that affects the photon
13 energy distribution and things like that. And
14 NIOSH went back and recalculated, and even
15 though it did increase slightly, it was
16 already a compensated case.

17 **MR. GRIFFON:** Okay.

18 **MR. FARVER:** And I think this goes back to
19 the question of if it's a compensated case,
20 how much detail do you go into in a worker's
21 location.

22 **MR. GRIFFON:** All right, so we have SC&A
23 agrees on that one. And let's just look at
24 the rest of the matrix and make sure there's
25 no other ones. I have this, and I remember

1 Larry did this at the last Board meeting, but
2 I have this note about NIOSH will present on
3 the QA program. And I know you gave us an
4 initial presentation. I'm not sure if I need
5 to keep that in this matrix or it doesn't make
6 sense to hold it there necessarily unless it's
7 going to be, were we intending on something
8 happening in looking at the -- I don't know.
9 It made sense for the one meeting.

10 **MR. ELLIOTT:** We presented our Q and A a
11 number of times but in great depth and detail
12 at the last Board meeting, and until we have
13 either some new information, trends to report
14 or some new QA/QC things that we're thinking
15 of implementing, I don't know that I have
16 plans to speak about QA/QC until that happens.

17 **MR. GRIFFON:** I think I'm going to delete
18 those as outstanding actions. I don't think
19 they belong there anymore so I'll just get
20 them out of the matrix.

21 And 119.3 I think it refers back to
22 119.1, right?

23 **MR. FARVER:** Right.

24 **MR. GRIFFON:** There's agreement on that,
25 too.

1 don't know what you're doing over there in the
2 Procedures work group.

3 **MS. MUNN:** Is there any reason to transfer
4 this to Procedures?

5 **MR. GRIFFON:** Well, that's what I'm asking.
6 The DR report --

7 Stu, this has come up as early as the
8 first set of cases I think, and you said
9 there's been some changes to the DR report,
10 but you haven't incorporated all of them I
11 don't think, or it's been kind of an evolving
12 thing, right?

13 **MR. HINNEFELD:** Right, we're back on that.
14 We're getting close to having a new template
15 for dose reconstruction.

16 **MR. GRIFFON:** But the template is not
17 necessarily the --

18 **MR. HINNEFELD:** But the language --

19 **MR. GRIFFON:** -- it's not a procedure.

20 **MS. MUNN:** It's not a procedure. Remember,
21 in Procedures we look at procedures that have
22 been given to SC&A for review, and this is
23 not, in my view, a procedure that's been given
24 to SC&A for review. Therefore, it's not
25 appropriately transferred to Procedures.

1 **MR. GRIFFON:** Right.

2 **MS. MUNN:** This is the place to track it.

3 **MR. GRIFFON:** You're off the hook, but now I
4 need a home for it. That's what I'm asking.
5 Where, you know, I don't want to lose it
6 because I think it was, it's come up in a
7 number of cases that we've looked at. And we
8 want to make sure that we go back and say,
9 okay, if the changes they made reconcile what
10 we brought up in our initial findings, so
11 where do we, it's not a site profile. It's
12 not a procedure.

13 **MR. ELLIOTT:** And the issues brought up in
14 the findings have been lack of clarity --

15 **MR. HINNEFELD:** I'm trying to make sure I've
16 got this one clearly. This has to do with the
17 nature in which the dose is reported to the
18 claimant, correct?

19 **MR. GRIFFON:** Right, right.

20 **MR. HINNEFELD:** And actual number that's
21 reported in versus the actual number that
22 shows up in the dose reconstruction.

23 **MR. GRIFFON:** Correct, yes.

24 **MR. HINNEFELD:** Well, I believe this will be
25 fixed by the new template because we

1 essentially avoid all that in the section
2 that's intended for the claimant. You just
3 tell the number without any of those DCF
4 values and ICRP adjustment values or any of
5 that stuff. They just tell them the number.

6 **MR. GRIFFON:** Well, there's a number, you
7 know what I'm saying, there's a number of
8 these that have come up like the --

9 **MR. HINNEFELD:** I know this goes back --

10 **MR. GRIFFON:** -- yeah, there's incidents
11 listed in the CATI report. You didn't
12 acknowledge it in the DR report. I know
13 you've taken care of those. Now you do
14 acknowledge it.

15 **MR. HINNEFELD:** There are some --

16 **MR. GRIFFON:** Well, we've never looked back
17 at the revised template.

18 **MR. ELLIOTT:** I don't think we've given you
19 one to look at.

20 **MR. HINNEFELD:** It's close to being done.
21 We've got a couple questions to resolve with
22 ourselves about -- see, we're going to have to
23 send the claimant a package that we think will
24 be informative that responds to a number of
25 things and some of which came up in Procedures

1 review when they were talking about CATI and
2 the kinds of information that's available to
3 the claimant. And so as I recall --

4 **MR. ELLIOTT:** And informative to various
5 audiences, not only the claimant.

6 **MR. HINNEFELD:** -- and so we're trying to
7 write a section that will be informative to
8 the claimant in essentially layman's language,
9 and then a different section for technical
10 reviewers. Now, whether we actually, you
11 know, the question, the most recent question
12 that we haven't really resolved is does the
13 technical section really need to go to the
14 claimant or can it just ride along to the end
15 person of the administrative record or the
16 analysis record for the case so it's available
17 for all the reviewers and people like that.

18 But do you really want to send
19 something that's going to be an Excel
20 spreadsheet probably that's multiple pages
21 long --

22 **MR. ELLIOTT:** And we could notify the
23 claimant, and they could ask for this.

24 **MR. HINNEFELD:** Oh, we would certainly tell
25 them that.

1 **DR. MAURO:** We talked about this during the
2 OTIB-0090 or -0097 review which had to do with
3 first it was the CATI, and the other was close
4 out. And it was agreed at that time around
5 the table I recall, no, you don't want to send
6 this stuff that makes it worse.

7 **MR. HINNEFELD:** So we have to ensure what
8 we, you know, what we send, there are certain
9 things in the regulation that the dose
10 reconstruction has to contain. The regulation
11 lists certain things that will be in the dose
12 reconstruction. So we need to make sure that
13 we've included that in what we send to the
14 claimant. But other than that I think most of
15 the technical information we think we would
16 prefer to exclude. It makes a more manageable
17 package for the claimant, and it eases some of
18 the minutia of building the package on our
19 side as well.

20 **DR. MAURO:** And I think the Procedures work
21 group came to that same conclusion.

22 **MR. GRIFFON:** Well, I mean, I don't mind
23 actually since this is the DR Subcommittee, it
24 may make sense to just have this subcommittee
25 review the final template and keep that here

1 as opposed to transferring it to Wanda. I
2 mean, I think we can keep that here and not
3 have, I was really just looking for a home
4 because that's come up a number of times.

5 **MR. HINNEFELD:** I'd say it's good as most.

6 **MR. GRIFFON:** All right, so we'll do that.

7 **MR. ELLIOTT:** Just a little more background
8 though. We've been talking about revising the
9 dose reconstruction report that claimants get
10 for about two-plus years now, and we've put a
11 lot of effort into that revision, probably 18
12 months ago. But then because of resource
13 constraints that we have faced for the last
14 year and a half, that has been a low priority.
15 It's also a big retooling, big retooling
16 effort because a lot of the report itself is
17 in --

18 I don't know how you say it, Scott.

19 -- but it's electronically developed
20 and to revise the whole structure of the
21 report requires a retooling of that whole
22 process. And so when we flip the switch on
23 this, we've got to have the retooling effort
24 behind us so that it will all work fine. And
25 we're struggling to get there. So as soon as

1 we get there, we'll give you, give this
2 Subcommittee the format, and you can tell us
3 what you think.

4 **MR. GRIFFON:** I'm just making a note for
5 myself for Kathy on the phone and John, this
6 item will stay with this Subcommittee.

7 Kathy, did you get that?

8 **MS. BEHLING (by Telephone):** Yes, I did, and
9 I think that's a good idea. Let's leave it
10 with the DR Subcommittee.

11 **MR. GRIFFON:** And if you're looking through,
12 Kathy, if you see things here that you don't
13 think have a home right now in terms of the
14 way you're looking at designing this database,
15 I really don't want to go down the database
16 discussion, but bring those up if you see
17 something like where's this going to go. Let
18 us know.

19 **MS. BEHLING (by Telephone):** I will, and I
20 have not come across any of those yet. I
21 think we have the database pretty well
22 organized.

23 **MR. GRIFFON:** Okay, good.

24 120.5, we're almost done with the
25 sixth set here. 120.5 I have NIOSH to provide

1 IMBA run for this case.

2 But you didn't have that, right? So
3 just checking that. Maybe I'm wrong on that.
4 Yeah, I think it carries through to the next
5 couple, too, yeah.

6 **MS. BEHLING (by Telephone):** This is Kathy
7 Behling. I have also in my notes that we've
8 questioned whether we got those IMBA runs, but
9 I believe we did get those. In fact, I have
10 written down here back in September of '07 we
11 received those. And I think we looked at
12 them, and we agree with NIOSH's response.

13 **MR. GRIFFON:** I'm going to put NIOSH
14 provided IMBA runs and SC&A -- you reviewed
15 them already? Because I don't --

16 **MS. BEHLING (by Telephone):** I believe we
17 did, but we should go back and look.

18 Doug, am I jogging your memory?

19 **MR. FARVER:** I'm sure I reviewed them, but
20 they were sent.

21 **MS. BEHLING (by Telephone):** Yeah, they were
22 definitely sent.

23 **MR. GRIFFON:** Well, I'll put a placeholder
24 on it for now. You don't have to guess that
25 you did or not.

1 **MS. BEHLING (by Telephone):** We'll look at
2 those again.

3 **MR. GRIFFON:** Okay, and that carries through
4 the next couple as well or the next one. And
5 I think that's it for the sixth set unless
6 anybody has anything else.

7 (no response)

8 **MR. GRIFFON:** All right. I got a little
9 note from Ray which I think is a good idea for
10 lunch at 11:45. He's running the show here,
11 so I'm fine with that.

12 **SEVENTH SET OF CASES MATRIX**

13 I think we can at least get a start on the
14 seventh set and work for about a half hour.
15 Let's get a start on the seventh set. And did
16 everybody get this matrix, or most people?

17 Now this one, again, this is our first
18 --

19 **DR. BRANCHE:** A couple people didn't get the
20 matrix.

21 **MR. GRIFFON:** I'm sorry.

22 **DR. BRANCHE:** When did it from Kathy?

23 **MR. GRIFFON:** This came from Stu actually.

24 **MR. HINNEFELD:** I sent it on June 2nd.

25 **DR. BRANCHE:** I've got it. Who needs it

1 because I think I have it. Nancy needs it.
2 Who else needs it electronically?

3 (no response)

4 **DR. BRANCHE:** Is it just Nancy who needs it?

5 (no response)

6 **DR. BRANCHE:** Here it comes, Nancy.

7 **MS. BEHLING (by Telephone):** I recently sent
8 out the eighth set. We're not quite there
9 yet.

10 **DR. BRANCHE:** Okay, Kathy, I did not get
11 your copy of the eighth set. I don't have an
12 e-mail message from you.

13 **MR. GRIFFON:** I don't think we're going to
14 get to that today anyway.

15 **DR. BRANCHE:** Well, I'm just saying, I
16 understand that.

17 But, Kathy, I should be getting a copy
18 of what you have, and I don't have one.

19 **MS. BEHLING (by Telephone):** Yeah, I think
20 John had forwarded, but I'll send it again.

21 **DR. BRANCHE:** I have it then, excuse me. I
22 have it. Yeah, he noticed that I was left
23 off. I got it. Thank you.

24 **MR. GRIFFON:** This starts off as 121.1, and
25 the first couple we actually don't have NIOSH

1 responses, right, Stu?

2 **MR. HINNEFELD:** Correct. The first two
3 cases --

4 **MR. GRIFFON:** Or at least pending.

5 **MR. HINNEFELD:** -- one's Aliquippa Forge,
6 and one's Simonds Saw and Steel. Several of
7 the comments address essentially the site
8 profile. The site profile is ^. And so those
9 I did not respond on because we have some
10 initial responses, but we still need to work
11 them internally to make sure those are the
12 responses we want.

13 So some of these I believe I put down
14 what I believe are global issues that have
15 been previously identified that we could just
16 transfer, put on the global issue list
17 enclosed in that format. I mean, there's
18 ingestion, visual --

19 **MR. GRIFFON:** And I see those coming up down
20 there in 121.4, .5, .6, good time to global
21 issues.

22 **MR. HINNEFELD:** To the best of my
23 recollection. If I am wrong, I'll be glad
24 to...

25 **MR. GRIFFON:** In these kind of cases my

1 sense is that these are what I've termed sort
2 of mini-profile reviews, mini-site profile
3 reviews. But I think they probably stay here
4 unless they -- I don't know. I guess we could
5 make a judgment with the Subcommittee members.
6 If they become too large, maybe then we
7 recommend to the Board that we establish a
8 work group to look at it, you know. But at
9 this point I think we're trying to handle
10 those sort of in this Subcommittee.

11 **MR. HINNEFELD:** Well, certainly since there
12 are no work groups assembled for Simonds Saw
13 and Steel and Aliquippa Forge.

14 **MR. GRIFFON:** In other words what I'm saying
15 is we're not just going to transfer them to
16 site profile review issues.

17 **DR. MAURO:** It doesn't exist.

18 **MR. GRIFFON:** Because there's no where to go
19 with it, right. It's here. The buck stops
20 here.

21 So for the first couple, Stu, you're
22 still reviewing those, right?

23 **MR. HINNEFELD:** We've done some work. We've
24 got the initial responses. I just want to
25 make sure we're happy with where we're going

1 to go and what we're going to say.

2 **MR. GRIFFON:** And then the 121.4, .5 and .6.
3 The only difference here is that you've really
4 put a resolution in the response column,
5 right? I mean, essentially you're saying this
6 is going to that global issue.

7 **MR. HINNEFELD:** It could be, could be.

8 **DR. MAURO:** The only --

9 **MR. GRIFFON:** That's fine. We understand.

10 **DR. MAURO:** There are some places -- I went
11 through, and when you get to 121.4 certainly
12 this business of breathing rate is a global
13 issue. But I'd like to just point out that
14 the reason we brought this up was I guess this
15 person was a furnace operator, and based on
16 the information provided.

17 And under those circumstances, and
18 whether you call this a global issue or not,
19 when a person has a job category that would
20 appear to be of a unique nature where the
21 generic assumptions such as the ones in the
22 ICRP, the 1.2 cubic meters per hour, may not
23 apply. When I see furnace operator, it
24 automatically triggers in my mind that's a
25 pretty, that's a job category that has a lot

1 of exceptions to it in terms of the potential
2 for being exposed to airborne dust loading,
3 the breathing rates.

4 What happens is the site profile,
5 which is really universal, all of a sudden you
6 guys are, hold the presses a little bit. This
7 guy might require a little special treatment.
8 And I think when all is said and done that's
9 what's really the recurring theme in many of
10 the comments related to this Aliquippa Forge
11 person, in that being the furnace operator and
12 doing the things that he did. I guess I
13 paused a bit and said, listen, is there any
14 aspect to the site profile where I felt maybe
15 was a little too general when applied to this
16 person.

17 **MR. GRIFFON:** It seems like this case might
18 be that individual that, that hypothetical
19 individual that we often talk about when we're
20 looking at the 95th percentile saying, if you
21 had that guy that had the real dirty job.
22 Maybe this is that example, and you're saying
23 you want to make sure to --

24 **DR. MAURO:** Yeah, I want to make sure. And
25 I'd like to also point out one of the

1 recurring themes again -- because we can go
2 through this quickly, but it's important -- is
3 the site profile itself draws heavily from
4 data gathered in the 1970s, 1978 basically,
5 whether it's residual radioactivity on
6 surfaces or is external exposure, but you're
7 applying that data to a person that worked
8 there in the 1950s.

9 And so again, it's one of these
10 recurring comments. Can you really do that 20
11 years earlier and whether or not, especially
12 if you don't use the 95th percentile. I
13 noticed that you went with the median for the
14 measurements made in 1978 and applied it to
15 this person who was a furnace operator, which
16 right off the top, you sort of push him at the
17 high end plus 20 years earlier. So we had
18 some significant concerns in the way in which
19 you developed Aliquippa Forge.

20 **MR. HINNEFELD:** And like I said, we're
21 trying to develop responses. We want to make
22 sure we get technical response, and it may
23 involve providing the site profile in some
24 fashion.

25 **MR. GRIFFON:** That's good to have on the

1 record. I mean, we want to understand the
2 nature of the finding though, so thank you.

3 **DR. MAURO:** There is no sound bite on this
4 one.

5 **MR. GRIFFON:** It's not simply those same
6 generic issues we've always had. It's a
7 little more to it.

8 **DR. MAURO:** There's more to it, yeah.

9 **MR. GRIFFON:** So then are we, now 121.7 is
10 kind of a unique one, but I haven't seen much
11 of the four, I mean basically --

12 **DR. MAURO:** They addressed it though. In
13 the response they re-did it, took out the
14 smoking and it still didn't change much.

15 **MR. HINNEFELD:** We put it in the most
16 favorable category, and it didn't change the
17 outcome. This will happen on occasion when we
18 get conflicting information from DOL on
19 smoking, and there's usually some
20 communication between our staff and DOL to
21 say, hey, you got to tell us, one. Which one
22 is it?

23 And so I don't know if that occurred
24 in this case, and the DOL said, okay, this is
25 really it. I didn't look to that

1 communication stream to see if that was done
2 or not or whether it was just our staff that
3 saw a designation and put that one in without
4 realizing there was conflicting information.
5 I don't really know what the case was on that.

6 **MR. GRIFFON:** I'm tempted to say here that
7 SC&A's in agreement, but I think it sort of
8 depends on those other findings, right?

9 **DR. MAURO:** Yes, that's --

10 **MR. GRIFFON:** Yeah, because it doesn't
11 impact the case, but if everything else
12 changes, yeah.

13 **DR. MAURO:** But then that maybe will trip
14 it. Because I want to point out, we did walk
15 away from this saying that he could easily
16 have come up with a dose a hundred times
17 higher for this guy. And then maybe all of a
18 sudden the smoking does make a difference.

19 **MR. GRIFFON:** Right, okay, so I think we
20 need to wait on all the responses then. And
21 just to look at the last one, oh, that's kind
22 of a summary. That's your point.

23 **DR. MAURO:** That's what I just said.

24 **MR. GRIFFON:** Okay, let's go on to 122 then.

25 **DR. BRANCHE:** Point one?

1 **MR. GRIFFON:** Yeah, 122.1.

2 **DR. MAURO:** This is Simonds Saw.

3 **MR. GRIFFON:** Yeah, this is Simonds Saw.

4 **DR. MAURO:** Your first response, let's get
5 to conceptually, in effect, at Simonds Saw the
6 external exposure from airborne dust and stuff
7 that's on the ground the way in which the
8 doses are determined, it turns out they were
9 hanging 20 film badges, which is good, to get
10 an external radiation field. And I think you
11 used the full distribution, the median.

12 This guy again, I think he was a
13 furnace operator also. My only comment was
14 given that he was a furnace operator, from
15 previous experience, these people usually are
16 handling a lot more contamination. They're
17 shoveling this stuff into the furnace, this
18 scrap of the uranium. So I guess my reaction
19 was maybe you should have used the 95th
20 percentile for this guy as opposed to the mean
21 or the full distribution that you got from the
22 hanging film badges. That was a suggestion.

23 **UNIDENTIFIED SPEAKER (by Telephone):** Hello?

24 **DR. BRANCHE:** Hello. This is the
25 Subcommittee on Dose Reconstruction.

1 (no response)

2 **DR. BRANCHE:** Michael Gibson, can you hear
3 us?

4 **MR. GIBSON (by Telephone):** Yeah, I can
5 still hear you, Christine.

6 **DR. BRANCHE:** Okay, good. I just wanted to
7 be sure we didn't lose, perhaps it was a wrong
8 number. Sorry for that.

9 **MR. CLAWSON:** Saved a lot on my insurance
10 though.

11 **DR. BRANCHE:** But we don't have a little
12 gecko walking across the table here.

13 **MR. GRIFFON:** So I don't know who was
14 speaking.

15 **DR. MAURO:** Again, because he's a furnace
16 operator, would you want to go with a more, a
17 higher end external submersion dose. Even
18 though, by the way, it's not an important
19 contributor compared to the other --

20 **MR. HINNEFELD:** Right, there's another dose
21 component in here working in proximity --

22 **DR. MAURO:** Without a doubt, and that
23 dominates.

24 **MR. HINNEFELD:** -- and that dominates it.
25 So we felt like this was an appropriate

1 approach. I understand where you're coming
2 from on, does one size fit all work or some of
3 these guys, really the 95th percentile guys,
4 yeah, we try to build these models so they're
5 favorable for the 95th percentile guy. And so
6 overall we felt like this was appropriate and
7 the overall dose assigned is favorable for the
8 95th percentile guy so that he's covered by
9 that.

10 So that's kind of our approach on
11 building these models. Now whether you take a
12 particular data set which, as you say, is not
13 an important contributor anyway, and you apply
14 this distribution, that seems to me to be a
15 relatively unimportant thing to try to sort
16 out. I think overall we're favorable to the
17 person anyway.

18 **DR. MAURO:** Well, I don't know if I would
19 entirely agree with that because, well, we can
20 get to the other issues where I believe he
21 was, if I remember, he was the person that was
22 being -- the generic approach is the rods and
23 the billets, right? He was a furnace operator
24 where they loaded basically billets.

25 I don't know if you want to -- see,

1 I'm talking -- are you okay with --

2 **MR. GRIFFON:** Yeah, yeah, we can move on. I
3 mean, I think this first one is, I think we
4 have to still answer this and look at this
5 model as a mini-site profile review now, I
6 mean, in this group still. So we'll leave it
7 there for now.

8 **DR. MAURO:** That's what it is. That's what
9 it is. That's what we're really doing.

10 I mean, Simonds Saw is in excellent
11 shape in terms of having lots of data, lots of
12 very good data. Now the question is applying
13 that data to this particular worker and is
14 there anything about this worker that really
15 maybe you want to tweak it a bit. And the
16 first place comes in with this submersion
17 exposure whereby you use the full distribution
18 for a furnace operator.

19 As I said, that's not going to really
20 change the dose very much for the reasons
21 we'll talk about in a minute. There are other
22 sources of external exposure that dominate.
23 But nevertheless that's a comment. That would
24 be number 122.1. So I'll leave that with you.

25 **MR. GRIFFON:** Well, then you're moving on.

1 think one foot away, so as far as I'm
2 concerned that is very conservative, very much
3 a bounding scenario except maybe for the
4 furnace operator. Because, see, what happens
5 is the furnace operator's probably up close
6 and personal only to billets. The billets are
7 the things that come in that you have to heat
8 up. Then after you heat them up they go off
9 and they get rolled, and then you get rods.
10 He's not up close and personal to the rods.
11 He's up close and personal to the billets.

12 Now, the billets are bigger than rods,
13 and the doses from the billets -- so in
14 reality, this guy probably really wound up one
15 foot away for seven hours a day to billets as
16 opposed to half and half between billets and
17 rods. And that does jack up the exposures a
18 little bit, 25 percent, not a lot.

19 But then another thing, now I'm not
20 too sure how this works though. I think he
21 would be up close and personal to more than
22 just one billet at any given point in time.
23 In other words the process of putting these
24 things in the furnaces as I understand -- I
25 was talking to a guy who's familiar with this

1 -- that there may be multiple billets that
2 he's up close and personal to.

3 So where I'm going is that I could see
4 if you were going to tailor your analysis to
5 this guy. Again, I'll say it again. This
6 approach certainly is claimant favorable for
7 the vast majority of workers. But maybe for a
8 person who worked with the furnace operator
9 now we're talking external exposure. I would
10 have considered possibly him being spending
11 most of his time close to more than one billet
12 and in effect going the route of the approach
13 taken in Bethlehem Steel where what was done
14 there is they used a semi-infinite slab.

15 In other words you could almost see
16 the difference. In one case you have this guy
17 that's standing next to a billet. In
18 Bethlehem Steel they've got him standing next
19 to basically an infinite, semi-infinite slab
20 of uranium. And I think it has a maybe factor
21 of two effect on the dose.

22 I don't know if that's important, but
23 I think that it seems that there's a breakdown
24 in parity between the way in which you
25 approach the problem for Bethlehem Steel, and

1 the way you approach the problem for Simonds
2 Saw. And it's of particular relevance here
3 because the guy's a furnace operator, and I
4 think in his case the Bethlehem Steel strategy
5 might have been a little bit more claimant
6 favorable. And we're talking about on the
7 order of a factor of two in the dose, external
8 dose.

9 **MR. PRESLEY:** John, can I say something
10 about your hypothesis?

11 **DR. MAURO:** Uh-huh.

12 **MR. PRESLEY:** A billet of uranium is rolled
13 about 800 degrees C. And there is nobody
14 going to stay very close to a billet, a foot
15 away from an 800 degree C billet. I mean, he
16 may go in with something and check it and back
17 off. Nobody.

18 **DR. MAURO:** So you mean after the heating
19 process is over, see, I was envisioning racks
20 of billets that he's putting into the furnace.

21 **MR. PRESLEY:** You put them in, but there's
22 no way in the world you're going to stay that
23 close.

24 **DR. MAURO:** Going to stay there after they
25 come out, yeah. I may have, I created a

1 little picture in my head of what I think it
2 might look like. I'm envisioning the billets
3 show up for a rolling, and they show up and
4 one of the first steps is you get them, you
5 want to heat them.

6 And so I'm picturing a room where
7 billets are stored for being put through the
8 furnace. And when they come out of the
9 furnace, they go off to the rolling operation.
10 So I had a -- now I might be wrong. I had a
11 picture that there may be open billets sitting
12 in the room where this guy is before they went
13 in -- I agree. Once it comes out, the
14 temperature of this thing is off the charts,
15 and they handle them with prongs at a
16 distance.

17 **MR. HINNEFELD:** I guess our general view on
18 the uranium dose model, and it probably has
19 recurred in a number of ways in a number of
20 manifestations, is that we are quite generous
21 with our modeled time and the proximity, how
22 long they spend, how close they spend, which
23 to us provides a high estimate on doses in our
24 dose model. We believe we are consistently
25 assigning high doses for uranium dose modeling

1 because largely because of the proximity
2 assumption.

3 So rather than to debate a lot of
4 times what is the particular dose rate and
5 what dose rate, you know, should you be at the
6 95th percentile or 50th percentile, and what
7 exactly are the components of the radioactive
8 material that contribute to the dose rate, and
9 the impurities in the uranium that would
10 contribute. We feel like that's all
11 essentially dealt with by the proximity and
12 the favorableness of the proximity and the
13 time.

14 And that's kind of a theme. I think
15 you'll see that over and over. And if you
16 would look at dose rates assigned from our
17 uranium dose models versus doses measured, you
18 know, historically at the Y-12 plant where it
19 was full of uranium, or at Fernald that was
20 full of uranium --

21 **DR. MAURO:** You don't see that, yeah.

22 **MR. HINNEFELD:** -- you don't see measured
23 doses where they were monitoring people who
24 worked around a lot of uranium all day long
25 that even approached what we assign on these

1 AWE models.

2 **DR. MAURO:** See, one of the things that
3 happens to me is I see all these AWE
4 calculations, so I'm very familiar with them.
5 Now, right here you're assigning 0.7 MR
6 millirad per hour and 0.285 for the one for
7 the 0.7 is for the billet. 0.285 is for the
8 rod. However, in Bethlehem Steel you assigned
9 2 millirad per hour, ten times higher than a
10 rod.

11 Now I say to myself, is there any
12 reason why you would assign workers at
13 Bethlehem Steel an external dose rate that's
14 ten times higher than what you're assigning at
15 -- and I can't, and to me I say there's a
16 breakdown in parity here.

17 **MR. HINNEFELD:** Now let's also be a little
18 careful on parity because we have, our
19 technical understanding and our technical
20 approaches do evolve over time. And so I
21 don't know that it's true that every case is
22 going to be performed the same way in
23 perpetuity. There may be new information
24 becomes available, new ^ become available, and
25 so there are changes to technical approaches.

1 And when the technical change approach changes
2 doses up, we've got a PER and we go back we
3 consider claims. But when that technical
4 approach more fine tunes a dose, and it goes
5 down, then we don't back to PER. We don't go
6 try to take money away from anybody. We don't
7 do anything like that. We just say, okay, we
8 feel like we have a better technical, more
9 defensible technical approach now. We're
10 going to use that from now on. Versus this is
11 really favorable than we used earlier on, but
12 we didn't have as much information as we have
13 now. So certainly I'm sensitive to parity for
14 this program, but I think when you're thinking
15 of what has to happen, what happens temporally
16 through this program, it's really careful.
17 Otherwise you're tied to the first approach
18 you ever got.

19 **DR. MAURO:** I understand. I understand.

20 **MR. HINNEFELD:** Anyway, that's just where we
21 come from. And also, because there is some
22 big GSDs on these dose numbers. These GSD
23 numbers, you know, the 95th percentile goes
24 well above 2 millirad per hourly.

25 **DR. MAURO:** Yes, it does. Yes, it does.

1 **MR. GRIFFON:** But I think we can, I mean, I
2 think the model, we need to re-examine a
3 little more closely and make sure, I guess,
4 for the question of this particular worker, is
5 everybody satisfied that it's bounding for
6 this situation. I'm curious about the
7 proximity question that Bob raised, and you
8 raised. So I think we want to look at that on
9 the mini-site profile side of this. But I
10 mean, this is really getting issues on the
11 table more than resolving at this point.

12 **MR. HINNEFELD:** Yeah, in fact, I didn't
13 really expect to resolve very much here. I
14 just kind of thought I'd just put out a
15 response.

16 **DR. MAURO:** Well, this is the first time
17 we're engaging a site profile as part of our
18 DR review process. I don't think we've done
19 that before.

20 **MR. GRIFFON:** Right, right. That, too,
21 yeah.

22 **MS. MUNN:** So this case is going to be
23 revisited?

24 **MR. HINNEFELD:** Well, we have some things
25 to, I think there's some stuff that we need to

1 concern ourselves with about the two site
2 profiles we're talking about, Aliquippa Forge
3 and Simonds Saw and Steel. And so we need to
4 look at these as site profile-type comments,
5 and there may be additional responses.

6 **DR. MAURO:** Yeah, I would say that in
7 looking at it, too --

8 **MR. HINNEFELD:** We may need some more
9 information from you as well.

10 **DR. MAURO:** -- Aliquippa, I have some
11 problems, what I call more fundamental
12 problems where you use the 1980 data, '70
13 data. I mean, that really goes to, I would
14 say not that the doses are very high, but that
15 whole strategy is very questionable, and it
16 comes up many times. In this case I think the
17 Simonds Saw site profile is very good. What I
18 started to question as --

19 **MR. HINNEFELD:** That's what we're saying,
20 Super-S operator -- so is one-size-fits-all
21 really appropriate? And is it sufficiently,
22 is our one-size-fits-all sufficiently
23 favorable that it covers the 95th percentile?

24 **DR. MAURO:** Yes, exactly.

25 **MR. GRIFFON:** Anything else on 122 that is

1 new to bring up, John?

2 **DR. MAURO:** 22.4, that's, I agree, that's a
3 global issue. This has to do with a
4 resuspended issue, ten to the minus six
5 resuspension factor. We're back there again.

6 **MR. GRIFFON:** So there's no --

7 **DR. MAURO:** Well, especially applicable. I
8 mean, picture this guy shoveling this stuff.
9 A resuspension factor of ten to the minus six
10 you see in relatively quiet settings indoors.
11 Now I'm picturing this guy, now, as a furnace
12 operator, I know he's loading billets.
13 Whether or not he's loading residue, because I
14 know one of the things you do is you roast
15 some of the cuttings that come off the, when
16 you cut the processes away to avoid fires.

17 You know, we ran into this when we
18 talked about Bethlehem Steel. You got
19 residue. So if he's not only loading billets
20 and heating them up, but he's also shoveling
21 residue of uranium that is being oxidized so
22 that you don't have a fire, then all of a
23 sudden I'm picturing a pretty, an environment
24 where there's a very great potential for dust
25 generation. And a ten to the minus six

1 resuspension factor is not going to --

2 **MR. GRIFFON:** But this seems like this is --
3 correct me if I'm wrong. This seems like this
4 finding is related to the residual time
5 period, right? After the work would have been
6 done, and the guy would have been still
7 working there, but it was a residual exposure?
8 Am I wrong?

9 **DR. MAURO:** I think that was Aliquippa, not
10 Simonds Saw.

11 **MR. GRIFFON:** Oh, on 122.4 I'm asking
12 because the --

13 **DR. MAURO:** No, I think --

14 **MR. GRIFFON:** -- it says resuspended
15 residual uranium.

16 **DR. MAURO:** No, residual uranium doesn't,
17 there's the residual time period, but there is
18 --

19 **MR. GRIFFON:** I'm trying to understand what
20 you meant by residual uranium.

21 **DR. MAURO:** I'd have to go look at it, but
22 there is a distinction. In other words,
23 there's the uranium that's airborne during
24 operations because you're rolling it. It's
25 flaking. It's becoming airborne. Then there

1 is, at the same time, there's also uranium
2 that's on the ground that falls down, and
3 that's residue, but it's during operations.

4 **MR. GRIFFON:** I understand your distinction.
5 I just don't understand what you meant in this
6 finding.

7 **DR. MAURO:** And I've got to check myself.

8 **MR. GRIFFON:** Because usually when we say
9 residual, we're talking residual time period
10 or we often have, so --

11 **DR. MAURO:** If it's, you know, nevertheless
12 -- stay with me for a minute.

13 **MR. GRIFFON:** My question would be on this,
14 do you have the same concern that you did in
15 the Aliquippa?

16 **DR. MAURO:** Yes.

17 **MR. GRIFFON:** Did they use monitoring from a
18 later time period to back calculate or is it
19 current information or what data was used?

20 **DR. MAURO:** The activity on surfaces here
21 I'd have to go check. I'd have to check.
22 Remember, you did have data from --

23 **MR. GRIFFON:** From the time period.

24 **DR. MAURO:** -- from the time period at the
25 time.

1 **MR. GRIFFON:** Not 20 years later.

2 **DR. MAURO:** Yeah, and my concern was that
3 the resuspension factor was not the one I
4 would have expected to see. But you're right,
5 I'd have to go back and look at the ^
6 structure. It's in the write up. In other
7 words one of the problems is that you have the
8 summary here. I'd have to go back to my write
9 up and see exactly where I was coming from
10 here.

11 **MR. GRIFFON:** Like we've said, this is our
12 first cut through, so this is really just
13 defining the issues more than we may not
14 resolve many, but we'll define them.

15 So the 122.5 and six. Five we just
16 did. Six is recycled uranium --

17 **DR. MAURO:** Which is again generic.

18 **MR. GRIFFON:** It's generic, but it's also
19 the response here I see is sort of a site
20 profile issue. Do you agree that, the
21 response says these are ^ Fernald/Hanford are
22 consistent with those ratios.

23 **DR. MAURO:** But then it says once completed
24 more -- in other words you're talking about
25 122.6 right now.

1 **MR. GRIFFON:** Yes.

2 **DR. MAURO:** If you read it says basically
3 once the recycled uranium analysis is
4 completed, a more authoritative analysis will
5 be available and revisions will be made. So
6 it's like the other one we talked about. It's
7 just like the one we talked about before
8 related to recycled uranium.

9 **MR. HINNEFELD:** This is a kind of a global
10 issue.

11 **DR. MAURO:** It is a global issue, and I
12 checked it off saying it's a global issue. I
13 agree.

14 The next one, 122.7, I had a, I'll
15 tell you conceptually what the concern is. I
16 know you folks didn't respond, but the thorium
17 inhalation question. It turns out that you
18 have a lot of information on thorium through-
19 put, lots of good data, and uranium through-
20 put. But for the purpose of doing the
21 inhalation from the thorium, I think you only
22 had a single thorium measurement that was
23 made.

24 And on the basis of that measurement,
25 the inhalation dose was calculated. In other

1 AWE sites where you had good information on
2 through-put, you did it prorated. You said,
3 listen, if I know that this was the amount of
4 uranium that went through, and I could
5 estimate the inhalation of uranium for workers
6 that were there, the amount of inhalation of
7 thorium is going to be directly proportional
8 to the through-put. Because they're both
9 really moving through except one, you have a
10 much smaller volume. The thorium's always a
11 much smaller volume.

12 So my reaction to this was rather than
13 basing the inhalation of thorium dose on a
14 single airborne sample measurement, which is
15 really very questionable, it would be better
16 to perhaps use the prorating approach as you
17 have done in many other site profiles for
18 AWEs. That would be a suggestion.

19 **MS. MUNN:** So the action is going to be
20 what?

21 **MR. HINNEFELD:** Well, we haven't provided
22 the response yet.

23 **DR. MAURO:** But that was my thinking, and
24 it's in the write up in my report.

25 **MR. ELLIOTT:** Which just helps clarify so

1 that we can respond.

2 **MR. GRIFFON:** 122.8 and nine are those
3 global issues.

4 **DR. MAURO:** Global, global.

5 And ten I checked off as okay.

6 **MR. GRIFFON:** Yeah, the only thing I
7 question on ten is it clearly would be a DOL
8 issue.

9 Is there any mechanism, Larry, for us
10 to, I mean, is this worthy that we should
11 forward this to DOL? I know they're
12 participating by phone anyway, but we don't
13 advise them necessarily.

14 **DR. MAURO:** During the CATI --

15 **MR. HINNEFELD:** There is a close-out
16 interview -- or someone interviews the
17 claimant alluded to an additional cancer. And
18 we may have checked, you know, we may have
19 asked DOL, and they may have come back and
20 said, well, they're talking about a secondary
21 cancer, a metastasis. Or they may have
22 already been investigated. It may not have
23 been.

24 **MR. ELLIOTT:** When we hear the claimant say
25 I have another cancer, we say to them you need

1 to go to DOL, and they determine eligibility
2 in that regard for your claim. It'll be up to
3 them. And once we hear from them that you
4 have an additional cancer, we'll rework the
5 dose reconstruction to that.

6 **MR. GRIFFON:** I understand that, but I'm
7 just wondering from our standpoint here to
8 close this. I mean, we can just drop it or we
9 can say we found this in our audit, DOL, maybe
10 you should look at it. Maybe you already
11 have. And just FYI kind of, I don't know if
12 it's --

13 **MR. SIEBERT:** We did just get this claim
14 back for an additional cancer.

15 **MR. ELLIOTT:** Sometimes it takes a long
16 time. Sometimes it doesn't.

17 **MR. SIEBERT:** Yeah, there's the initial
18 153.6.

19 **MR. GRIFFON:** So there was an additional
20 cancer so --

21 **MR. SIEBERT:** So the DOL did add an
22 additional cancer.

23 **MS. MUNN:** So it's still under review
24 essentially.

25 **MR. SIEBERT:** Well, we rework it.

1 **MR. HINNEFELD:** We'll rework it.

2 **MR. SIEBERT:** In March of this year they
3 assigned a new cancer.

4 **MR. ELLIOTT:** I think for purposes of your
5 working group matrix though this is probably
6 closed.

7 **MR. GRIFFON:** Right. That certainly closes
8 it because we know.

9 Next, 123, John, what site is this?

10 **DR. MAURO:** I'm shifting off to Doug now.

11 Doug, we just left the AWEs.

12 **MR. FARVER:** You're off the hook now, John.

13 **MR. GRIFFON:** Well, actually, you know what?
14 Before we get into a new site, this might be a
15 good time to break. No, actually, there's
16 only one finding. Why don't we try to get
17 through this one, then break.

18 **MR. FARVER:** It should be pretty simple
19 because this is one of these fission product
20 findings.

21 **DR. BRANCHE:** We're at 123.1?

22 **MR. GRIFFON:** 123.1, yeah.

23 **MR. SIEBERT:** Which site is this from?

24 **MR. GRIFFON:** Hanford. It is Hanford?

25 **MR. FARVER:** So this finding you'll see pop

1 up in several of these cases coming. We also
2 have one from the sixth set, didn't we?

3 **MR. GRIFFON:** I think so.

4 **MR. FARVER:** That had to do with fission
5 products.

6 **MR. GRIFFON:** Right.

7 **MR. FARVER:** And what I'll defer, I'll ask
8 Kathy. She's had time to look at this one
9 because she's the one that clued me into the
10 fission product issue. It actually predates
11 me.

12 So, Kathy, have you looked at this
13 one, this finding?

14 **MS. BEHLING (by Telephone):** Yes, I have.
15 I've briefly looked at it, and I guess if I
16 recall correctly, in this case they missed
17 fission product dose calculated, and I believe
18 they calculated actual fission product dose
19 after 1970. And this goes back to a previous
20 finding for the portion of the missed fission
21 product. We, you always go into a
22 radionuclide selection process for identifying
23 what would be the most claimant favorable
24 radionuclide for fission products.

25 And I think in this case it was like

1 Cerium-144. But we've questioned what about
2 all of the other radionuclides that may have
3 been missed. And I know at one point in time
4 NIOSH indicated that they were possibly
5 developing a workbook. And I think this
6 finding goes back to those previous questions
7 regarding is there a workbook being developed
8 where you're going to be looking at all of the
9 various radionuclides associated with missed
10 fission products or are you continuing to look
11 at just the radionuclides that will contribute
12 the largest dose?

13 **MR. HINNEFELD:** You guys have anything on
14 that?

15 **MS. BRACKETT:** Well, it sounds like OTIB-
16 0054.

17 **DR. MAURO:** I was just going to say that.

18 **MR. GRIFFON:** Yeah, that's what I thought.

19 **MR. SIEBERT:** And we're looking at the
20 application of OTIB-0054 to whole body count.

21 **MS. BRACKETT:** Oh, right, right, because it
22 wasn't written specifically --

23 **MR. SIEBERT:** It's written for urinalysis.

24 **MS. BRACKETT:** And we have been looking at
25 comparisons, but it's very complicated, and we

1 kind of keep letting it slip away.

2 **MR. SIEBERT:** And it falls into the other
3 issues.

4 **MS. BRACKETT:** We have started developing
5 some comparisons and trying to come up with a
6 method for applying it whole body counts.

7 **MR. SIEBERT:** And we're starting off with
8 the cases where this has been brought up in
9 these matrices and doing those comparisons
10 first.

11 **MS. BRACKETT:** You finished one of them,
12 right? We have --

13 **MR. SIEBERT:** Almost finished with one.
14 It's pretty clear at least for the first one
15 that we've done that the overestimating use
16 and the most claimant favorable was very
17 claimant favorable even though we compared to
18 the whole body counts in '54. But we are
19 still working that.

20 **MR. HINNEFELD:** So in other words we then
21 will, we are going to provide additional
22 analysis of these cases.

23 **MS. BRACKETT:** What we had hoped to do is
24 show that it's claimant favorable to do what
25 we've been doing rather than having to change.

1 **MR. SIEBERT:** That's very complicated.

2 **MS. BRACKETT:** Right. So that will depend
3 on the outcome of the --

4 **MR. GRIFFON:** So this isn't really OTIB-
5 0054. It's a comparison against OTIB-0054,
6 right?

7 **MS. BRACKETT:** Yes, right.

8 **MR. SIEBERT:** Fifty-four doesn't apply to
9 whole body counts.

10 **MR. GRIFFON:** Right.

11 **MS. BRACKETT:** Well, right --

12 **MR. GRIFFON:** And I'm not sure where to send
13 this.

14 **MS. BRACKETT:** Well, that's true because the
15 outcome will be either we will demonstrate
16 that what we're doing is claimant favorable or
17 we'll have to modify OTIB-0054 to incorporate
18 whole body counts in there.

19 **MR. CLAWSON:** Basically it's going to have
20 to stay here until they determine --

21 **MR. HINNEFELD:** Probably.

22 **MR. GRIFFON:** Yeah. Okay, this might be a
23 good point to break for lunch.

24 **DR. BRANCHE:** We're going to get together at
25 12:45 or at one?

1 **MR. GRIFFON:** I think 12:45.

2 **DR. BRANCHE:** We'll reconvene at 12:45, and
3 so I'll turn the line off, and we'll open the
4 phones back up and see you soon.

5 (Whereupon, a break for lunch was taken from
6 11:45 a.m. until 12:45 p.m.)

7 **DR. BRANCHE:** If someone is on the line,
8 please let me know if you can hear me.

9 **MS. BEHLING (by Telephone):** This is Kathy
10 Behling. I can hear you.

11 **DR. BRANCHE:** Thanks, Kathy, I appreciate
12 it.

13 Okay, Mark, it's all yours.

14 **MR. GRIFFON:** Back on the seventh set, try
15 to liven it up after lunch. Somebody help me
16 out. Where did we stop off?

17 **MR. FARVER:** 24.1.

18 **MR. HINNEFELD:** 24.1.

19 **MR. GRIFFON:** We're on 124.1. And so I'll
20 turn it over to SC&A I guess. I'm not sure
21 which site this is.

22 **MR. FARVER:** I believe this is Hanford.
23 Yeah, Hanford. And the finding was about
24 inappropriate method to calculate missed
25 photon dose, and it has to do with the

1 counting of the zeros. The workbook, the
2 equation used in the workbook to count the
3 zeros was the, well, it worked okay, but the
4 headings of the different dosimeter parameters
5 changed, but the equation stayed the same.

6 In other words sometimes you'd be
7 adding up a shielded zero and the next time
8 it'd be a gamma, and sometimes it's
9 penetrating or sometimes it's low neutron and
10 change over the years, but the equation would
11 still be the same. So NIOSH apparently went
12 back in and changed the workbook, and I have
13 not checked the new DR report yet, so it's my
14 action. And this also goes for 124.2 and
15 124.3.

16 **MR. GRIFFON:** Any follow up on that, Stu?
17 Any clarification? Is that about right?

18 **MR. HINNEFELD:** I think what we said is they
19 were right, and that tool's been corrected.

20 **MR. GRIFFON:** All right, continuing on to
21 124.4.

22 **MR. FARVER:** All right, 124.4.

23 **MS. MUNN:** Is this still open? Because --

24 **MR. GRIFFON:** Yeah, SC&A's going to look at
25 the tool.

1 **MR. FARVER:** Has to do with the failure to
2 identify an incident in the DOE records. What
3 it comes down to is NIOSH agrees there should
4 have been more clearly explained in the DR
5 report, which is we agree. So we're okay with
6 that finding and their response.

7 **MS. MUNN:** 124.3? So both two and three,
8 right?

9 **MR. GRIFFON:** So we've got agreement on that
10 one. That's 124.4, right?

11 **MR. FARVER:** That was 124.4.

12 **MR. GRIFFON:** Yeah, 124.1, 2 and 3 are all
13 fall into that first, the tool, reviewing the
14 Excel tool.

15 Okay, now we're on to case 125.

16 **MR. FARVER:** Case 125 is another Hanford
17 site. 125.1, the DR does not properly account
18 for all the photon dose. Apparently, a couple
19 doses were not, for years in 1952 and '82,
20 were not entered into the IREP. But they say
21 regarding the '84 dose, they say it's in the
22 IREP, but I still couldn't find it. So I'll
23 still come back to them and say I could not
24 find a 1984 dose in the final IREP file. The
25 IREP entry that they referred to is for 1948.

1 **MR. GRIFFON:** Give him a chance to find
2 that.

3 **MS. MUNN:** Nineteen eighty-four. So nothing
4 has happened.

5 **MR. GRIFFON:** Stu, any follow up?

6 **MR. HINNEFELD:** Well, I'm not sure how much
7 of this I can reconstruct right now. I'll see
8 what I can get to.

9 **MR. GRIFFON:** I was just pausing to give you
10 a chance to find it or whatever.

11 **MR. HINNEFELD:** Scott is doing some
12 scrambling over here. I don't know if he's
13 going to find anything or not.

14 **MR. GRIFFON:** So the follow-up question
15 again just so I can --

16 **MR. FARVER:** Oh, the follow up question was
17 the 1984 dose that they referenced for an IREP
18 entry turns out to be a 1948 dose. So I still
19 can't find the 1984 dose.

20 **MR. HINNEFELD:** I guess we'll just have to
21 go back. Also, I think I'd like to know when
22 all these are added, '52, '82 and '84, just to
23 make sure that the case comes out the same
24 way.

25 **MR. FARVER:** Well, what I try to go by is

1 what believe is the final IREP file, which
2 would start with S-E such-and-such.

3 **MR. HINNEFELD:** Yeah, it will start with the
4 two letter designation which is the DOL
5 office, and then --

6 **MR. FARVER:** Well, I'm not saying that that
7 IREP dose isn't contained in one of the
8 working files. It may be. But the final
9 file, it was not contained.

10 **MR. HINNEFELD:** We'll have to go back and
11 look again.

12 **MR. GRIFFON:** That was for 125.1, right?

13 **MR. FARVER:** 125.1.

14 125.2 is, does not properly account
15 for all the neutron dose. And then NIOSH
16 gives their response and I agree with their
17 response.

18 **MR. GRIFFON:** Okay, so we have agreement on
19 that one?

20 **MR. FARVER:** Right.

21 **MR. GRIFFON:** So 125.3, I think.

22 **MR. FARVER:** 125.3.

23 **MR. GRIFFON:** See if there's any comments on
24 that.

25 **MR. FARVER:** DR does not properly account

1 for variation in bioassay MDA. This has to do
2 with over the years the MDAs on the bioassay
3 analysis has changed, and we do not feel that
4 they accounted for that. And I still disagree
5 with them.

6 Using half the MDA, if you calculate
7 using half the MDAs, you won't exceed the MDA
8 values for 1964, which is what they claim. In
9 other words they're claiming if you went back
10 and used the half the MDA values, you would
11 exceed your MDAs for later years, and
12 therefore, it's not likely to be possible.
13 And I'm saying that, yes, you can do that, and
14 it won't exceed your MDAs for 1964. And I can
15 e-mail them to you, the IMBA file if you wish.

16 **MR. GRIFFON:** I think we should do that,
17 yeah, that would make it clearer so everybody
18 can look at the data.

19 **MR. FARVER:** Right, so that's my action.

20 **MR. GRIFFON:** I mean, they're saying that by
21 using half the MDA earlier on you would have
22 anticipated levels later that would have been
23 over the MDA. You would have seen it. You
24 would have had positive results, just because
25 I saw a lot of people looking a little

1 bewildered there.

2 **MR. SIEBERT:** Were you comparing against
3 half the MDA or the MDA? Were you using half
4 the MDA across the board?

5 **MR. FARVER:** I was using half the MDA just
6 to calculate the intake, but it would not
7 exceed the MDA of later years.

8 **MR. SIEBERT:** There's the rub. That needs
9 to be compared to half the MDA. Projections
10 out from half the MDA need to be compared
11 against half the MDA. Because when we're
12 calculating versus half the MDA, what we're
13 doing is we're calculating the mode of the
14 triangular distribution, which means the top
15 end is actually at the MDA. If you project
16 out what the MDA intake would be, it would
17 have exceeded the MDA. That sounded circular.

18 **MR. GRIFFON:** Yeah, that did. Why don't we
19 share the IMBA file?

20 **MR. CLAWSON:** That was clear as mud.

21 **MR. GRIFFON:** I'd like to see the number.
22 It's always easier to see the numbers.

23 **MR. ELLIOTT:** Yeah, it's easier to see the
24 number.

25 **MR. FARVER:** But really I'm just saying I'm

1 sure that's the difference. I am not
2 comparing it to half the MDAs for 1960 later
3 years because I don't think that's what your
4 response said.

5 **MR. GRIFFON:** Okay, well, maybe we should
6 see the numbers, but are you saying the
7 difference between the MDA and the DL -- I
8 mean, that's your distinction, right?

9 **MR. SIEBERT:** If you calculate the intake
10 based on the MDA over two, your projections
11 need to be compared to the MDA over two --

12 **MS. MUNN:** Correct.

13 **MR. SIEBERT:** -- for consistency purposes.

14 **MR. HINNEFELD:** Well, it may depend on the
15 reporting mechanism for the site, too. For
16 instance, if they report the result regardless
17 of what the result was, and if so, then the
18 result would be, then you would expect some of
19 those results to exceed the DL. Well, they
20 wouldn't exceed the MDA, they would exceed the
21 DL --

22 **MR. FARVER:** Correct.

23 **MR. HINNEFELD:** -- if the higher intake rate
24 had been used earlier. So a little bit
25 depends here on how that site reported its

1 bioassay results. If they would just report
2 less than MDA for a bioassay result, then as
3 you say, there's no way to tell because those
4 data points could, in fact, have been less
5 than MDA.

6 But if they reported against the DL,
7 for instance, they would just, say, report
8 less than DL or the number. Or if they just
9 reported the value that popped out no matter
10 what it was, and those still were all below
11 the ^ of the DL, then you would have, then
12 what the dose reconstruction done would have
13 been correct. Isn't that right? Isn't there
14 a reporting thing here as well?

15 **MR. FARVER:** Right, I don't remember how
16 they reported it.

17 **MR. HINNEFELD:** I don't either.

18 **MR. SIEBERT:** It's Hanford I believe --

19 **MS. MUNN:** It is Hanford.

20 **MR. SIEBERT:** -- MDAs if I remember
21 correctly --

22 **MR. FARVER:** I don't know.

23 **MR. SIEBERT:** -- for plutonium.

24 **MR. HINNEFELD:** It was less than 0.05 then?
25 Is that ^?

1 **MR. SIEBERT:** I can look real quick.

2 **MR. HINNEFELD:** Okay, well, we don't --

3 **MR. SIEBERT:** We'll look at it.

4 **MR. HINNEFELD:** -- necessarily need to
5 belabor it here.

6 **MR. GRIFFON:** Yeah, let's look at the IMBA
7 file and make it a lot easier, yeah.

8 Okay, 125.4.

9 **MR. FARVER:** 125.4, DR does not properly
10 account for whole body counts. DR did not
11 account for positive whole body count results
12 from cesium and Zinc-65. Had they been
13 evaluated it still would have been small
14 doses. That was pretty much summing up
15 NIOSH's response. They were not accounted
16 for, but had they been accounted for the doses
17 would have been small. And our contention is
18 he still should have accounted for them.

19 **MR. HINNEFELD:** Well, I guess less than a
20 0.02 we should have. As a standard approach
21 we don't enter doses less than a millirem.
22 But it should have, the DR could have said
23 that. And he could have put in the two
24 millirem doses for the ^.

25 **MR. GRIFFON:** I mean, is this done, I'm

1 **MR. GRIFFON:** Is there any follow up on the
2 second part of that, Stu? I think the first
3 part we have is the procedure in question.

4 **MR. HINNEFELD:** It's just, I guess, a
5 typographical that made it through.

6 **MR. GRIFFON:** Just a typo. So there's
7 agreement on that part, yeah. How does that
8 get corrected? Or does it affect this case?

9 **MR. HINNEFELD:** I mean, it was just a
10 misstatement. I mean, the case was done, and
11 we're using more favorable --

12 **MR. GRIFFON:** The correct thing was used.
13 It was just a typographical error.

14 **MR. HINNEFELD:** It was reported incorrectly
15 in the dose reconstruction. I don't think
16 there's anything to do on this case.

17 **MR. FARVER:** Isn't that something that
18 should be caught in the peer review?

19 **MR. HINNEFELD:** It should have been caught
20 in the peer review and the tech review or the
21 technical editing and theoretically, maybe
22 not, and then in our review. So, yeah, it
23 should have been caught in the review. I
24 don't know why it wasn't.

25 **MR. FARVER:** Is that part of the peer review

1 checklist to check the intake types and
2 quantities and nuclides?

3 **MR. HINNEFELD:** I don't remember the peer
4 review checklist.

5 **MR. SIEBERT:** But typically -- I mean, once
6 again, human error all with checklists.
7 You're still going to get --

8 **MR. FARVER:** At least if it's in a checklist
9 someone's going to say, yes, I looked at it.
10 I checked it off as correct.

11 **MS. MUNN:** They did have a checklist?

12 **MR. GRIFFON:** I think this is why we brought
13 up the quality control idea before was that
14 how do we, okay, we have this. Standing alone
15 it's probably not that big of an issue
16 certainly. But then if we have questions
17 related to quality that come up over and over,
18 is there any way for our Board to review the
19 peer review process, the quality control
20 process, you know, that aspect. And I don't
21 know, I think we reviewed some of the
22 procedures in the procedures review, haven't
23 we? Yeah. But I don't know that we've looked
24 at --

25 **DR. MAURO:** The only thing we did in the

1 procedures review was to, the overarching
2 finding was that there are lots of QA
3 procedures, and it's not, there really is no
4 place where they integrated the whole process,
5 where you actually see cradle to grave the QA
6 process. See, on one level is, is the QA
7 program coherent and well communicated so that
8 a person could see, understand it. There's
9 another question of is it being implemented.

10 **MR. GRIFFON:** Or is it being implemented
11 effectively.

12 **DR. MAURO:** Implemented effectively. We
13 didn't do that. In effect we're doing that.
14 I mean, that's what we're doing. By checking
15 the numbers if we do find places where there's
16 a problem, it means that, well, it might be
17 implemented but on occasion, we'd have
18 something that should have been caught during
19 the ^ process.

20 **MR. GRIFFON:** But I guess from my standpoint
21 what we have to -- and I'm not sure we can do
22 it here and now, but something we might want
23 to think about, other Subcommittee members or
24 the Board, is that certainly, as Scott said,
25 human error. I mean, you're going to have

1 some of these. Now do we at some point want
2 to look at this systematically and say are
3 there too many. Is this happening too
4 frequently or are they of a severity that
5 concerns the Board? You know, that kind of
6 thing. We haven't done that yet.

7 **DR. MAURO:** In principle, it is in fact
8 imbedded in all of our audits. In other words
9 in theory we have thousands perhaps of
10 findings, some of which are in fact, like this
11 one, okay, here's a place where something can
12 slip through. So in theory one could argue
13 that we could actually sort on that, and say,
14 okay, how many of the findings are, would be
15 defined as a place where the Quality Assurance
16 program missed it, and it got through, got
17 through the gate so to speak. So in theory it
18 still is already done or being done as part of
19 this process.

20 And then it really doesn't matter how
21 do we sort from our dataset and what does it
22 mean. And let's say we report back, okay, out
23 of reviewing -- I forget -- 240 cases, how
24 many QA findings did we have, you know, not
25 technical arguments or debates or discussions,

1 but something that where -- this is a perfect
2 example where maybe something got through that
3 shouldn't have gotten through.

4 That is something that we didn't talk
5 about on how to use our database. In theory
6 we could use our database for that. I'm not
7 sure how easy that would be, but it could be
8 done.

9 **MR. GRIFFON:** Well, we've already used it to
10 some extent in our reports to the Secretary.
11 I mean, we've used the spreadsheets which have
12 some, I mean all that information you talked
13 about.

14 **DR. MAURO:** We do sort a lot of categories.
15 I don't know.

16 Kathy, are you on the line, Kathy?

17 **MS. BEHLING (by Telephone):** I'm here.

18 **DR. MAURO:** This conversation goes toward
19 questions that out of, you know, the various
20 findings that we have, some of them fall into
21 this category called, well, I mean, I guess we
22 would define this -- and I guess everyone
23 agrees -- this would be an example of a
24 quality assurance --

25 **MR. GRIFFON:** And I have a category. I've

1 categorized things that way.

2 **DR. MAURO:** And we do have that, okay, then
3 it's already --

4 **MR. GRIFFON:** Because if you remember, I
5 have these other three columns that are blank
6 through this matrix. Before we submit these
7 final reports, we always fill those in, the
8 program site ranking, the section and the
9 grouping.

10 **DR. MAURO:** So that is something to sort on.

11 **MS. BEHLING (by Telephone):** And that will
12 be captured in the database. And even if it
13 wouldn't be captured on a column like that,
14 when we populate the database, and we put in a
15 description, if we use a description such as
16 this is a QA concern, the database can go in
17 and sort on any term that's in there. That
18 was something we built into the Procedures
19 Review database, and it's also built into the
20 Dose Reconstruction database.

21 **MR. SIEBERT:** To answer a question that was
22 asked about the peer review checklist. In the
23 peer review checklist it has the question is,
24 is correct inhalation absorption types used.
25 Which used was correct. Yes, there was just a

1 typographical error in the dose reconstruction
2 report. We don't specifically have a separate
3 line saying that.

4 **MS. MUNN:** That's good to know.

5 **DR. MAURO:** I mean, it's a matter of degree.
6 Now there are QA errors whereby let's say the
7 wrong absorption or wrong class was used.
8 That would also be QA, but that would be a
9 little more serious.

10 **MR. GRIFFON:** That's right, there's
11 different tiers of it, too.

12 **MR. HINNEFELD:** I think certainly a large
13 amount of the review that these cases get
14 speak to the number in the dose
15 reconstruction, and this is the number ^. And
16 it was probably certainly a number of years
17 ago far less attention to the words in the
18 dose report before. So that could be --

19 **MR. GRIFFON:** Which might be something we
20 need to --

21 **MR. HINNEFELD:** And it's something to think
22 about. And I hate to make the new DR report
23 sound like a panacea for this because people
24 are still going to say things, use the wrong
25 words to say things. I don't know that we

1 would even describe to the claimant the
2 solubility class because that's probably going
3 to be in the technical section of the report
4 that they can get if they want.

5 **MS. MUNN:** Stu, it can be a very confusing
6 factor.

7 **MR. HINNEFELD:** Scott has to keep explaining
8 it to me. I cannot keep it straight.

9 **MR. SIEBERT:** And so I ask Liz.

10 **MR. GRIFFON:** Okay, let's move on. I think
11 we beat that one around enough. 125.6.

12 **MR. FARVER:** 125.6, does not properly
13 account for unmonitored internal dose, two
14 time periods of concern, 1947 to '48 and '63
15 to '84. And NIOSH's response, for years '63
16 to '84, during that time the employee had some
17 whole body counts which were used to calculate
18 fission product dose. So that's, I believe
19 that's acceptable. Although I still didn't
20 find any unmonitored fission products dose for
21 '47 to '48. I mean, I believe from your
22 response isn't that that it should be
23 calculated for '47 to '48?

24 **MR. HINNEFELD:** I believe what our response
25 says is that the intake rate for '44 to '46

1 should also apply to '47.

2 **MR. FARVER:** Correct.

3 **MR. HINNEFELD:** So yeah.

4 **MR. FARVER:** But in the files as it stands
5 there's still, there was not an unmonitored
6 dose for that time period. And I believe this
7 case is being returned for rework --

8 **MR. GRIFFON:** Yeah, that's what I was just
9 writing.

10 **MR. FARVER:** -- for Super-S. So really when
11 a case gets reworked you just have to make
12 sure you get that extra year in.

13 **MR. HINNEFELD:** Yeah, it'll all be covered
14 in the rework.

15 **MR. GRIFFON:** Okay.

16 **MR. FARVER:** 125.7, IMBA intake rate
17 incorrectly entered into the chronic annual
18 dose workbook. It was either entered as an
19 acute. It should be a chronic or just the
20 opposite in this finding here.

21 **MR. SIEBERT:** Which one are you talking
22 about?

23 **MR. GRIFFON:** 125.7, right?

24 **MR. FARVER:** Yes. It looks like it was a
25 typographical error. It should have been

1 884.1 dpm per day. It was 844.1. So I mean,
2 it was a typo. Once again the concern here is
3 just a QA concern. Should that have been
4 caught?

5 **MS. MUNN:** In the typos in terms of ^.

6 **MR. GRIFFON:** Yeah, I think as John said
7 earlier, I think there's different levels of
8 quality concerns obviously.

9 **DR. MAURO:** Like in this case if the actual
10 dose was calculated with the wrong number,
11 even though it would be different than, the
12 typing said this number, but they actually
13 used the right number. And I don't know the
14 facts of the matter. Is this just a matter
15 of, this particular issue we're looking at
16 now, the number that was in there was that
17 just a typo, and someone typed in the wrong
18 number, or when you go into the spreadsheets
19 or the analysis they used the correct number
20 or did they use the incorrect number?

21 **MR. FARVER:** They used the correct number.
22 The report contains the typo.

23 **DR. MAURO:** So it's the lesser of the --

24 **MR. GRIFFON:** The lesser of the two, right.

25 **MR. FARVER:** It's a matter of if someone's

1 comparing intakes, they should have caught
2 that.

3 **DR. MAURO:** Sure, sure, I understand.

4 **MR. FARVER:** Go on to eight?

5 **MR. GRIFFON:** Yeah, 125.8.

6 **MR. FARVER:** 125.8, NIOSH may not have
7 requested all the exposure records. This has
8 to do with the employee was at Hanford and
9 then at NTS. And NIOSH's response says it
10 should have been requested but --

11 **MR. GRIFFON:** It's going to be reworked
12 anyway, right?

13 **MR. FARVER:** Claim has been returned for
14 rework for other reasons.

15 **MR. HINNEFELD:** And I would think today if
16 we had had this kind of situation, we would
17 have asked DOL about the NTS employment. If
18 there's indication there's NTS employment
19 where the person said I was also employed at
20 such-and-such, we try to wait on those, you
21 know, put those on ^ until we get with DOL and
22 say here's this evidence of this other
23 employment. Can you add that to the claim?

24 **MR. FARVER:** This just goes back to where
25 it's in the CATI report. After carefully

1 reviewing the CATI report, they should have
2 caught this.

3 **MR. ELLIOTT:** They should have caught this
4 but done what? I mean, if the CATI interview
5 indicates additional employment, we can't
6 verify the eligibility of the employment for
7 the claim. We have to turn it back to DOL.

8 **MR. HINNEFELD:** Yeah, turn it back to DOL.

9 **MR. ELLIOTT:** So that's the only action on
10 our part.

11 **MR. GRIFFON:** You should have probably
12 kicked it back though, right?

13 **MR. ELLIOTT:** In some cases the interview
14 may indicate that they thought they had
15 employment at another site but DOL has already
16 heard that and has deemed it not eligible. So
17 you have to really follow the thread of the
18 eligibility determination. And I don't know
19 if this particular claim has that thread in it
20 or not.

21 **MS. MUNN:** I guess we have to assume that
22 this was a non-compensated case. Otherwise,
23 it wouldn't --

24 **MR. HINNEFELD:** It wouldn't have been
25 returned for rework.

1 **MS. MUNN:** This would not be a significant -
2 -

3 **MR. HINNEFELD:** Once it's adjudicated it's
4 not likely to get returned for rework.

5 **MR. GRIFFON:** 125.9.

6 **MR. FARVER:** 125.9, NIOSH did not properly
7 address radiological incidence and potential
8 missing bioassay data. There were four or so
9 incidents mentioned in the DOE files where
10 bioassay was requested in three out of the
11 four, and it gives specific dates in our
12 report. I guess our concern with the NIOSH
13 response is, okay, where are the missing
14 bioassay results. I mean, there are specific
15 dates the incidents happened --

16 **MR. SIEBERT:** Can I back up to the previous
17 one? I'm sorry. I was just messing around.
18 The previous one with the NTS, the initial
19 application to DOL does have NTS listed as
20 they said they worked at NTS. So that
21 information was to DOL prior to us getting
22 that information. So we pretty much made the
23 assumption DOL already ruled on that.

24 **MR. ELLIOTT:** Moved on that and said no
25 then.

1 **MR. SIEBERT:** Sorry to bump back on that.

2 **MR. ELLIOTT:** So in that case we have no
3 action to take.

4 **MR. FARVER:** In other words we couldn't find
5 bioassay data to even come close to the three
6 1957 incidents. And the incidents are
7 elevated airborne, elevated airborne,
8 potential fission product U/Pu inhalations
9 with positive nasal smears. But the bioassay
10 results don't correspond to the dates.

11 So without the data you could at least
12 assess the intakes from alternate means such
13 as workplace data. Maybe there's some
14 incident reports or coworker data, but there's
15 documented incidents right there, positive
16 nasal smears.

17 **MR. HINNEFELD:** How was the internal dose
18 assessed for this person?

19 **MR. SIEBERT:** Later data was used for
20 limitation.

21 **MR. HINNEFELD:** A chronic exposure?

22 **MR. SIEBERT:** Probably.

23 **MR. GRIFFON:** So you used a later,
24 apparently you used a urinalysis data point
25 after all the claimed incidents or documented

1 incidents. I don't know which they are. And
2 then you would assume chronic I guess.

3 **MR. FARVER:** Which may or may not be
4 appropriate.

5 **MR. HINNEFELD:** Well, I mean, there could be
6 a comparison of acute intakes on the dates of
7 the incidents described on the earliest date
8 that would match the bioassay, the first
9 bioassay date. See how that would compare to
10 the chronic intake.

11 That's a thought that, you know, the
12 general rule, a long chronic intake usually is
13 a bigger intake than acute in order to match a
14 bioassay result on a particular date. It
15 really depends on when the chronic intake
16 started.

17 **MR. FARVER:** I guess if you have
18 documentation that intake happened on a
19 certain date, then I would use that date and
20 say there was an intake and try to model the
21 data around the documented intakes because
22 that's what you know for documented incidents
23 --

24 **MR. SIEBERT:** Well, if you have positive
25 bioassay.

1 **MR. FARVER:** But we don't have the bioassay
2 results.

3 **MR. HINNEFELD:** No, we don't have anything
4 from those incidents. We have bioassay years
5 later.

6 **MR. FARVER:** Right, it says bioassay was
7 requested, but we don't have the results. So
8 we really are claiming saying is missing
9 bioassay data.

10 **MR. GRIFFON:** And that data point years
11 later, is that a real value or is that less
12 than MDA or something like that?

13 **MR. SIEBERT:** It's less than.

14 **MR. HINNEFELD:** Less than, so how big an
15 intake could you have on that intake date? So
16 the question is, well, I don't know the
17 specific case like how long did the person
18 work before the incident, for instance.
19 Because presumably the chronic intake would
20 have started with their employment, and so
21 you'd have that much.

22 And then if you have acute intake on
23 the date of the incident, that just misses the
24 bioassay date just below the detection level
25 on the first bioassay sample, you'd compare

1 it, that would be one intake regime. And then
2 compare that intake regime to the longer
3 chronic intake rates.

4 **MR. FARVER:** Oh, I agree. You could compare
5 them, but there was no indication that any
6 comparison was done.

7 **MR. GRIFFON:** Yeah, so I think you're saying
8 you're probably going to need to do that as a
9 follow up?

10 **MR. HINNEFELD:** Right, I would suggest that.

11 **MR. GRIFFON:** Although this is a whole PER
12 review anyway, so I don't know.

13 **MR. HINNEFELD:** Well, it's back, right?
14 It's back for being reworked. But I mean, the
15 approach --

16 **MR. GRIFFON:** Liz, you wanted to talk?

17 **MS. BRACKETT:** Yeah, I was just thinking
18 this is plutonium, right, that we're talking
19 about? The method published in, what, I guess
20 it wasn't in the Health Physics Journal.
21 Maybe it was in the Internal Dosimetry summer
22 school, but there's a method where if you've
23 got exposure far in the past, and you have a
24 bioassay, a contemporary bioassay result, it
25 doesn't matter what intake routine you assign.

1 You can assign one acute intake, five acute
2 intakes, a chronic intake, you get the same
3 result for the dose based on the later
4 bioassay results. And personally I didn't
5 believe it when I saw this, and I did a bunch
6 of calculations and demonstrated to myself
7 that it really does work. But that does have
8 the caveat that, because it was based on
9 operationals generally assuming acute intakes
10 rather than much in the way of chronic, but
11 you're not supposed to have had any intakes
12 for five or six years just prior to the result
13 that you use. I don't know how it's impacted
14 if you -- one of the scenarios is a chronic
15 all the way up --

16 **MR. GRIFFON:** There's a buffer between --
17 this is for -- I remember this publication,
18 yeah. Looking at retirees coming back from
19 medical surveillance tests.

20 **MS. BRACKETT:** Well, we used it quite a bit
21 when we did the Mound dose reconstruction
22 because we were looking at historical intakes.
23 But you generally do get the same intakes.

24 **MR. GRIFFON:** Well, if you can provide, I
25 think you need to provide us an IMBA

1 comparison, and then if you want to reference
2 this, that'd be good to know, too.

3 **MR. FARVER:** The point here is there's
4 bioassay data that was documented as being
5 taken on certain dates that do not correspond
6 with the bioassay data that was received.
7 Someone should have recognized that.

8 **MR. GRIFFON:** That's the data question, too.

9 **MR. FARVER:** I mean, that's the key right
10 there.

11 **MR. GRIFFON:** And the quality question. I
12 mean, that's a question of did you get all the
13 person's records, and then the other part of
14 that is why wasn't this picked up in review.

15 **MR. FARVER:** Correct.

16 **MR. GRIFFON:** And then finally, Stu, the
17 final question, I guess, is what you're
18 proposing. Does this bound, is the chronic
19 approach that you described bound this
20 situation. So sort of three parts to that.

21 **MR. FARVER:** Okay, 126.1, is that where
22 we're at?

23 **MR. GRIFFON:** Yup.

24 **MR. FARVER:** It's a Hanford and INEL person,
25 recorded photon dose uncertainty not assigned,

1 and I believe this has been brought up before
2 in case 69. I agree with their response. I
3 mean, their response is fine. They used a
4 maximizing DCF value of one, so that one's
5 okay.

6 **MR. GRIFFON:** Yeah. And there's no further
7 action on this.

8 **MR. FARVER:** Correct.

9 **MR. GRIFFON:** Okay.

10 **MR. FARVER:** 126.2, improper hypothetical
11 intake dose model used for calculating
12 internal dose. And this has to do with the
13 workbook that was used, the OTIB-0002 workbook
14 where you can put in if it's a uranium site,
15 reactor site, non-uranium site and so forth.
16 And our belief was it should have been a
17 uranium site-slash-reactor site. And NIOSH
18 gives a description of why they don't feel
19 that way.

20 **MR. GRIFFON:** What is the facility on this
21 case?

22 **MR. FARVER:** Hanford and INEL.

23 **MR. GRIFFON:** Hanford and INEL, yeah, that's
24 right.

25 **MR. FARVER:** I'm okay with that. I didn't

1 find any indication of uranium work in the
2 employee's records when I went through.

3 **MR. GRIFFON:** So you had, even in Idaho you
4 didn't have any indication of --

5 **MR. FARVER:** I couldn't find anything in the
6 records.

7 **MR. CLAWSON:** What did they call out his
8 facilities? I guess I'm sitting here looking
9 at Hanford and they've got about everything
10 that there is and in Idaho, too.

11 **MR. FARVER:** Well, I understand that.

12 **MR. SIEBERT:** We're not saying he didn't
13 have potential for uranium. We're saying that
14 it's not a uranium -- Hanford and INEL are not
15 uranium facilities as pertaining to the
16 overestimating assumptions in the method that
17 we use. The methods that we use in a uranium
18 facility is something where the limits were
19 based on the higher limits for uranium
20 facilities, and Hanford was not a facility
21 like that.

22 **MR. HINNEFELD:** OTIB-0002 has, there is a
23 uranium intake, right, Scott? In OTIB-0002?

24 **MR. SIEBERT:** Yes.

25 **MR. HINNEFELD:** For the non-uranium

1 facilities there is uranium intake. It's just
2 the uranium facilities because of the controls
3 --

4 **MR. CLAWSON:** I guess I'm looking at Idaho
5 as after the dissolving the fuel, you've got
6 everything right there, repackaging the raw
7 uranium and so forth. And I'm just wondering
8 -- maybe I'm getting off --

9 **MR. FARVER:** I think it has to do with their
10 definition of uranium facilities.

11 **MR. HINNEFELD:** The uranium facility is
12 defined in -- stop me if I say something wrong
13 -- OTIB-0002 describes, gives a basis for how
14 those intake levels were arrived at. And
15 because the uranium facility would attempt to
16 control intakes at the higher intake, activity
17 intake rates associated with uranium limits
18 versus plutonium limits or those other limits,
19 that you have for a facility that's, a uranium
20 facility and controls based on uranium, you're
21 going to have these higher intake rates.

22 And so you have a bigger uranium
23 intake, TIB-0002 uranium intake, at a uranium
24 facility. Now in a non-uranium facility
25 there's still a uranium intake, but it's not

1 as big, and it's not controlled.

2 **MR. GRIFFON:** And TIB-0002 for Hanford-Idaho
3 situation, was this done earlier on?

4 **MR. HINNEFELD:** This must have been an early
5 one to do to have done TIB-0002, because
6 currently they have bioassay.

7 **MR. GRIFFON:** Because you probably use site
8 models now, right for Hanford-Idaho? Or would
9 it depend if it was overestimating would you
10 still use a generic?

11 **MR. HINNEFELD:** Well, TIB-0002 was a quick
12 way to do a lot of dose reconstructions, so I
13 don't know if we use TIB-0002 very much
14 anymore, do we?

15 **MS. BRACKETT:** Yes.

16 **MR. HINNEFELD:** Do we?

17 **MS. BRACKETT:** Because it's built into some
18 of the external dose tools, so it's very
19 convenient for the dose reconstructors to use.
20 So they do.

21 **DR. MAURO:** Denial.

22 **MS. BRACKETT:** Yeah, denials.

23 **MR. GRIFFON:** But overestimating even for a
24 place like Hanford-Idaho where you have site
25 models, you'd still use TIB-0002.

1 **MR. HINNEFELD:** Apparently, we still --

2 **MS. BRACKETT:** I'm not 100 percent certain,
3 but it's my understanding that dose
4 reconstructors still would tend to use it. I
5 don't know for specific sites, but I think
6 that it is still used even at sites where
7 coworker models are available.

8 **MR. GRIFFON:** And I guess someone's compared
9 TIB-0002 to any coworker facility model and
10 made sure that they're bounding of those I
11 assume.

12 **MS. BRACKETT:** There's been no generic
13 comparison done.

14 **DR. MAURO:** There have been a couple of
15 circumstances I recall where TIB-0002 was not
16 limiting, but those are very special
17 circumstances.

18 **MR. GRIFFON:** It would be unlikely. The
19 other concern you get into is the claimant's
20 side of this when they say you didn't even use
21 my site data.

22 **MS. BRACKETT:** If there's site data, well,
23 if the individual --

24 **MR. GRIFFON:** Well, individual data, that's
25 different. So I don't know what the

1 circumstances here, I mean, this was probably
2 an early case I'm guessing.

3 **DR. MAURO:** Yeah, let me ask you this in
4 terms of the hierarchy philosophy requirement.
5 Let's say you do have bioassay data, but it's
6 self evident that even using TIB-0002, which
7 would be off the charts, would apply to this
8 person, but he's not going to be compensated.
9 Would you use TIB-0002?

10 **MR. HINNEFELD:** It has been done on
11 occasion.

12 **MR. SIEBERT:** And this one was done in 2004.
13 So, yes, it is definitely an early one.

14 **MS. BRACKETT:** There is a hierarchy that the
15 dose reconstructors are given, that's also in
16 OTIB-0060, the hierarchy of data to be used.
17 But like I said, OTIB-0002 is built into the
18 external tool, so it is still used in some
19 cases.

20 **DR. MAURO:** So you did have this tension, as
21 Louie used to say, between the hierarchy of
22 data requirement and the efficiency
23 requirement where they sort of play off each
24 other a bit, and I guess some judgment is
25 used. Is that still being done or --

1 **MS. BRACKETT:** Yes.

2 **DR. MAURO:** -- did you abandon the TIB-0002
3 approach when you do have real data for real
4 people?

5 **MS. BRACKETT:** I can't -- Scott would know
6 better than I because I --

7 **MR. SIEBERT:** You're right. There's a
8 tension because efficiency and the actual
9 data, I mean, I'm not going to sit here and
10 say TIB-0002 is not used now because I know it
11 is. But it's pretty much a judgment on the
12 dose reconstruction part that, yes, it is an
13 overestimate. If they have any positive
14 bioassay, there have to be comparisons to
15 ensure that it's limited by.

16 **DR. MAURO:** In the end this person would be
17 denied no matter which way you went.

18 **MR. SIEBERT:** Oh, yes. If we use the actual
19 data, it would be much less than it was.

20 **DR. MAURO:** Right.

21 **MR. GRIFFON:** Okay. I'm not sure if we need
22 any follow up on that, but I don't think
23 there's any follow up.

24 **MR. FARVER:** No, no, I was okay once I read
25 how they determine uranium facility.

1 Otherwise, I was confused, too.

2 **MR. CLAWSON:** I've got some question on
3 that, but I'll do at the site.

4 **MR. GRIFFON:** Okay. Go ahead.

5 **MR. FARVER:** 127.1, it's a Hanford-NNL case.
6 The first finding NIOSH failed to properly
7 address all work locations documented in the
8 DOE records. So there's just some dispute
9 over did they get the proper buildings and
10 facilities right, and we've not received a
11 response yet. So continue on with that.

12 **MR. HINNEFELD:** I think I got a response to
13 that just recently, but it was too close to
14 this meeting to try to get it out.

15 **MR. FARVER:** 127.2, failure to account for
16 recorded photon dose uncertainty, and
17 apparently the doses were entered as
18 constants, and without an uncertainty we felt
19 that there should have been as either a normal
20 or non-normal with an appropriate uncertainty.
21 And I guess the response was, well, they
22 probably should have been done with the Monte

23 Carlo combination of doses and DCFs, but --

24 **MR. HINNEFELD:** We put this comparison in
25 there because it's easier than actually

1 running the Monte Carlo and seeing how the
2 Monte Carlo would have turned out. We said
3 that even if we used one as a DCF as a
4 constant versus the most likely, it just
5 wouldn't --

6 **MR. FARVER:** And I think the POC on this was
7 somewhere around 40-some percent, 45.

8 **MR. HINNEFELD:** It could very well be. I
9 know we were ^ in that range at this time.
10 That's still, it's only what, ten percent or
11 so additional risk. Even at 45 percent you
12 need, I think it's more like 12 percent, you
13 need like 12 percent additional risk even at
14 45 percent in order to get to 50 percent.

15 **DR. MAURO:** Dose.

16 **MS. MUNN:** ^ one millirem for that?

17 **MR. HINNEFELD:** Yeah, dose, quality factors
18 and all that stuff added in.

19 **MR. ELLIOTT:** Depending on the cancer, too,
20 I don't know which cancer this is. That's not
21 the rule for all cancers.

22 **MR. HINNEFELD:** Well, that value going to 45
23 percent, 50 percent is pretty fixed because
24 that's just the geometry of the POC calculus
25 or the algebra of the POC calculation. It's

1 going 45 percent, you know, you're talking
2 about risk. That's not exactly dose depending
3 upon the dose, you know, whether it's alpha
4 particle versus a photon and things like that.
5 So it's -- and to that extent it also depends
6 on the cancer and how risky is it. But it's,
7 you know, the combination of dose and an
8 effectiveness factor, you actually need to be
9 at 12 percent more to go from 45 to 50
10 percent.

11 **MR. SIEBERT:** And it was originally 23.8 rem
12 and adding 0.3, 0.4 rem is definitely not
13 going to rise to that level.

14 **MR. FARVER:** For my clarification is it okay
15 to enter recorded photon doses as constants
16 without uncertainties?

17 **MR. HINNEFELD:** If we felt, and I believe we
18 have a resolution in one of the early
19 findings, 69, finding 69, that if the DCF
20 range is below one, you know, that triangular
21 DCF range is below one, it's okay to submit
22 the recorded photon dose as a constant and a
23 DCF of one as an overestimate for that photon
24 dose.

25 **MR. FARVER:** But not to record a dose in DCF

1 less than one as a constant.

2 **MR. HINNEFELD:** I don't believe that should
3 be done.

4 **MR. FARVER:** Okay.

5 **MR. HINNEFELD:** A recorded dose with a
6 constant with a DCF of less than one, if
7 you're picking like the most likely, well, a
8 measured dose times a DCF where you use the
9 most likely value of the DCF, not the whole
10 range but the most likely value, and enter
11 that product as a constant, I don't believe
12 it's acceptable.

13 I believe it's okay if the DCF range
14 is below one to take the measured dose times
15 one and enter that as a constant. But other
16 than that, it's I think what you do is you
17 take the measured dose because a normal
18 distribution typically combined with the DCF's
19 triangular distribution, and you get the
20 result. And sometimes it's normal, and
21 sometimes it's lognormal. And it may change
22 year to year.

23 **MR. FARVER:** Just for my clarification
24 because I get confused.

25 **MR. HINNEFELD:** I believe that's the

1 position we've taken.

2 **MR. SIEBERT:** That's correct.

3 **MR. FARVER:** So I guess that finding's okay,
4 or that resolution's okay.

5 **MS. BEHLING (by Telephone):** That position
6 has not been proceduralized, has it?

7 **MR. HINNEFELD:** What position is that?

8 **MS. BEHLING (by Telephone):** Because I
9 believe that --

10 **MR. HINNEFELD:** As much trouble as I had
11 saying it, you want me to proceduralize it?

12 **MS. BEHLING (by Telephone):** No, I believe
13 we had started identifying that as a finding
14 because according to the procedure it
15 indicated that the recorded dose should be
16 entered with the uncertainty. But I think
17 you're correct. We've agreed that that
18 doesn't, that we didn't need to do that.

19 Although I have seen I know in
20 previous cases, I think there was a thyroid
21 cancer where you used the one, and it was
22 actually supposed to be a greater than one.
23 And so that didn't apply in that particular
24 case, but I assume that there have been no
25 procedural changes to indicate that that is an

1 appropriate approach, using a constant and the
2 DCF of one if the actual DCF is less than one.

3 **MR. HINNEFELD:** Well, no one here can think
4 of one of the top of their head.

5 **MS. BEHLING (by Telephone):** Okay, just
6 checking.

7 **MR. GRIFFON:** Is there one in the plans or
8 no, not necessarily? I mean, should there be
9 one? That's the question.

10 **MR. HINNEFELD:** As a general rule we don't
11 proceduralize every potential overestimating
12 approach. As a general rule, we don't do
13 that. If someone can take an expedient
14 approach that will be a, provide a, for
15 instance, in a non-compensable case will
16 provide a higher dose than what following the
17 technique would, we've just generally allowed
18 -- I don't know of each example that's been
19 proceduralized.

20 **DR. MAURO:** What would be helpful though is
21 when that dose reconstructor decides to do
22 that, he should mention, by the way, I'm doing
23 it this way so that, in other words
24 recognizing that this is not standard
25 procedure, but I'm doing it this way because

1 it's an efficiency method and still comes up
2 with --

3 **MR. HINNEFELD:** I think there's a lot of
4 opportunity to do that if you're just writing
5 a technical report for technical reviewers,
6 you can make a shorthand note in your
7 technical section about what you did there
8 without having to explain it very well.

9 **DR. MAURO:** From our perspective we
10 basically check your numbers against your
11 procedures, and if it's not there, and we get
12 this, we say, we don't know what to say about
13 this. But explained the way you just
14 explained it, you know, from our perspective
15 it would satisfy us. It's been explained, and
16 it makes sense, and we can move on. Even
17 though it may not have been contained in some
18 official procedure, that helps.

19 **MR. HINNEFELD:** And also, I think the
20 technical section of the DR gives a lot of
21 opportunity to make those kinds of brief
22 technical descriptions that are really hard to
23 explain in something that you want the
24 claimant to read and understand.

25 **DR. MAURO:** Yeah, I understand. That's

1 again one of those dilemmas. You want to keep
2 your report, your DR report, coherent and easy
3 to understand by the claimant, but you also at
4 the same time you are reading it and we're
5 looking for the, you know, and we have this
6 tension. How do you satisfy both?

7 **MR. HINNEFELD:** You give it a lot of credit
8 and say we want to keep it understandable, but
9 you kind of like to get it there.

10 **MR. GRIFFON:** Does any of this go back to
11 the DR instructions that we've talked about?

12 **MR. HINNEFELD:** I don't know that anything's
13 been set out like that either. I think we
14 can't go up and look through them and see,
15 nothing comes to mind of the people most
16 familiar with what's out there. So I don't
17 know. It would be a way to do it. But on the
18 other hand, we've not generally tried to in
19 every case write down even as an instruction
20 all of the possible ways that it might be
21 quicker to take a short cut.

22 **MR. GRIFFON:** The reason I brought that up
23 awhile ago was that I thought that was one way
24 to get at this question that John's raising
25 because that sort of has some technical notes

1 that you give to the DR instructor at the time
2 they were doing the DR because that's always
3 the dilemma we have in looking back is that we
4 don't know exactly what they were following
5 then.

6 And if you had those DR notes, and I
7 don't think you have them for all sites, but
8 you do have them for some, DR instructions or
9 notes or whatever they are. And I hope those
10 have started to be included in the DR files.
11 I think we said we were going to do that.

12 **MR. HINNEFELD:** Yeah, I think we said, now
13 that you mention that I think we did say that.
14 I can't remember for sure.

15 **MR. GRIFFON:** I think several times NIOSH
16 committed to it.

17 **MR. HINNEFELD:** Did we commit to it?

18 **MR. GRIFFON:** Well, Stu, I thought you said
19 definitely going forward retrospective would
20 be very hard.

21 **MR. HINNEFELD:** Yeah, I remember that part
22 now.

23 **MR. GRIFFON:** And I thought that was, I
24 didn't know we needed a Board action to make
25 that happen. I thought that was --

1 **MR. HINNEFELD:** Well, you shouldn't need a
2 Board action. I think the issue might be for
3 me to sit in this room and make that
4 commitment to do that, see, I don't know what
5 I'm committing in terms of resources to. I
6 don't know how much work that is or how hard
7 that would be to do.

8 **DR. MAURO:** In a way you almost can't be
9 proscriptive about this. What you're really
10 saying is, listen, you have to give enough
11 information that, in the supporting notes,
12 that anyone auditing your work, whether it's
13 being audited within NIOSH or it's being
14 audited --

15 **MR. GRIFFON:** I'm not asking for anything
16 that's not being done already. Don't get me
17 wrong. You know that, Stu. I mean, I'm not
18 asking necessarily for what John's talking
19 about. I'm asking for these DR notes that
20 already exist, that you're already using, that
21 they be included in, I mean, we asked for this
22 a couple years ago, and I thought it was going
23 to, I mean, I thought the big push back on me
24 was that we can't go backwards and try to do
25 this. It's impossible.

1 **MR. HINNEFELD:** Well, I remember that.

2 **MR. GRIFFON:** But going forward it wasn't
3 going to be that impossible. I thought it
4 was, I thought you did commit to it, and I
5 wish you had told me the caveat.

6 **MR. HINNEFELD:** I don't remember. I very
7 well could have. It's not like me to say
8 that, to say something like that in these
9 meetings.

10 **MR. GRIFFON:** Well, but I thought we talked
11 about it on the Board, too.

12 **MR. HINNEFELD:** It might be. It might be.
13 I'd have to go back and check, and I'll have
14 to check with the contractor about anything
15 I've sent to them about it, because normally I
16 send that over pretty quick. But, and I'm
17 just really drawing a blank on what happened
18 after that.

19 **MR. SIEBERT:** I'm pretty sure I'd remember a
20 direction to do that.

21 **MR. HINNEFELD:** Yeah, and so to me that
22 sounds like something that may not be as easy
23 as it seems to get that information into the
24 DR supporting documents folder.

25 **DR. MAURO:** But doesn't that leave you in a

1 QA dilemma? That is, after your dose
2 reconstructor --

3 **MR. GRIFFON:** Well, that's the whole reason
4 it was brought up.

5 **DR. MAURO:** Yeah, doesn't that leave, and
6 the work is being checked, and the person was
7 creative. What you're really saying is,
8 listen, you've got to leave a certain amount
9 of creativity to your dose reconstructor to
10 use common sense or what he thinks make sense
11 to get through this process efficiently. And
12 that's reasonable. But at the same time that
13 sort of leaves you in a place where, wait a
14 minute. What did he do, and how come he did
15 this? It's not in accordance with this
16 procedure. And a footnote or something, it's
17 not even SC&A any more. It's really internal
18 to NIOSH. It seems to be something that you
19 would need.

20 **MR. HINNEFELD:** Well, I'll have to go back
21 and be able to talk to some more staff about
22 it. I'm not opposed to doing it unless it
23 would be very difficult. I don't know how
24 hard it would be. I don't know if these
25 instructions are readily attainable and

1 clipable. Is there a convenient place for a
2 dose reconstructor to go and get a copy of the
3 instructions they're applying and put it in
4 there. Or was it something that was put out
5 in a note in a staff meeting or something like
6 that. So it's a little hard for me to
7 understand exactly what I'd be asking for when
8 I ask for this. And so from that standpoint
9 I'd like to have --

10 **MR. GRIFFON:** I think from what, the
11 sampling I saw it varies --

12 **MR. HINNEFELD:** I do remember a
13 conversation, and you --

14 **MR. GRIFFON:** -- the sample I saw varies
15 from site to site. I mean, some sites have a
16 lot more instruction, but I'm sure I haven't
17 seen the universe, and I'm sure you're right
18 that there's notes from meetings.

19 **MR. HINNEFELD:** Well, I don't see any dose
20 reconstructors any more so I'm at a little bit
21 of a disadvantage. So I don't see that many
22 of them. But there'll be occasions where
23 there'll just be an explanatory paragraph ^.

24 **MR. GRIFFON:** Well, if you can follow up on
25 this because I really did think that was in

1 place going forward --

2 **MR. HINNEFELD:** Well now we're having this
3 conversation, I have to go back because I
4 remember the conversation, and I remember
5 exactly what you said, but we just thought it
6 would be very difficult to do it
7 retrospectively --

8 **MR. GRIFFON:** Yeah, I knew that.

9 **MR. HINNEFELD:** -- but it might be doable.
10 And so I absolutely do not recall what
11 happened after that. Sorry.

12 **DR. BRANCHE:** How are you going to follow up
13 with Mark and the work group?

14 **MR. HINNEFELD:** Well, I can send a message
15 to the work group or to the Subcommittee when
16 I figure out what happened and what might be
17 possible here. I really want to understand
18 what I'm asking for because it's not real
19 clear to me what I would be asking the
20 contractor to do if I told him to do this.

21 **MR. GRIFFON:** Yeah, I mean, Scott, you can
22 probably answer better than anyone. I mean,
23 these -- and I've seen different names for
24 them that's why I'm not trying to be coy here
25 or anything, but I've seen DR instructions and

1 DR notes --

2 MR. SIEBERT: Table top notes and --

3 MR. GRIFFON: Yeah, things like that,
4 different titles, and there's no standardized
5 name for these things. But different sites,
6 especially Rocky Flats, had a couple sets for
7 external and internal.

8 MR. SIEBERT: The complicated sites.

9 MR. GRIFFON: Yeah, some of the more
10 complicated sites had, and it makes sense, it
11 had an almost sort of like a triage approach,
12 if-thens, you know. If you had this
13 situation, use this or else use this or
14 whatever. And I was told they modified over
15 time so, and nobody necessarily kept archived
16 versions of them. So to place them in time
17 would be difficult.

18 MR. SIEBERT: It's something we had to deal
19 with that wasn't a TBD but we knew there was
20 an issue, we might deal with it there and try
21 to look up the TBD. But since they were
22 trackable documents, it did change over time.

23 MR. HINNEFELD: Like procedures and things
24 like that that would be used would be
25 referenced in the DR.

1 **MR. GRIFFON:** Yeah, the procedures is no
2 issue.

3 **MR. HINNEFELD:** So that would be the issue.
4 It would be the more informal instructions.

5 **MR. GRIFFON:** But these notes get into the,
6 you know, if I remember them right, some of
7 them get into the selection of solubility
8 classes and different decisions that the DR
9 individual has to make when they're looking at
10 data for specific sites. And the questions
11 that we sort of raise in the audit function,
12 how did they decide on this. Well, some of
13 that -- I'm not saying all of it, but some of
14 it is proscribed in some of these notes, you
15 know? So anyway, I guess as long as you have
16 a clear action that you can check on, do you
17 think we can have an answer for the Board
18 meeting?

19 **MR. HINNEFELD:** I think so. That's what,
20 two weeks away?

21 **DR. BRANCHE:** Yes.

22 **MR. GRIFFON:** Because I know we've discussed
23 this on the Board before. So I'll raise it as
24 part of the Subcommittee section, you know,
25 report.

1 **MR. HINNEFELD:** Okay, I would think so.

2 **MR. GRIFFON:** Okay. Let's finish case 127
3 then, and then we'll maybe take a break I
4 think. A couple more findings here.

5 **MR. FARVER:** We're on the third finding?

6 **MR. GRIFFON:** Yeah.

7 **MR. FARVER:** 127.3, recorded shallow dose is
8 inappropriately entered into IREP as electrons
9 greater than 15 keV. NIOSH calculated shallow
10 dose and assigned it as electrons greater than
11 15 keV. The reviewer felt that it should have
12 been less than 30 keV photon since the
13 employee worked near plutonium as a claimant
14 favorable measure.

15 NIOSH gives their response as to why
16 they did what they did. And I'm going to have
17 to go back and review OTIB-0017. So that's my
18 action. For some reason I left this one
19 blank, and I don't know if I just passed on it
20 and didn't get back to it or got confused by
21 it.

22 **DR. MAURO:** I seem to recall the low energy
23 photons of the same. In other words you have
24 the assumption of betas versus photons for
25 shallow doses, the photons that have the

1 higher risk. I remember that one of your
2 procedures, when you're doing a shallow dose,
3 and you're dealing with low energy photons and
4 low energy beta, both of which might be
5 recorded in an open window. The assumption I
6 believe you use automatically is the low
7 energy photon, and that gives you the higher
8 risk. I may have it backwards.

9 **MR. HINNEFELD:** I think there's a site
10 specificity to it. I don't know that we have
11 a general direction to it because I believe
12 there would be some site specific criteria
13 that would enter into the decision of what is
14 this open window likely to be. And within
15 certain sites it would be work location
16 specific. So I don't know that we have a
17 general direction out there about it because
18 there's site specific information in most
19 cases that would lead you one way or the other
20 in many cases. The magnitude of the risk may
21 depend upon the radiated organ.

22 **MR. FARVER:** The organ in this case is the
23 breast. I know the special section in the
24 OTIB-0017, and that's why I have to go back
25 and just make sure what it says.

1 **MR. HINNEFELD:** Okay, and then and our
2 initial response was we felt that this doesn't
3 seem to have been a work location really that
4 would be particular external plutonium photon
5 dose associated with it.

6 **MR. FARVER:** I think it's going to come down
7 to claimant favorability, because I think that
8 one of the statements in the DR report is the
9 shallow dose was attributed to electrons
10 greater than 15 keV as a claimant favorable
11 assumption. So let's see if that's true or
12 not.

13 **MR. HINNEFELD:** Will that really be
14 favorable in other words. It may actually be
15 the wording in the dose reconstruction.

16 **DR. MAURO:** I've seen this before. I just
17 don't remember how it goes.

18 **MR. HINNEFELD:** And I think it might be an
19 organ specific.

20 **MR. FARVER:** 127.4, failed to properly
21 account for all the missed electron dose. And
22 NIOSH gives a very good explanation of
23 Attachment C of OTIB-0017, and it's very
24 proscriptive. It tells what to subtract from
25 what, and if this is zero and this is zero,

1 then you assign this. So it's, I'm okay with
2 their resolution.

3 **MR. GRIFFON:** Okay.

4 **MR. FARVER:** 127.5, failed to assign missed
5 neutron dose. And I thought this was a
6 particularly good response by NIOSH. In the
7 first statement they say for reasons stated in
8 the response to findings 127.1 B1 --

9 **MR. GRIFFON:** And there's nothing there.

10 **MR. FARVER:** -- and there's no response, so
11 I like that.

12 **MR. GRIFFON:** Just kind of keeping us on our
13 toes, right?

14 **MR. FARVER:** And this has to go with
15 location. So I imagine when they reply,
16 respond to finding number one, we'll be able
17 to look at both --

18 **MR. HINNEFELD:** Yeah, I actually have 127.1,
19 the original response that came on 127.1 I had
20 questions about. And so I didn't include it.
21 My questions have now been answered, but I
22 just got the answer, and I didn't get it out
23 to the Subcommittee.

24 **MR. GRIFFON:** There's location on this, but
25 there's also the activation question, right,

1 the Sodium-24 --

2 **MR. HINNEFELD:** Yes.

3 **MR. GRIFFON:** -- activation question, and
4 whether that is a viable --

5 **MR. FARVER:** I figured you had a response on
6 there then took it out.

7 **MR. GRIFFON:** So we're waiting on NIOSH's
8 127.1 for this one.

9 **MR. FARVER:** Right, and then we'll just
10 evaluate them all. I just thought it was a
11 chance to take a shot at Stu.

12 **MR. HINNEFELD:** Why would you think that I
13 would want to respond clearly to these?

14 **MR. GRIFFON:** You know what? I said take a
15 break after this case, but there's about ten
16 more findings. So why don't we just, this is
17 a good one on a laughing note, let's take a break.
18 Ten minutes, is that all right? Ten minutes
19 for people.

20 **DR. BRANCHE:** We'll put on hold for ten
21 minutes. (Whereupon, a break was taken
22 from 2:00 p.m. until 2:15 p.m.)

23 **MR. GRIFFON:** We're on, I think we left off
24 on 127.6.

25 **MS. MUNN:** Oh, did we do five?

1 **MR. GRIFFON:** We did five, yeah, we have
2 sort of a dual follow up on 127.5. NIOSH is
3 going to look into their response to 127.1 is
4 missing, and SC&A will review it.

5 **MR. HINNEFELD:** Just as a point to be made,
6 it relates to 127.5. In this case the two in
7 vivo counts for Zinc-65 and Sodium-24 are, in
8 fact, non-detects. The original dose
9 reconstruction that was done for this, when
10 that dose reconstruction was done, we had a
11 table of whole body count values that we
12 thought were MDAs. So you compare essentially
13 to an MDA over two to see if you're
14 detectable.

15 Am I doing okay here?

16 **DR. MAURO:** You're good.

17 **MR. HINNEFELD:** So we felt, so we originally
18 thought they were detectable. Subsequently,
19 we learned that that table was actually a
20 critical level for LDs so that a value below
21 the LD values is, in fact, non-detectable even
22 if it's greater than half of it. But lower
23 than the LD it's not detectable. So those
24 are, in fact, non-detectable bioassay samples.
25 This case was then reworked for whatever

1 reason, additional employment or cancer or
2 something like that, and was done as a rework.

3 Rather than explain in a dose
4 reconstruction a second time that, oh, forget
5 it, those really weren't positive bioassays,
6 the dose reconstructor continued to call them
7 positive bioassays so as to not introduce that
8 confusion in it, and just was going to add in
9 the dose. And so that's why there appears to
10 be -- the question that gave rise to this was
11 I asked how come we're seeing these things
12 well after the single pass reactor shut down.
13 How come we're seeing Sodium-24 if it's really
14 an ingestion intake from the water supply.
15 Well, the fact is they really weren't positive
16 samples. We weren't seeing it.

17 **DR. MAURO:** I mean, this goes way back. I
18 remember the meeting we had three years ago
19 when this came up. And this is how it all
20 ends, interesting.

21 **MR. HINNEFELD:** Certainly for this case.

22 **MR. GRIFFON:** So when this says further on
23 5/1/sometime, he had a positive whole body
24 count indicating 660 picocuries of Sodium-24?
25 It's not a positive.

1 **MR. HINNEFELD:** Correct.

2 **MR. GRIFFON:** You think you should modify
3 this response in any way, Stu? Because I'm
4 afraid that if this goes into a public record,
5 you know, this is going to be really confusing
6 to people. I think you might want to consider
7 modifying that.

8 **MR. HINNEFELD:** I believe we can. I think
9 '79 is one of those dates where we would, of
10 those bioassays when we would say, yeah. In
11 fact, we may just take that whole portion,
12 that last portion out.

13 **MR. GRIFFON:** I have you both down as an
14 action to follow up on this anyway. But given
15 what you said, I think I'd appreciate it if it
16 was modified.

17 **MR. HINNEFELD:** Okay.

18 **MR. GRIFFON:** All right, 127.6.

19 **MR. FARVER:** 127.6, reviewer unable to
20 reproduce onsite ambient dose as described in
21 the DR report. And NIOSH's clarifies on how
22 the doses were calculated. And I accept their
23 description on their ambient doses.

24 **MR. GRIFFON:** All right.

25 **MR. FARVER:** 127.7, inappropriate onsite

1 ambient dose uncertainty, and they also
2 explained the uncertainty in their previous
3 response, so that's fine, too.

4 **MR. GRIFFON:** Okay.

5 **MR. FARVER:** 127.8, failure to account for
6 internal doses for all fission products. We
7 don't have a response from NIOSH.

8 **MR. GRIFFON:** Right, this is a --

9 Stu, I guess this is still on your --

10 **MR. HINNEFELD:** Yep.

11 **MR. GRIFFON:** Okay.

12 **MR. FARVER:** 127.9 is reviewer questions the
13 appropriateness of attributing the Zinc-65 and
14 Sodium-64 doses to ingestion.

15 **MR. GRIFFON:** Does that go back to what we
16 were just discussing?

17 **MR. FARVER:** This goes back to the positive,
18 not positive whole body counts, so we're okay
19 with their explanation other than they
20 probably should put --

21 **MR. HINNEFELD:** We may want to put a little
22 different wording in there.

23 **DR. MAURO:** Yeah, this wording here doesn't
24 say --

25 **MR. HINNEFELD:** Well, it has to do with, I

1 mean, there seems to be in this finding, and I
2 think maybe we've seen it before, this
3 intimation that the fact that these people if
4 they had had a positive bioassay for these
5 activation products, that maybe that was an
6 indication of a neutron ^ that they were
7 exposed to. Our view in most of the response
8 in 127.5 we plan to take out, kind of talks
9 about this doesn't seem to be likely --

10 **DR. MAURO:** Be the case.

11 **MR. HINNEFELD:** -- even given the amount of
12 other dose that would have to go with it. You
13 know, external dose that would be associated
14 with that kind of activation.

15 **DR. MAURO:** I recall when this issue emerged
16 a couple of years ago. And the argument was
17 made, no, it's from drinking the water in the
18 Columbia River. I guess, we found, I guess,
19 later that the water, that would have been
20 upstream. In other words, the only way you
21 would get the Sodium-24 from discharges from
22 the Columbia River was from the water being
23 acquired downstream from the discharges from
24 the reactors.

25 But the water supply was coming from

1 upstream, and that was like subsequent to that
2 discussion. So we found it hard to believe
3 that the Sodium-24 was from discharges. Now
4 if the real answer is that there is no Sodium-
5 24, that's the answer, and that puts the whole
6 thing to bed if that's the case. Just a
7 point.

8 **MR. SIEBERT:** From an ingestion/inhalation
9 point of view the dose reconstructor ran them
10 both ways and assigned ingestion because it
11 was the larger dose.

12 **MR. HINNEFELD:** When he thought it was
13 positive.

14 **DR. MAURO:** When he thought it was positive.

15 **MR. SIEBERT:** When he was considering it a
16 positive. He did it both ways to be on the
17 safe side.

18 **MR. GRIFFON:** Yeah, but that doesn't account
19 for the neutrons.

20 **DR. MAURO:** I have to say I think it's
21 important that we put the Sodium-24, and it
22 really isn't there because that's, that's a
23 killer.

24 **MR. GRIFFON:** Because quite frankly, a lot
25 of people didn't buy this water ingestion

1 idea.

2 **MR. FARVER:** 127.10.

3 **MR. GRIFFON:** Yep.

4 **MR. FARVER:** Failed to assign missed dose
5 for several unmonitored radionuclides. Still
6 waiting for a response.

7 127.11, NIOSH failed to address the
8 breath sample monitoring reported in the CATI
9 report.

10 **MR. GRIFFON:** Can you just stop at ten?
11 What, the unmonitored neutrons is that? Do
12 you recall? This is not fission product stuff
13 obviously, is it? It's something else, right?

14 **MR. FARVER:** Such as Strontium-90, C-14, P-
15 32, says radon gas and other nuclides. Looks
16 like the reviewer mentions radon generator
17 used for animal studies in the 1008-F
18 Building. So anyway, that was ten.

19 And 11 is kind of related where we say
20 they failed to address breath sampling
21 monitoring. In the CATI report the EE stated
22 that he was sure that he provided breath
23 samples, especially when he was working in the
24 300 Area. And the records did not include any
25 breath sampling results.

1 Then NIOSH gives their response that
2 basically if the breath monitoring had been
3 performed, records would have been included in
4 the DOE response. Breath monitorings are not
5 utilized to monitor radon, but rather measure
6 radium body burden. Which would lead to the
7 question, well, and then finally they say
8 radon exposure would not contribute, would
9 contribute almost no dose to the breast. If
10 they did do breath monitoring for radium, that
11 would contribute to the breast.

12 **MR. GRIFFON:** I was a little confused by
13 that response. Yeah, I was a little confused
14 by that response. You might want to re-look
15 at that because you're saying the breath
16 monitoring's done for radium not radon. But
17 then at the end you say and radon wouldn't
18 contribute to the dose.

19 **MR. HINNEFELD:** Well, the finding was about
20 radon.

21 **MR. GRIFFON:** Yeah, I know. I think the
22 CATI implied radon, right? Is that -- I think
23 the CATI --

24 **MR. FARVER:** Well, and also in that previous
25 finding, number ten, I believe the reviewer

1 mentioned something about a radon generator --

2 **MR. GRIFFON:** Right, okay.

3 **MR. FARVER:** -- and things like that.

4 **MR. GRIFFON:** So yeah, yeah.

5 **MR. HINNEFELD:** I thought the finding was
6 about radon so that's why we commented on
7 that.

8 **MR. FARVER:** Well, it was really just breath
9 sampling, you know, are there results, and if
10 they're not, what are you going to do? And if
11 it was for radium, could that contribute to
12 the breast?

13 **MR. GRIFFON:** Has any of this come out in
14 the site profile review for Hanford, 300 Area,
15 would they be, would they have done breath
16 sampling?

17 **MR. HINNEFELD:** I don't know. Well, radon
18 generator theoretically would have some radium
19 there. It wouldn't be very much. I'm not
20 aware of it. I don't know the site profile
21 well enough to know.

22 **MR. FARVER:** I mean it's probably something
23 the employee's not going to forget, giving
24 breath samples.

25 **MR. HINNEFELD:** Well, it could be in a

1 spirometry test or a respirator fit test.

2 **MS. MUNN:** And that was very common in the
3 300 Area, very common. Practically everybody
4 had it at one time.

5 **MR. FARVER:** Well, so did I, but I think the
6 employees were aware enough that that was not
7 a breath sample.

8 **MR. GRIFFON:** I think it's worth pulling the
9 string. I do.

10 **MR. FARVER:** They knew that was for a
11 respirator fit.

12 **MR. GRIFFON:** Yeah, I think so, too.

13 **MR. HINNEFELD:** Yeah, they should have known
14 it was a respirator fit.

15 **MS. MUNN:** Well, even so --

16 **MR. HINNEFELD:** But it seems like they were
17 taking my breath sample. I blew through a
18 tube into a box. Sounds like they're taking a
19 breath, it looks like they're taking a breath
20 sample.

21 **MR. FARVER:** I don't know. How did they
22 take a breath sample?

23 **MR. HINNEFELD:** Well, first of all the
24 technique I don't think is used very much. It
25 hasn't been used for a long time I don't

1 think. But normally what they would do is
2 they would have a person breathe bottled air,
3 aged bottled air, so that there's essentially
4 no radon in the air they're breathing. And
5 then exhale -- I don't even know how it's
6 captured, how they captured the exhalant.

7 **DR. MAURO:** There is a procedure.

8 **MR. HINNEFELD:** There is a procedure
9 somewhere.

10 **DR. MAURO:** We have a procedure on it, yeah.

11 **MR. HINNEFELD:** There's a procedure for
12 interpreting it.

13 **DR. MAURO:** And how it's done, and how to
14 interpret it. We reviewed it.

15 **MR. HINNEFELD:** So I'm not exactly sure how
16 they captured the air. I would assume they
17 count it in chelation bottles or chelation
18 chambers of some sort. I don't know.

19 **MR. FARVER:** But I would think an employee
20 would remember that as being unusual as
21 opposed to the annual respirator --

22 **MR. GRIFFON:** Spirometry test.

23 **MR. HINNEFELD:** Well, it might be. My view
24 is I think a spirometry test could easily be
25 thought of as a breath sample, well, I left

1 some sort of breath sample.

2 **MR. FARVER:** I just don't remember seeing in
3 the CATI reports that I reviewed people coming
4 up and writing in there that they gave breath
5 samples. And most of them I'm sure had
6 respirator tests.

7 **MR. HINNEFELD:** Yeah, most of them had
8 respirator tests.

9 **DR. MAURO:** Did they do at Hanford -- I know
10 there was an awful lot going on, basically
11 you'd worry about this if you were doing
12 chemical separations of ore. And that's with
13 Mallinckrodt, these other sites --

14 **MR. HINNEFELD:** That's where you'd have a
15 fairly good amount of radium.

16 **DR. MAURO:** -- you had radium separated, and
17 there was a very real possibility, especially
18 when they saved it --

19 **MR. GRIFFON:** That's what I was wondering.
20 What's the source term here?

21 **DR. MAURO:** Right, there would have to be
22 because they were separating, they were
23 processing ore, and they were chemically
24 separating out the uranium. I think that was
25 done sometime at Hanford.

1 **MS. MUNN:** No, it -- just a minute.
2 Processing ore is not the same as dealing with
3 powdery substances, and there was a great deal
4 of centering that went on there. So powder
5 was common, especially in 308 and 306. There
6 would have been, it would not have been
7 unusual for some of the health physicists to
8 have suggested breath samples from time to
9 time. It would make commonsense.

10 **MR. GRIFFON:** So that's consistent with the
11 CATI so that's all the more reason to follow
12 up on it I would think.

13 **MR. HINNEFELD:** Yeah. Well, I'll have to go
14 see what else we have.

15 **MR. GRIFFON:** And you might want to ask the
16 site profile people, too, what they found out
17 about, because they've looked at the aggregate
18 data I'm sure.

19 **MS. MUNN:** It would not be a common, it
20 would not be too common simply because most of
21 that work was done in gloveboxes, but the mere
22 fact that you occasionally get a rupture in a
23 glovebox would be an adequate reason for
24 breath sampling.

25 **MR. GRIFFON:** To do the test. So I mean I

1 guess is there an action there? That's the
2 question. I would say I think NIOSH should
3 follow up on --

4 **MR. HINNEFELD:** We'll have to go back and
5 look.

6 **MR. FARVER:** Yeah, I don't know, might want
7 to chalk it up to a radium source term?

8 **MR. GRIFFON:** Right, right, but it sounds
9 like -- can that be a NIOSH action to follow
10 up on that, Stu?

11 **MR. HINNEFELD:** Yeah, well, certainly we may
12 want to modify our response somewhat.

13 **MR. FARVER:** Then really this goes in with
14 the number 12 finding, 127.12. NIOSH: Failed
15 to properly address incident in the two CATI
16 reports. In the CATI reports the employee
17 gives a pretty good description about working
18 in the lab. There was an incident, and his
19 hair color changed for a few months. Does not
20 appear to be addressed in the DR report.

21 And then NIOSH's response is if they
22 existed, it would have been included. If the
23 incident reports existed, then they would have
24 been included in the record. I look at that,
25 and I still say, well, you didn't request

1 additional information, and maybe this is
2 something where they need to go back to DOE
3 now and look for additional information such
4 as incident reports, superintendent logbooks.
5 I'm not sure we had a specific date on this
6 incident or not. I don't believe so.

7 **MS. MUNN:** One would think you could at
8 least get in the ballpark for the date in an
9 incident of that magnitude.

10 **MR. FARVER:** Right. I would say it's pretty
11 severe if it's changing an employee's hair
12 color. Of course, that probably could be
13 chemical.

14 **MR. HINNEFELD:** Sounds chemical to me.

15 **MR. FARVER:** Right, but --

16 **MR. GRIFFON:** It could be associated --

17 **MR. FARVER:** -- both.

18 **MR. GRIFFON:** -- radiation exposure. You
19 usually don't have one without the other.

20 **MR. FARVER:** But it might be able to put it
21 into a certain area, facility, building,
22 something like that.

23 **MS. MUNN:** I've not heard of such a thing
24 personally. But that would --

25 **MR. FARVER:** The concern was the NIOSH

1 response was that they, we felt they should go
2 look for additional reports.

3 **MR. GRIFFON:** I mean, I'm a little perplexed
4 by that last part of the response, too, Stu,
5 that you assume since some other investigation
6 reports were there that these would have been
7 in there if they happened. I mean, are there
8 ever --

9 **MR. HINNEFELD:** Maybe just that they were
10 available. I mean, one thing to ask, one
11 thing to consider about making additional
12 requests back to a site on new, different
13 kinds of information.

14 **MR. GRIFFON:** They may not find them anyway,
15 right? They can look again, but --

16 **MR. HINNEFELD:** Yeah, they may just find
17 what they found --

18 **MR. GRIFFON:** If they look in the same spot,
19 they're not going to find it.

20 **MR. HINNEFELD:** Chances are that's what
21 generally happens when you go back.

22 **MR. GRIFFON:** And the other, I guess, you
23 have a question of incomplete records, but
24 also a question of would there be any
25 classified records. I don't know about

1 Hanford's, you know, if there were incidents
2 that had parts of the documents, the write
3 ups, were classified. Would they have not
4 been included in the individual's records?

5 **MR. HINNEFELD:** Good question. I don't
6 know.

7 **MR. GRIFFON:** Yeah, I don't even know if --

8 **MR. FARVER:** And you may be able to place it
9 to an area, facility, and request incident
10 reports for that facility for a timeframe
11 instead of requesting bioassay data.

12 **MR. HINNEFELD:** Well, these were all
13 survivor CATIs though. I mean the EE didn't,
14 the actual employee would have passed away.
15 So there's no firsthand account. This wasn't
16 the employee giving this. These were the
17 survivors giving these.

18 **MR. FARVER:** I understand, but you may be
19 able to -- like there's a week in the 300
20 Area. If you could in a lab in the 300 Area,
21 if you could pin that down to a timeframe,
22 says it occurred in the '80s, and then what
23 type incidents did you have in the '80s.

24 **MR. HINNEFELD:** There might be a way. Might
25 be a way to find some more. I don't know.

1 And another thing is, are you going to get
2 enough stuff to help you with a dose
3 reconstruction above what you already have,
4 and I don't really know what we have in this
5 case.

6 **MR. FARVER:** But those two tie together, 11
7 and 12.

8 **MS. MUNN:** If you can tie it to an
9 approximate timeframe, and by approximate I
10 mean a couple of years, then the number of
11 incident reports for the 300 Area shouldn't be
12 that staggering.

13 **MR. GRIFFON:** I'm going to lump that action
14 in with number 11.

15 All right, then we're on to -- that
16 was a long case, 128.1.

17 **MR. FARVER:** 128.1, this I believe is a
18 Savannah River case, and the first finding is
19 NIOSH failed to properly address -- oh, no.
20 Improperly converted recorded photon doses to
21 organ doses, and we discussed this before
22 about the range of dose conversion factors.
23 You know, using just the AP geometry or using
24 the range overall geometries. And this is one
25 of those findings. They used the range over

1 all the geometries instead of just the AP.
2 Like I say, it's been corrected.

3 **MR. GRIFFON:** I think that's right, and it's
4 a compensable claim.

5 **MR. SIEBERT:** The tool's been corrected.

6 **MR. FARVER:** the tool's been corrected.

7 **MR. SIEBERT:** But it's a compensable claim.

8 **MR. FARVER:** It was a workbook situation.
9 So this finding's okay as is 128.2 which was
10 the same thing only it was improperly
11 converted missed photon doses to organ dose.
12 We'll see this one quite a bit from here on
13 out.

14 **MR. GRIFFON:** 128.3 then.

15 **MR. FARVER:** 128.3, the intake mode listed
16 in the IREP is not consistent with the DR.
17 The IREP sheet lists the employee's intake as
18 a chronic intake; however, it should be acute.

19 **MR. SIEBERT:** It's the other way around. It
20 was listed in IREP as acute. It should have
21 been chronic.

22 **MR. HINNEFELD:** These are internal dose
23 numbers, right?

24 **MR. FARVER:** Yes, internal doses.

25 **MR. HINNEFELD:** Yeah, internal doses are

1 always chronic. And in terms of the IREP
2 input sheet the dose rate is always chronic.
3 It's the dose rate on the IREP input sheet
4 that's the dose rate that's always chronic on
5 the IREP input sheet for an internal dose.

6 **MR. GRIFFON:** So it was calculated correctly
7 but the IREP, was the IREP --

8 **MR. HINNEFELD:** No, the IREP dose rate was
9 run incorrectly. It was listed as acute
10 instead of chronic.

11 **MR. FARVER:** Oh, it was split into two
12 timeframes, that's what it was. So half of it
13 from '54 to '80 in IREP was listed as chronic.
14 And from '81 to '95 it was listed as acute
15 when it all should have been chronic.

16 **MS. MUNN:** So you rewrite it and it didn't
17 change it.

18 **MR. HINNEFELD:** Didn't change.

19 **MS. MUNN:** No change.

20 **MR. FARVER:** No, and this is not so much a
21 dose concern as it is a QA concern.

22 **MR. GRIFFON:** No change or insignificant?
23 It had to change something.

24 **MR. HINNEFELD:** No, it doesn't have to
25 change. That DVREF only comes in at fairly

1 high dose rates. So until you get to a
2 relatively high dose rate, acute and chronic
3 will give you the same number.

4 **MR. FARVER:** 128.4, intake mode listed in
5 the IREP is not consistent with the dose
6 reconstruction report, and this is for
7 plutonium, and it's the same situation. The
8 previous one was for uranium, I believe.

9 **MR. GRIFFON:** 128.4, I'm sorry, I missed
10 that.

11 **MR. FARVER:** It's the same as 128.3, and
12 it's for plutonium.

13 **MR. GRIFFON:** 129.1.

14 **MR. FARVER:** 129.1, we'll group that with
15 129.2, and this has to do with the range of
16 dose conversion factors. Again, it's a
17 Savannah River EDCW tool.

18 **MR. GRIFFON:** So the same thing we had --

19 **MR. FARVER:** Same thing as the previous
20 case. So both these findings, 129.1 and
21 129.2, have been corrected, and they're okay.

22 **MR. GRIFFON:** I assume had no effect on the
23 case, right?

24 **MR. HINNEFELD:** This one's back for rework
25 anyway. You're down to 129. Our response was

1 129.3, and this came back for rework. So
2 it'll be done using the correct techniques.

3 **MR. GRIFFON:** Is it after rework under a PER
4 review?

5 **MR. HINNEFELD:** Yeah. It's a Super-S
6 Plutonium PER.

7 **MR. FARVER:** 129.3, failed to properly
8 account for all the missed doses, missed
9 photon doses.

10 **MR. SIEBERT:** Was an LOD over two issue.

11 **MR. GRIFFON:** Yeah, we've had that a few
12 times.

13 **MR. FARVER:** Yes, the LOD over two issue.
14 That's been corrected, so that's okay on that
15 finding.

16 **MR. GRIFFON:** That was 129.3. And this has
17 been corrected in PROC-6, right?

18 **MR. FARVER:** Yes. Where has the LOD over
19 two been corrected? PROC-6?

20 **MR. HINNEFELD:** Actually, the correction
21 looks like it's in --

22 **MR. GRIFFON:** Is it in the IG-001?

23 **MR. HINNEFELD:** Rev. 2 of the IG.

24 **MS. BEHLING (by Telephone):** I believe
25 they're also trying to make a correction to

1 the workbook so this is done automatically,
2 and the dose reconstructor doesn't have to
3 look at this issue.

4 **MR. SIEBERT:** Yeah, that has long since been
5 changed.

6 **MS. BEHLING (by Telephone):** Okay.

7 **MR. FARVER:** 129.4, NIOSH did not properly
8 account for all the assigned neutron dose.
9 This goes back to the photon dose to organ
10 dose findings because they used a different
11 range of DCF values, and to do neutron doses
12 you do a neutron-to-photon ratio. It would
13 affect the neutron doses. So that's being
14 corrected.

15 **MR. SIEBERT:** In other words the neutron
16 dose was done correctly at the time with what
17 it was based upon. It's just what it was
18 based upon changed.

19 **MR. FARVER:** Correct.

20 129.5, failure to account for internal
21 doses from all fission products. I believe
22 this takes us back to OTIB-0054.

23 Kathy, do you have any input on this
24 one?

25 **MS. BEHLING (by Telephone):** This is the

1 same issue that we discussed before, the fact
2 that they selected the highest, the
3 radionuclide that gave the highest dose for,
4 rather than looking at all of the fission
5 products and the contribution from all missed
6 radionuclides. So this is what we discussed
7 before.

8 **MR. GRIFFON:** Is this particular one based
9 on urinalysis or based on whole body? It
10 looks like urinalysis.

11 **MR. SIEBERT:** Sure, it's whole body count.
12 I have to look for sure, but --

13 **MS. BEHLING (by Telephone):** It's whole body
14 count --

15 **MR. SIEBERT:** -- based on the highest. Yes,
16 it's whole body count.

17 **MS. BEHLING (by Telephone):** It's whole body
18 count, and this is the issue that they
19 indicated they may add something to OTIB-0054
20 regarding whole body counts.

21 **DR. MAURO:** And this was a denial. Is that
22 correct?

23 **MR. HINNEFELD:** Oh, yeah, it came back for
24 PER, so it must have been.

25 **DR. MAURO:** So it's not --

1 **MR. HINNEFELD:** It's not compensable. If it
2 were to come back under a PER, we're only
3 looking non-compensables.

4 **DR. MAURO:** No, the only reason I brought it
5 up is because it looks like you overestimated,
6 used the worst radionuclide rather than some
7 appropriate mix. And now it's coming back for
8 PER, certainly not true for this but for some
9 other reason.

10 **MR. HINNEFELD:** This is Super-S. Our
11 response on 129.3 is we list what the reason
12 is it's coming back, Super-S.

13 **MR. GRIFFON:** All right.

14 **MR. FARVER:** 130.1, we'll do 130.2, and it's
15 the range of dose conversion factors again,
16 improperly converted --

17 **MR. GRIFFON:** They're both the same --

18 **MR. FARVER:** -- dose to organ dose. And
19 it's been resolved.

20 130.3 is the missed photon doses, LOD
21 over two issue. So that's been corrected.
22 And this claim has also been reworked to
23 evaluate the Super-S Plutonium.

24 130.4, failed to properly account for
25 all missed neutron doses. Basically, NIOSH

1 could not assign any neutron exposure, and the
2 employee worked in the 400-D Area reactor
3 facilities of Savannah River Site. We thought
4 they should have some missed neutron doses for
5 the years the EE worked at the reactor
6 facilities.

7 NIOSH's response is that the neutron
8 dose would have been accompanied by
9 approximately five times the photon dose.
10 Since they were either low or no photon doses
11 in the years he was at the reactor, it's not
12 likely there should be a neutron dose. And my
13 only question is -- and I'll just kind of go
14 to John -- I guess we're okay on the neutron-
15 to-photon ratios with Savannah River?

16 **DR. MAURO:** Well, I don't know about
17 Savannah River, whether or not that is on the
18 front burner. I don't recall that being
19 something --

20 **MR. FARVER:** I know we were questioning some
21 of the Hanford --

22 **DR. MAURO:** At Hanford, yeah, but I don't
23 know about Savannah River.

24 **MR. HINNEFELD:** I think there's additional
25 investigation going at Savannah River as well

1 on neutron-to-photon ratios, I think.

2 **MR. SIEBERT:** It's on the table after --

3 **MR. HINNEFELD:** After Hanford, after the
4 Hanford investigation, I think they're going
5 to --

6 **MR. FARVER:** Since their response is based
7 on the neutron-to-photon ratio being correct -
8 -

9 **MR. HINNEFELD:** I think there might have
10 been another possible avenue of response here.
11 I believe our Savannah River guidance has
12 certain job titles in the reactor areas where
13 you would consider them neutron exposed. Not
14 everybody in the reactor areas is considered
15 neutron exposed, but there are certain job
16 titles that are. So our response may, we may
17 be able to speak to that. I don't know what
18 this guy's job title is.

19 **MR. FARVER:** Operator, foreman and
20 supervisor in heavy water operations.

21 **MR. HINNEFELD:** Heavy water operations
22 wouldn't be the issue. It would be to do with
23 the reactor.

24 **MR. FARVER:** No, but I'm sure that was
25 leading up to he was operator or foreman of

1 something, and then --

2 **MR. HINNEFELD:** I forget which job titles,
3 but there are certain job titles which are
4 specified as potentially neutron exposed in
5 the reactor area. Reactor operator, I think,
6 was one, but I don't remember. I'm not sure,
7 maybe not.

8 **MR. FARVER:** The only concern there was if
9 the NP ratios were correct.

10 **MR. HINNEFELD:** Maybe not.

11 **DR. MAURO:** Are you saying in here that you
12 were using --

13 **MR. HINNEFELD:** Yeah, but I mean the photon
14 should be an indication. If it's a photon-to-
15 neutron ratio's okay, there should be a
16 concomitant photon along with it.

17 **DR. MAURO:** I see according to the responses
18 that you have five-to-one ratio neutron-to-
19 photon, that's pretty high.

20 **MR. HINNEFELD:** Photon ratio.

21 **DR. MAURO:** Unless I'm reading this
22 incorrectly. Neutron would have been
23 accompanied by approximately five times.

24 **MR. HINNEFELD:** Five times as much.

25 **DR. MAURO:** Oh, okay, I didn't --

1 **MR. HINNEFELD:** It should read five times as
2 much photon.

3 **DR. MAURO:** I'm used to the reverse.

4 **MR. FARVER:** Okay, are we ready for 130.5?

5 **MR. GRIFFON:** Uh-huh, yep.

6 **MR. FARVER:** Prior TBD revision used to
7 determine medical doses. Basically the
8 medical dose TBD that's referenced in the DR
9 report is not the one that was used to
10 calculate the doses is what it comes down to.
11 And dose reconstructor consciously chose to
12 leave the X-ray doses as is due to the newer
13 values being lower. Although this is claimant
14 favorable, NIOSH agrees that the latest
15 version of the TBD should have been used.

16 **MR. GRIFFON:** That's closed. I mean, we've
17 got NIOSH agrees.

18 **MR. FARVER:** 130.6, calculational method
19 underestimates fission product dose. I've
20 read NIOSH's response, and I agree with their
21 response. We agree with 130.6.

22 **MR. GRIFFON:** Right.

23 **MR. FARVER:** Yeah, and they did give a good,
24 thorough response.

25 **DR. MAURO:** Would this go in our database as

1 a QA concern in the box? See, you have an
2 okay, the answer is the response to your
3 question but is there something that would go
4 into the little scorecard as a QA concern?

5 **MR. FARVER:** Well, I put the QA concern
6 because it was, they used a different version
7 of the TBD than what was referenced.

8 **MR. GRIFFON:** So I guess as we've seen often
9 here, you responded to one but then you
10 adjusted the tritium instead of being so
11 claimant favorable, I mean, you're doing this
12 on the fly I'm thinking or did --

13 **MR. FARVER:** Oh, no, I went to look at this
14 case.

15 **MR. GRIFFON:** Oh, no, it's okay, because my
16 question is, is that appropriate, I mean, the
17 first time through you assumed tritium
18 exposure for a number of years. And then you
19 went back and said, well, now we're only going
20 to assume it when he was monitored, right? Is
21 that the essence of it?

22 **MR. FARVER:** It goes into the next finding.
23 The next finding has to do with the tritium
24 dose.

25 **MR. GRIFFON:** Yeah, so these two may

1 overlap. I mean, I --

2 **MR. FARVER:** Well, you're reading about how
3 they changed the tritium dose, and that has to
4 do with the next finding.

5 **MR. GRIFFON:** Oh, okay, but I'm saying
6 you're about to close one out. That's why I'm
7 asking if they overlap or can we still close
8 that one out.

9 **MR. FARVER:** Yes, we can close it out.

10 **MR. GRIFFON:** Let's go on to the next one
11 then, and I'll listen and see if I agree with
12 closing it out.

13 **MR. FARVER:** Okay. 130.7, underestimates
14 tritium dose. The tritium dose is from the --

15 **MR. GRIFFON:** I mean, here you're saying
16 they underestimated it, and in 130.6 they
17 lowered it.

18 **MR. FARVER:** Correct. The tritium dose is
19 from the workbook used by NIOSH does not
20 account for years when no tritium sample was
21 submitted; and therefore, underestimates the
22 tritium dose. That was our initial finding.
23 And this goes back to the DR report that says,
24 that has written in it, for years where no
25 tritium samples were submitted, a dose equal

1 to the maximum tritium measured dose was
2 assigned. And based on what we said, no, you
3 didn't do that. And NIOSH's response is,
4 well, the DR should have read where no tritium
5 samples were submitted, no tritium dose was
6 assigned, which is probably more correct.

7 **MR. GRIFFON:** And which was, I guess the
8 assumption here is that any years in the
9 tritium areas they would have definitely been
10 monitored, right?

11 **MR. SIEBERT:** Their tritium monitoring was
12 simplistic enough to keep it up. They just
13 did it.

14 **MR. GRIFFON:** I mean, that seems to make
15 sense. I just don't know if anybody examined
16 that issue.

17 **MR. FARVER:** Yes, I believe that's come up
18 before.

19 **MR. GRIFFON:** Okay.

20 **MR. FARVER:** And then they went back --
21 okay, and this is where we talk about where
22 they adjusted the tritium dose. Apparently,
23 they were using the maximum values, and I
24 believe that you change it from maximums to
25 actuals or something.

1 **MR. HINNEFELD:** Do you know, Scott?

2 **MR. SIEBERT:** Well, ^ for the unmonitored
3 years, the 355 millirem should have went to
4 zero because they weren't being monitored.

5 **MR. FARVER:** Correct.

6 **MR. SIEBERT:** Rather than overestimating
7 what the maximizing, we just went with more
8 realistic.

9 **MR. GRIFFON:** I guess what I'm trying to
10 understand is, is your initial finding, 130.7,
11 said that the DR underestimated the tritium
12 dose, and that was when they were including
13 dose for unmonitored years. So I would have
14 thought you would have concluded almost that
15 they overestimated it. I don't, I guess I'm
16 trying to follow these two together.

17 **DR. MAURO:** I mean, it sounds like there was
18 a judgment made here that if the person wasn't
19 monitored for tritium, there was no need to
20 monitor for tritium; therefore, we should not
21 assign any tritium dose as opposed to what was
22 done earlier where apparently you were, as a
23 matter of routine, assigning some tritium dose
24 perhaps if the person was in a reactor area --

25 **MR. HINNEFELD:** Probably just as an

1 overestimating --

2 **DR. MAURO:** As an overestimating --

3 **MR. HINNEFELD:** -- as why not just give it
4 to him as his whole career. There's no ^
5 technique and get the case out of here.

6 **MR. GRIFFON:** And as you give him the best
7 estimate, you got a narrowing, right.

8 **DR. MAURO:** But that's a pretty important
9 transition. In other words you're confident
10 then that if there was any potential at all
11 that there was some tritium exposure, that
12 there would have been a urine sample collected
13 and an analysis done. And that's really where
14 you're coming down as opposed to this earlier
15 assumption where you --

16 **MR. HINNEFELD:** Right.

17 **MR. GRIFFON:** And the other note I had on my
18 notes was does this jive with his work
19 history, with the individual's work history.
20 In other words was he in those areas, in those
21 buildings, in that job and for whatever reason
22 got overlooked.

23 **DR. MAURO:** The way I see it is there's a
24 way in which you could confirm that
25 assumption. That is, normally you pull a

1 silicon gel air samples in an area that has
2 airborne tritium samples. And if the area
3 that he's working in, dose samples were being
4 pulled, but he was not getting a bioassay,
5 then that would sort of belie the assumption
6 you made.

7 I don't if -- see, I like the idea
8 that if you do, if you are gonna go down the
9 road you described, one way to confirm it is -
10 - in addition, we know, the weight of evidence
11 is such that there likely was no tritium issue
12 here because there was no tritium air sampling
13 going on.

14 I'm just assuming that because I know
15 way back when when I was at these sites, if
16 there was always a -- if there was any
17 possibility of tritium, you had silica gel
18 pulling an air sample, and you collected it
19 and monitored for it. So for this person, if
20 there was none of that going on where he was
21 working at that time, that would sort of
22 confirm your assumption.

23 **MR. SIEBERT:** Looking at the actual bioassay
24 records, when he was in areas where tritium
25 was needed, he's leaving it every week or two.

1 **MR. HINNEFELD:** And there were locations ^.

2 **MR. GRIFFON:** And you're saying his work
3 history suggests that before he started
4 leaving tritiums, he wasn't in those areas.
5 He was somewhere else. You have that
6 documented? I mean, you can crosswalk that is
7 what you're saying. Because I, you know,
8 we're only talking, what, 300, I mean the
9 maximum is 350 millirem a year. But
10 obviously, this must be a close case or else
11 you wouldn't have stripped that away from this
12 guy.

13 **MR. FARVER:** Well, I mean, there are
14 specific years when there were just no tritium
15 results, '64, '73 and '75 to '81. So for
16 those --

17 **MR. GRIFFON:** Yeah, it's a missing data
18 question.

19 **MR. FARVER:** -- and I'm kind of like Scott.
20 If he would have been needing it, he would
21 have had something that year. He would have
22 submitted a sample. If he worked there for
23 three months, he would have had three months
24 worth of samples.

25 **MR. GRIFFON:** Yeah, it seems like, I mean, I

1 guess I'm just asking --

2 **MR. SIEBERT:** I mean, it's just generally
3 one of those things we've seen at Savannah
4 River, but there's either a lot of tritium
5 sampling when they're working there or there's
6 not.

7 **MR. GRIFFON:** I guess I would just --
8 because it seems like it is a close case,
9 otherwise, you wouldn't have bothered to
10 reduce this little amount of tritium dose, so
11 I think it would probably be worth -- I don't
12 know. If there was a way to at least check
13 the work history and say, look, he was in this
14 other area. That's why you don't see anything
15 for these two prior years. And then he moves
16 in here, and obviously, the tritium, every
17 week we see it, you know? I guess I still
18 have that question anyway.

19 **MR. FARVER:** I'll look into it.

20 **MR. GRIFFON:** Well, I think it's a NIOSH
21 action probably.

22 **MR. HINNEFELD:** I'll see what we have. We
23 might have some work assignment cards from
24 Savannah River.

25 Is it Savannah River?

1 **MR. FARVER:** Yes.

2 **MR. HINNEFELD:** We might have some work
3 assignment cards from Savannah River that
4 would indicate the person's work assignments.

5 **MR. GRIFFON:** Okay.

6 **MR. FARVER:** Case 131, 131 the finding,
7 131.1, dot-2, dot-3, see if we can get rid of
8 all of them.

9 **MR. GRIFFON:** They're the same DCF?

10 **MR. FARVER:** I think so. The first finding,
11 two findings are DCFs range that we've dealt
12 with in the last two cases. And the third
13 finding is LOD over two and the missed photon
14 dose.

15 **MR. GRIFFON:** All right.

16 **MR. FARVER:** Finding number four, improper
17 method used to calculate electron doses.

18 **MS. CHANG (by Telephone):** I think we could
19 do a little bit of them --

20 **DR. BRANCHE:** Chia-Chia?

21 **MR. GRIFFON:** No, really, we're interested
22 in what you have to say, Chia-Chia.

23 **MS. CHANG:** Bye.

24 **MR. GRIFFON:** All right, 131.4 we're on,
25 right?

1 **MR. FARVER:** Yes. I'm trying to figure out
2 what I wrote here. I think this is another
3 one where I'm going to go back and review
4 OTIB-0017. This also has to do with a breast
5 dose and shallow dose. Because my notes say
6 how were the doses calculated, single DCF or a
7 range. And I want to go back and look at some
8 of that.

9 **MR. SIEBERT:** Well, but the finding was that
10 we didn't do it per OTIB-0017.

11 **MR. FARVER:** Correct. And that's why I want
12 to go back and look at that.

13 **MR. SIEBERT:** OTIB-0017 wasn't published for
14 four months after this assessment was
15 finished.

16 **DR. MAURO:** And had you used it --

17 **MR. SIEBERT:** Had we used it, it would have
18 gone down.

19 **MR. GRIFFON:** And it would have been a
20 lower, right.

21 **MS. MUNN:** Okay, acceptable?

22 **MR. FARVER:** I think it'll be acceptable.

23 **MR. GRIFFON:** Well, what was the, what was
24 in place prior to OTIB-0017? Was it just -- I
25 guess that's the question.

1 **MR. FARVER:** OCAS IG-001.

2 **MR. SIEBERT:** That was pretty much a
3 straight interpretation of IG-001.

4 **MR. GRIFFON:** Right, so it was from IG-001.

5 **MR. SIEBERT:** Which is why we wrote OTIB-
6 0017.

7 **MR. FARVER:** Yeah, I'll look at it.

8 **MR. GRIFFON:** Yeah, you can follow up on it.

9 I mean, we understand your point
10 though, Scott. TIB-0017 wasn't in there.

11 **MR. FARVER:** 131.5.

12 **MR. GRIFFON:** You should have anticipated
13 TIB-0017.

14 **MR. FARVER:** The findings fail to properly
15 account for all missed electron doses, and
16 NIOSH gives an explanation of what they did.

17 **MR. GRIFFON:** Is this another case that's
18 being reassessed in Super-S?

19 **MR. FARVER:** Yes.

20 **MR. HINNEFELD:** It is back.

21 **MS. MUNN:** Another Super-S.

22 **MR. FARVER:** I don't have a concern with
23 what they wrote in their response. And part
24 of this does go back to the fact that OTIB-
25 0017 wasn't in place at the time.

1 **MR. SIEBERT:** And also LOD over two.

2 **MR. GRIFFON:** It is an LOD over two thing,
3 yeah. So I think we're okay there, right?

4 **MR. FARVER:** Yes, we're okay.

5 131.6, failure to account for internal
6 doses from all fission products. We've had
7 this a few times today. And OTIB-0054
8 provides guidance for evaluating fission
9 products, but this was also related to whole
10 body counts. So this is where we're going to
11 be comparing OTIB-0054, but they don't mention
12 what they were currently using.

13 Now on to case 132.

14 **MR. GRIFFON:** 132.

15 **MR. FARVER:** Which is another Savannah River
16 case so you can guess what the first three
17 findings will be.

18 **DR. BRANCHE:** You're taking out all the
19 mystery.

20 **MR. GRIFFON:** We've got DCF, DCF and LOD.

21 **MR. FARVER:** The first three findings once
22 again have to do with, the first two are the
23 range of DCFs. The third one is a little
24 different.

25 **MR. GRIFFON:** It's not LOD over two.

1 **MR. FARVER:** It's not LOD over two. It's
2 inappropriate exposure geometry, and it has to
3 do with should you use AP or should you use
4 rotational ^.

5 So 132.3 and 132.4 are both dealing
6 with the exposure geometries. And this case
7 is going back for a rework under Super-S.

8 Now 132.5, there's the LOD over two
9 finding. I knew it would be there.

10 **MR. GRIFFON:** Okay, 132.6.

11 **MR. FARVER:** 132.6, improperly converted
12 recorded shallow doses to organ dose, and it's
13 just the same as the previous. So 132.6 and
14 132.7 have to do with -- oh, that's the range
15 of DCFs that we talked about earlier. And
16 then the missed photon dose, the LOD over two.

17 Where are we at, eight?

18 **MR. GRIFFON:** Yeah, I thought you were 132.6
19 and .7 you just did, right? Now we're up to
20 eight, 132.8. I thought I lost you. You were
21 just talking about LOD over two.

22 **MR. FARVER:** That's part of 132.7. It's a
23 missed shallow dose to organ dose I believe
24 that was part of it. No, I must have had the
25 wrong page. It is strictly the DCFs.

1 **MR. GRIFFON:** Yeah, I didn't think it had
2 anything to do with LOD. Okay, 132.8.

3 **MR. FARVER:** Improperly converted neutron
4 dose to organ dose. Sounds like DCFs.

5 **MR. GRIFFON:** Right, it's just a three
6 different, yeah.

7 132.9.

8 **MR. FARVER:** Reviewer questions whether the
9 EE was exposed to Type S-Super Plutonium. And
10 since the case is --

11 **MR. GRIFFON:** Under PER review.

12 **MR. FARVER:** It's been returned for
13 consideration. The question I had was does
14 the NIOSH response, does that contradict the
15 one up above it in 132.8. In other words the
16 case has not been returned from DOL for Super
17 S Plutonium evaluation.

18 **MR. SIEBERT:** I think the "not" shouldn't be
19 there. I think it has been returned.

20 **MR. PRESLEY:** The same as 132.5 to say it's
21 been returned.

22 **MR. SIEBERT:** It has.

23 **MR. FARVER:** I thought it contradicted.

24 **MR. GRIFFON:** Yeah, it has been, yeah. Get
25 that out of there.

1 **MS. BEHLING (by Telephone):** Can we go back
2 to findings 132.3 and 132.4? I would just
3 like to ask a quick question. This had to do
4 with a change that was made to the external
5 implementation guide. And because of that
6 change it has to do with the DCF values and
7 whether to use an AP or in some cases for
8 certain types of cancers whether they should
9 apply a correction factor to that DCF value.
10 Is this a PER issue? How do we identify
11 whether there were other cases that may have
12 been affected by this change to the
13 implementation guide?

14 **MR. HINNEFELD:** Are you talking about here
15 the organs where --

16 **MS. BEHLING (by Telephone):** Yes, for cases
17 of --

18 **MR. HINNEFELD:** -- the AP is not the most,
19 there are some organs where the AP is not the
20 most favorable.

21 **MS. BEHLING (by Telephone):** Correct, for
22 certain types of cancers such as bone,
23 esophagus, lung cancers --

24 **MR. HINNEFELD:** Offhand I don't know. I can
25 find out. I know that in many cases, those

1 cases have come back for other reasons. For
2 instance, very, very many cases came back or
3 are coming back for Super-S Plutonium, very
4 many. And it could be that these will all be
5 addressed in that fashion, but I could take a
6 look.

7 **MS. BEHLING (by Telephone):** Okay, I didn't
8 know if there would be a separate PER for this
9 external implementation guide or not.

10 **MR. HINNEFELD:** I don't know for sure our
11 plan on that.

12 **MR. GRIFFON:** I think we need maybe a ten-
13 minute break again. People are taking their
14 own breaks, so I'm kind of taking the hint.
15 People on the phone, I think it's just Kathy,
16 but there might be others.

17 **DR. BRANCHE:** Well, Chia-Chia seems to be on
18 the line.

19 **MR. GRIFFON:** Oh, yeah, there's a couple
20 people out there. Ten minutes we'll get back
21 at 3:27 eastern, thanks.

22 (Whereupon, a break was taken from 3:16 p.m.
23 until 3:30 p.m.)

24 **DR. BRANCHE:** The Dose Reconstruction
25 Subcommittee is starting again now.

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Mr. Griffon.

MR. GRIFFON: We're picking up on case 133.1, which is which site?

MR. FARVER: That's a good question, Mound.

MR. GRIFFON: Mound, yes.

MR. FARVER: And 133.1, inappropriate method used for deriving missed photon doses, just LOD over two again. No, I think this is a little different. It has to do with using the minimum number of zeros or the median number of zeros. And I wasn't real sure of the response from NIOSH. I mean, I didn't really understand it.

MR. HINNEFELD: Well, I think it was an oversight in a reworked case that they had --

MR. GRIFFON: Yeah, I think they're agreeing with the finding.

MR. HINNEFELD: -- they stayed with the minimized. We essentially agreed with the finding and stayed with the minimized number as opposed to.

MR. FARVER: Okay, that's good.

DR. MAURO: In the reanalysis, I see you, in fact, looked at this case again from two cancers to one cancer, and it was originally

1 compensable. Is it now not compensable? I
2 haven't seen that. In other words if it's
3 still compensable, the fact they minimized and
4 used zeros wouldn't really be problematic
5 except it's a QA issue.

6 **MR. SIEBERT:** No, it's non-compensable with
7 one cancer.

8 **DR. MAURO:** Oh, it became non-compensable.
9 So it went from compensable to non-
10 compensable, but you kept the zeros in. That
11 needs to be fixed.

12 **MR. GRIFFON:** But did you assess that fix,
13 and would it affect -- it would not affect --

14 **MR. SIEBERT:** It's back for Super-S.

15 **DR. MAURO:** Oh, it's back for Super-S.

16 **MR. SIEBERT:** We will be once we deal with
17 the neutron issues.

18 **MR. PRESLEY:** Is it compensable or not?

19 **MR. GRIFFON:** It's non-compensable as it
20 stands.

21 **MR. HINNEFELD:** It's not compensable the way
22 this reviewed dose reconstruction is not
23 compensable. Now, since this one has been
24 done and reviewed by you guys, this case has
25 been returned to us yet again, this time for

1 Super-S Plutonium. We also have a Mound
2 technical issue that, neutron technical issue
3 that we're sorting out. So that has to get
4 sorted out, and ^ Super-S Plutonium and the
5 case will be reworked, and these things will
6 be corrected in rework.

7 **DR. MAURO:** This one's a laundry list of
8 issues that you're going to be dealing with,
9 only one of which will be the zeros.

10 **MR. HINNEFELD:** Yes, yes. There are a
11 number of things that will be done, changed
12 when it's done.

13 **MR. PRESLEY:** As it's corrected.

14 **MR. HINNEFELD:** The last time it went over
15 it was non-compensable, and it's back again
16 with us to rework.

17 **MR. FARVER:** 133.3, reviewer questions
18 NIOSH's -- no, 133.2, inappropriate method
19 used for deriving missed neutron doses. And
20 this is again the minimizing or median zeros.

21 **MR. GRIFFON:** Okay, and so you have under
22 the site profile review, you're also reviewing
23 the neutron issue as you say here, right, Stu?

24 **MR. HINNEFELD:** Yeah, there's a neutron
25 issue at Mound that we need to sort out.

1 **MR. FARVER:** 133.3, reviewer questions the
2 selection of dates of uptake for positive
3 bioassay results. There's a little bit of
4 description here. Basically, on this one this
5 is for plutonium. There were two chronic
6 intakes assessed and one acute inhalation.
7 And the reviewer questions the intake dates
8 that were assigned. NIOSH's response was
9 intake dates should be moved forward as
10 suggested. Moving it forward will result in a
11 lower dose based on smaller chronic intake
12 rate.

13 **MS. MUNN:** Is that an okay result?

14 **MR. FARVER:** That's an okay.

15 **MR. HINNEFELD:** Except it's got to be
16 reworked.

17 **DR. MAURO:** That's one on the list that
18 perhaps would bring the dose down. The others
19 might bring the doses up. This one might
20 bring the doses down. Got it.

21 **MS. MUNN:** But for our purposes here --

22 **MR. FARVER:** It's an okay.

23 133.4, reviewer questions whether
24 additional radionuclides should have been
25 assessed. The employee was monitored for PU-

1 238 and -239, and referring to a table in the
2 TBD he could have been exposed to secondary
3 radionuclides. Since the bioassay program
4 didn't include monitoring for these nuclides,
5 should you assess for these secondary
6 radionuclides? And my only concern with
7 NIOSH's response is they just talk about
8 plutonium, and they don't address the
9 americium or neptunium or thorium that are
10 also mentioned in the Table 5.2.

11 **MR. HINNEFELD:** Well, this is Mound. You
12 guys should know a lot about Mound. You guys
13 must know something about Mound.

14 **DR. BRANCHE:** We know it's in Ohio.

15 **MR. HINNEFELD:** I know you're conflicted
16 that's why you know a lot about it. Do you
17 have ^ anything about the non-plutonium
18 isotopes? Americium --

19 **MS. BRACKETT:** Well, my guess -- I don't
20 know the details of this specific case, but
21 americium was associated with a Plutonium-239
22 mixture rather than -238, so that would be why
23 that wasn't included. But a separate process
24 that would be worked on that's not associated
25 with the plutonium, I would have to look at

1 the details of this case to see ^. I don't
2 remember when thorium showed up on site.

3 **MR. GRIFFON:** I mean, I guess the question
4 is -- I'd have to look back at the case, too.
5 Where this guy worked and --

6 **MR. FARVER:** He worked in Buildings PP, SW,
7 and R.

8 **MR. GRIFFON:** PP, SW and R.

9 **MR. FARVER:** And according to Table 5.2 of
10 the TBD, there are, may have been exposed to
11 secondary radionuclides such as, and it lists
12 radionuclides.

13 **MR. GRIFFON:** So you're going by the TBD for
14 these buildings.

15 **MR. FARVER:** So if he worked in these areas,
16 could he have been exposed to these nuclides,
17 and if so, should they be assessed.

18 **MR. HINNEFELD:** Well, the case is being
19 reworked, but it sounds like this needs to be
20 addressed in some fashion.

21 **DR. MAURO:** Isn't Mound a, I guess, in an
22 SEC mode right now?

23 **MS. BRACKETT:** Yes, I was going to say the
24 TBD is being reworked, and specifically these
25 kinds of nuclides are being addressed in the

1 SEC group right now.

2 **MR. GRIFFON:** So this may also defer to site
3 profile as well as the --

4 **MR. HINNEFELD:** Rework of this.

5 **MR. GRIFFON:** -- rework, yeah.

6 **MR. HINNEFELD:** The rework of this case
7 would probably have to wait until those
8 questions are resolved in the SEC arena to
9 determine where they're going to end up before
10 this case is actually done.

11 **MS. BRACKETT:** Because there is a lot more
12 research being done into these findings,
13 program nuclides.

14 **MR. FARVER:** 133.5, reviewer questions the
15 solubility class of the plutonium, and this is
16 where the reviewer just points out the
17 possibility of Super-S.

18 **MS. BRACKETT:** Right. If it was assessed as
19 238 then we wouldn't apply Super-S.

20 **DR. MAURO:** I was on a conference call on
21 Mound recently. We had one of these question
22 and answer sessions with Joe Fitzgerald. He's
23 leading up the Mound evaluation report and
24 Joyce was there, Joyce Lipsztein, and there
25 was something about Plutonium-238 being high-

1 fired pellets off of these what-do-you-call
2 units, these --

3 **MS. BRACKETT:** RTGs.

4 **DR. MAURO:** -- yeah, RTGs, and that those
5 pellets themselves have a very interesting
6 unknown clearance. They go in, and they don't
7 clear immediately, but that they start to
8 break up.

9 **MS. BRACKETT:** Yes, they're very insoluble
10 to start with, and then it becomes more
11 soluble over time. Actually, we're in the
12 process of evaluating that. There has been
13 papers published on this material. There's
14 been one proposed model. We've gotten the
15 data on that particular case and several other
16 cases. The paper's based on a Los Alamos
17 incident. And we have the data from six of
18 the cases there, and we've been trying to find
19 Mound cases that look like that. We haven't
20 found that many that actually exhibit that
21 behavior. We've plotted every single person
22 at Mound who had plutonium bioassay results,
23 and we've gone through all of the graphs to
24 see if we could identify --

25 **DR. MAURO:** To see a pattern?

1 **MS. BRACKETT:** -- and it doesn't, I thought
2 that we had seen a few cases like that when we
3 did the dose reconstruction, but we're having
4 a hard time identifying any. But we are
5 working on a model for the Plutonium-238 of
6 this particular behavior that's actively --

7 **MR. HINNEFELD:** This is this issue from the
8 Mound SEC or assessment --

9 **DR. MAURO:** That's center stage, center
10 stage. And I only bring it up because then it
11 almost begs the question can we address the
12 issue for this particular person until these
13 issues are discussed.

14 **MR. HINNEFELD:** No, this case is back to us.
15 It'll wait. It won't be reworked until these
16 are resolved so that those answers can be put
17 in place.

18 **MR. GRIFFON:** You said this case is being
19 reworked for Super-S issues, right? Under the
20 Super-S PER review it's being reworked, Stu?
21 Or this first part says that this particular
22 heat source plutonium is not Super-S. It's a
23 different kind of issue, right?

24 **MS. BRACKETT:** Right.

25 **DR. MAURO:** Ceramicized. It was ceramics.

1 **MR. GRIFFON:** Ceramics, yeah.

2 **MS. MUNN:** Absolutely ceramic.

3 **MR. HINNEFELD:** Our judgment, Mark, about
4 PER evaluations doesn't always match DOL's,
5 and sometimes they return cases to us for
6 rework other than the ones we have identified.
7 So this one's back for that reason now. It's
8 back and these things will be taken care of.
9 Once these things have been taken care of,
10 anything that's not returned by DOL would be
11 addressed in the PER. Since we've changed the
12 Mound approach, we have to have a PER for
13 Mound. Anything that wouldn't be brought back
14 would be brought back in that fashion.

15 **MR. GRIFFON:** I was just looking in terms of
16 inconsistency in your responses, but really,
17 it's a DOL decision, right?

18 **MR. HINNEFELD:** DOL returns what they want
19 to return.

20 **MS. BRACKETT:** So basically nothing will
21 happen with this though, right? We'll send it
22 back and say Super-S doesn't apply to this
23 assessment.

24 **MR. HINNEFELD:** Well, this case right now is
25 going to be pending. This case is going to be

1 pended if no other reason than neutron issue
2 as well as the various technical issues that
3 are being debated in the SEC forum at Mound.
4 And the resolution of those then will
5 influence how this turns out. And chances are
6 we'll just hold this one here.

7 **MR. GRIFFON:** Okay.

8 **MR. FARVER:** 133.6, reviewer questions
9 whether all positive tritium results were
10 accurately reported by the DOE. And I guess
11 this just has to do with the reporting at
12 Mound. They reported annual doses for tritium
13 at Mound.

14 Is that correct, Scott?

15 **MR. SIEBERT:** If I recall, correct. Once
16 again since I'm conflicted, I don't see Mound
17 cases that frequently. But I believe that is
18 correct, and we only get annual reporting for
19 tritium.

20 **MR. FARVER:** I believe that's correct, too.

21 **MR. CLAWSON:** Do you mean the monitoring of
22 the people was quarterly?

23 **MR. SIEBERT:** Well, the monitoring was more
24 frequently. The only records that we get are
25 annual roll ups as to what the dose was for

1 tritium.

2 **MR. GRIFFON:** So what's the resolution here?

3 **MR. HINNEFELD:** Which one are we on?

4 **MR. FARVER:** The assigned missed doses.

5 **MR. GRIFFON:** 133.6, so SC&A's okay with the
6 way they assigned the missed doses?

7 **MR. FARVER:** Yeah, the question was did you
8 get all the results from DOE, and I don't
9 believe there were any more results.

10 **MR. GRIFFON:** All right, case 134.

11 **MR. FARVER:** 134.1, acute intake date does
12 not correspond to incident date.

13 **MR. GRIFFON:** What site is this? I'm sorry.

14 **MR. FARVER:** This is another Mound site.
15 The initial review found there was an incident
16 date or an incident on a certain date that did
17 not correspond to the acute intake date
18 assigned by NIOSH. NIOSH's response is that
19 the intake, the incident did not have an
20 internal uptake. It was a positive dose swipe
21 from contaminated hands.

22 **MR. GRIFFON:** A false positive.

23 **MR. FARVER:** A false positive. It was from
24 contaminated hands. As such, a subsequent
25 chest count was negative.

1 **MR. GRIFFON:** Is that what the investigation
2 concluded, Scott, that it was due to
3 contaminated hands?

4 **MR. SIEBERT:** That appears to be what the
5 DOE concluded.

6 **MR. FARVER:** And I guess I, I don't have a -
7 -

8 **MR. GRIFFON:** Nothing new there.

9 **MR. FARVER:** No, but somebody has a positive
10 no swipe, I usually have a little concern with
11 that, but --

12 **MR. GRIFFON:** Well, the other question I
13 have, and not looking at the case, you know,
14 right now it may be tough to remember this
15 unless you guys ^ funny on it, but it says
16 subsequent bioassay chest count. Was this
17 chest count done close to that date of this
18 incident or was it well after?

19 **MR. FARVER:** That's in the next finding.

20 **MR. GRIFFON:** Oh, okay.

21 **MR. SIEBERT:** Yeah, that's what DOE said.

22 **MR. FARVER:** 134.2, the chest count --

23 **MR. GRIFFON:** Not all my questions lead to
24 your next finding.

25 **MR. FARVER:** -- investigative incident

1 report was not included in the records. So
2 even though they say in their documents that
3 there was a chest count --

4 **MR. GRIFFON:** Oh, so the investigation
5 report said there was a chest count done, but
6 it wasn't in the records.

7 **MR. FARVER:** It was not in the records,
8 which leads you to wonder what other data and
9 incident reports were also missing. And I
10 don't know how you resolve something like
11 that.

12 **MS. MUNN:** Did I miss it, Doug?

13 **MR. GRIFFON:** It was a compensable claim,
14 right?

15 **MR. PRESLEY:** That's what I'm going to say.
16 134.3 says it's compensable.

17 **MR. GRIFFON:** Yeah, so the bottom line at
18 the end, right?

19 **MR. FARVER:** Yeah, that makes it even more
20 difficult.

21 **MS. MUNN:** How far apart did you say the
22 intake date and the incident, reported
23 incident date were?

24 **MR. GRIFFON:** I don't know if, was it in the
25 investigation report? You never found the

1 sample, but in the investigation report they
2 must have said it.

3 **MR. FARVER:** Was involved in an incident in
4 Building R-131 March of 1983 there was an
5 incident. And in the documentation of the
6 probably DOE investigation, it lists that
7 there was a chest count taken, and that it was
8 negative.

9 **MS. MUNN:** They don't say what date?

10 **MR. GRIFFON:** Doug, don't say what date?

11 **MR. FARVER:** Oh, I'm sure there's a date but
12 it's --

13 **MR. GRIFFON:** Yeah, it's in there, but we
14 don't have it.

15 **MR. FARVER:** I don't have it exactly. It's
16 March of 1983.

17 **MR. GRIFFON:** But it was done right after
18 the incident apparently, right?

19 **MR. FARVER:** It doesn't say what date the
20 chest count was done. But it says in their
21 report a chest count was done and was
22 negative.

23 **MR. GRIFFON:** I guess if this was a non-
24 compensable claim, I would be struggling here
25 on what do you do. But it was a compensable,

1 right? I don't think NIOSH had to resolve it
2 because it was compensable.

3 **MR. SIEBERT:** We assigned it in April of '83
4 as opposed to March of '83, and it's
5 compensable so it would have just been up.

6 **MR. GRIFFON:** Right.

7 **MR. CLAWSON:** That still falls under the
8 information and integrity of the information.

9 **DR. MAURO:** Unless they just said we've gone
10 far -- very often they stop. In other words
11 they'll stop. We're not going any farther,
12 and then that's not unreasonable.

13 **MR. GRIFFON:** I can see the point here. Why
14 pull the string if you don't have to.

15 **MR. FARVER:** You know, on one hand you're
16 wondering what happened to the lung count --

17 **DR. MAURO:** On the other hand, you don't
18 need it.

19 **MR. CLAWSON:** But where it is compensable,
20 but the bottom line is it still gets back to,
21 you know, they're saying one thing. There's
22 no data there.

23 **MR. GRIFFON:** Oh, yeah, if you're looking in
24 terms of the overall site --

25 **MR. CLAWSON:** Right, that's what I was

1 looking at.

2 **MR. GRIFFON:** -- you're wondering, right,
3 where is the data, and does this happen often.
4 Then you'd be really concerned.

5 **MR. FARVER:** 134.3, do not properly address
6 incidents in the CATI or DOE reports. And
7 this is just, I know this is boilerplate from
8 the template. It says right here in the CATI
9 report section, no incidents were discussed in
10 any interview or were found in the dosimetry
11 records. Well, that's just not true. There
12 was a lot of records. And NIOSH's response
13 was, yes, they should have been included. So
14 it's okay, 134.3.

15 **MR. GRIFFON:** Right, but it does get back to
16 that, and I think we're going to bring that DR
17 report template back to this group because, I
18 mean, the benefits of a template are obvious
19 because you want consistency. But the
20 downside is that it is also obvious that you
21 just fall into that trap of answering
22 everybody the same way instead of really
23 dealing with the question that's raised in the
24 CATI. You just kind of --

25 **MR. FARVER:** There were several instances in

1 the CATI report that were mentioned about the
2 employee had to be scrubbed down, had to leave
3 urine samples, restricted due to an injury,
4 and was several, many pages in the DOE
5 records. So I'm going to bring this back to
6 another QA concern. It's in the CATI. It's
7 in the records, but it doesn't get caught in
8 the DR.

9 **DR. MAURO:** Does the DR say something to the
10 effect that though this was stated this was in
11 the records, we did not pursue to get it
12 because we didn't need it?

13 **MR. FARVER:** No incidents were discussed in
14 the interview or were found in the dosimetry
15 records.

16 **MR. SIEBERT:** Well, in the next sentence
17 there's no information was raised in the
18 interviews suggest the dose estimates in the
19 dose reconstruction were not claimant
20 favorable, which once you get the compensable
21 part --

22 **DR. MAURO:** It's over.

23 **MR. SIEBERT:** -- it's a decided point. But
24 we agree that that should have stated that
25 rather than putting that paragraph in, should

1 have said it was not needed because we're
2 already --

3 **MR. GRIFFON:** It's already compensable.

4 **DR. MAURO:** Because I see that all the time.

5 **MR. FARVER:** Now 135.1, a Y-12, K-25 case.
6 The DR did not properly account for all
7 potentially missed doses.

8 **MR. GRIFFON:** This is Y-12, K-25, both
9 sites?

10 **MR. FARVER:** Yes. And I agree with NIOSH's
11 response. I guess I have a question probably
12 more because I'm not familiar with the Y-12
13 and K-25 cases. Was this a workbook error,
14 and it was something that was corrected?

15 **MR. SIEBERT:** Unfortunately, I can't answer
16 that because this is not my, Y-12's not my
17 site.

18 **MR. FARVER:** The finding goes to missed
19 photon dose should have included missing
20 quarters of dosimetry data as well as zero
21 entries. And I was just asking if this was a
22 workbook error, you know, the counting of
23 zeros so to speak.

24 **MR. GRIFFON:** This one must have also been a
25 close POC I'm assuming. I don't know.

1 Liz, do you have that list of the
2 POCs? I'm wondering in that first part of --

3 **MR. SIEBERT:** 46.77.

4 **MR. GRIFFON:** The first part of 135.1 you, I
5 mean, my question is, is this a missed dose or
6 unmonitored, or did you use a coworker to
7 substitute for those missing periods of time
8 not having looked at the case. I was just
9 looking at the matrix. I didn't pull the case
10 out.

11 **MS. BEHLING (by Telephone):** It seems to me
12 there was some missing quarters as well as
13 some zero doses. I think there should have
14 been some unmonitored dose.

15 **MR. GRIFFON:** That's what I was asking,
16 Kathy.

17 **MR. FARVER:** I mean, and their response says
18 missed photon dose should have included the
19 missing quarters of data as well as the zero
20 entries. The necessary corrections were made
21 and the dose increased to the point that it
22 was necessary to reexamine the other assigned
23 doses. In other words it was --

24 **MR. GRIFFON:** Give some, take away some
25 other parts. It was enough to fine tune the

1 other calculations. And I guess you looked at
2 the ambient dose because it was almost like
3 you were double assigning, I think, right?

4 **MR. FARVER:** Correct. And I believe there's
5 an --

6 **MR. GRIFFON:** Which makes sense.

7 **MR. FARVER:** -- attachment or a table in
8 that procedure that says if the employee's
9 monitored, you don't assign ambient dose. And
10 I'm assuming that's probably what you went to
11 and said, well, we don't assign ambient dose.

12 **MR. GRIFFON:** Right, which is fine. My
13 question is in those quarterly, missing
14 quarters or whatever, how was that filled in
15 with dose. Was it --

16 **MR. HINNEFELD:** Yeah, your question is
17 should the missing quarters, should they
18 really have been missed or should they have
19 been coworker --

20 **MR. GRIFFON:** Monitored.

21 **MR. HINNEFELD:** -- or monitored coworkers.
22 Well, I don't know.

23 **MR. FARVER:** In other words how were the
24 necessary corrections made?

25 **MR. GRIFFON:** Right. So I think we'll put a

1 NIOSH follow up on that one.

2 The 135.1, we're still on it. That's
3 the one we're on. We move slow.

4 **MR. FARVER:** We're not through beating it
5 yet.

6 Okay, finding 135.2, EE should have
7 been assigned missed neutron doses.

8 **MR. GRIFFON:** This gets into the work
9 location question for Y-12 I assume, right?

10 **MR. FARVER:** Well, there's a couple ways you
11 could look at it from missed work location or
12 this is what those NIOSH folks are hinging on,
13 there's a Part Two Neutron Radiation Report
14 that basically says if you didn't receive a
15 dose in a certain timeframe, then you're not
16 likely to get a neutron dose. And therefore,
17 they don't assign neutron doses. Now I don't
18 necessarily agree with that document, but that
19 document's been approved, and that's what it
20 says. So I would have to stick by their
21 response.

22 **MR. GRIFFON:** Well, at the bottom of that
23 response I have a question. If a worker ^ in
24 an area where the source of neutrons, the film
25 was not processed and a zero was recorded for

1 the neutron dose for that monitoring period,
2 my question was how do you distinguish if it
3 was processed did they record a, say it was
4 processed, and it was less than detectable,
5 would they put less than detectable or would
6 they put zero? And if they're recording zeros
7 in both instances, how do you distinguish?

8 **MR. HINNEFELD:** I think probably the attempt
9 to distinguish would be based on, in this case
10 it was based on the person's job title and the
11 types of materials in 9212 that might give
12 rise to neutron dose. If I'm not mistaken,
13 the 9212, the potential neutron exposure in
14 9212 was from enriched uranium, thorium. And
15 if someone is a machinist, they're going to be
16 machining uranium or some other metal as
17 opposed to --

18 **MR. GRIFFON:** Well, I understand that
19 rationale, but Doug was just describing the
20 other protocol which I think you're using
21 which is this other thing described in the
22 first paragraph. After what I just said you
23 say, "Therefore, workers that had no positive
24 neutron doses," so I guess you're saying --

25 **MR. HINNEFELD:** I think the first part of

1 this response explains why there would be a
2 zero in the record, a neutron zero although
3 there really was no potential exposure for
4 neutrons. See, that's what they're saying is
5 that the film included a neutron component.
6 The badge included a neutron component. They
7 wouldn't necessarily read it if they felt like
8 there was no --

9 **MR. GRIFFON:** Yeah, but what I'm saying is
10 how do you know if it was a real zero or if it
11 was a zero meaning less than detectable. I
12 mean, maybe they didn't put down zero for less
13 than detectable.

14 **MR. HINNEFELD:** From looking at the record I
15 don't think there's a way to determine whether
16 it's a we didn't process or there's no
17 potential exposure, and we didn't process the
18 zero. Or if there was a potential exposure,
19 we'd process it. If it's less than limited
20 detections you can put a zero down. From
21 looking at the record I don't think there's
22 any way to tell. I think the way to try to
23 distinguish what it might be and what is the
24 potential exposure to neutrons is from the
25 person's job title.

1 **MR. GRIFFON:** Going back to the job
2 location.

3 **MR. HINNEFELD:** The job title and locations
4 where he worked. So that's how that
5 determination was attempted to be made.

6 **MR. CLAWSON:** That's correct.

7 **MR. HINNEFELD:** So that was how. Now
8 there's an outstanding issue with this RPRT-
9 0033 and the site profile and what's the
10 correct list of neutron sources. Can that be
11 explained better? And can that come up
12 better? So that issue is out there already,
13 which the resolution of that could, in fact,
14 affect this. But as the information was
15 provided, I think the determination or the
16 decision that this person doesn't appear to
17 have been neutron exposed was based largely on
18 their job title.

19 **MR. PRESLEY:** He worked in the machine shop.

20 **MR. FARVER:** For a certain time period they
21 were listing zeros, so you would think he'd
22 assign --

23 **MR. GRIFFON:** Yeah, right. And that's what
24 I was getting at. You don't, you can't tell
25 if it's a zero or if it's a zero meaning not

1 processed.

2 **MR. HINNEFELD:** Less than LOD or not
3 processed. You can't tell from looking at the
4 record.

5 **MR. GRIFFON:** So you're deferring back to
6 the process buildings for your determinant.

7 **MR. HINNEFELD:** And job titles.

8 **MR. GRIFFON:** So this is being discussed in
9 the site profile. No, it's not. I'm writing
10 the site profile.

11 **MR. HINNEFELD:** You're writing the site
12 profile. You can talk about whatever the heck
13 you want.

14 **MR. GRIFFON:** Well, you said it had come up
15 though. Where is it --

16 **MR. HINNEFELD:** In their dose reconstruction
17 report.

18 **MR. GRIFFON:** So I guess we'll have to pull
19 back into that site profile discussion though.

20 **MR. HINNEFELD:** I think we would not, I
21 think we don't want to lose it.

22 **MR. GRIFFON:** Right, we don't want to lose
23 it.

24 **MR. HINNEFELD:** And it would be we either
25 need to resolve it here --

1 **MR. GRIFFON:** It is a site profile-type
2 issue.

3 **MR. HINNEFELD:** -- it is a site profile-type
4 issue.

5 **MR. GRIFFON:** And Jim Neton actually
6 recently e-mailed me asking something about Y-
7 12 to close it out.

8 **MR. HINNEFELD:** What's the final list of
9 items that were still on the table when the
10 SEC decision was made? It doesn't affect the
11 site profile.

12 **MR. GRIFFON:** So I think we might, that
13 might be a good impetus to get that back on
14 the table.

15 **MR. HINNEFELD:** And like I say you could say
16 and by the way this one is, there's this issue
17 that's come over from DR review that we also
18 need resolved with the Y-12 site profile.

19 **MR. GRIFFON:** So I'm going to put we're
20 going to defer that one to the site profile.

21 **MR. CLAWSON:** Are you sure you don't want to
22 give it to Procedures to review?

23 **MR. GRIFFON:** I'd love to give it to
24 Procedures, but --

25 **MR. CLAWSON:** I just thought we kind of

1 missed our opportunity there.

2 **MS. MUNN:** There is no opportunity that
3 exists. Shall I read for you the charter of
4 the Procedures work group?

5 **MR. CLAWSON:** No, thank you.

6 **MS. MUNN:** Or do I need to hold up a big
7 sign?

8 **MR. FARVER:** Number three?

9 **MR. GRIFFON:** Yes.

10 **MR. FARVER:** 135.3, unable to reproduce the
11 internal dose from missed thorium dose from in
12 vivo analysis. Reviewed their files that they
13 sent, and -- did you send those files? No,
14 those were --

15 **MR. GRIFFON:** Were these files in the
16 initial --

17 **MR. HINNEFELD:** I don't know if these files
18 were included.

19 **MR. FARVER:** Oh, those were the original
20 files in the case because I know I've looked
21 at them. I agree with their response.
22 Basically, they used IMBA to calculate the
23 intake rates, then you plug that into the CADW
24 workbook. So it's okay.

25 **MR. GRIFFON:** Because of the limits of IMBA,

1 yeah.

2 **DR. MAURO:** We're on 135.3?

3 **MR. FARVER:** Yes.

4 **DR. MAURO:** I just read the response. A
5 person inhales the Thorium-232, and we have a
6 bioassay or some method of estimating the
7 intake of Thorium-232. And what I'm reading
8 here is, of course, you've got the Radium-228
9 with its five year half-life rolling in. So
10 he's probably taking in some, he might be
11 taking in some Radium-228 along with the
12 Thorium-232 in his work setting depending on
13 what he's working with. But what I understand
14 here is that, okay, now the Radium-228 is
15 going in while the Thorium-232 is sort of
16 stuck in his lungs. What do you do to account
17 for that? I guess I didn't follow from your
18 answer. What do you do about that?

19 **MS. BRACKETT:** We don't need to do anything.
20 In addition, the software takes that into
21 account. The problem is the coding within
22 IMBA doesn't properly take it into account.
23 It follows the previous ICRP-30 method where
24 it assumes that all of the daughters stay with
25 it, but there's independent kinetics for the

1 progeny following their own models, the newer
2 models. IMBA cannot handle that, and so IMBA
3 does correctly calculate the intake since it's
4 based just on the parent. But the dose, we
5 have recalculated the dose conversion factors
6 based on -- well, Keith Eckerman actually
7 helped us.

8 **DR. MAURO:** Keith put it together for you,
9 okay.

10 **MS. BRACKETT:** DCAL, now we actually have
11 DCAL, and Tom LaBone runs that if we need to
12 do something. So we just calculated it based
13 on the current model.

14 **DR. MAURO:** Yeah, we have DCAL provided to
15 us also. Okay, quite frankly I wasn't aware -
16 - so all the progeny in IMBA are treated
17 biokinetically as their parent then.

18 **MS. BRACKETT:** And so there are several
19 where IMBA is inaccurate, and in fact, we've
20 gone through and where, they've all been
21 updated in CAD-W. They're currently, the
22 thorium numbers are documented in OTIB-0028,
23 and that's in the process, it's been updated,
24 and it's in review for other nuclides. The
25 rest of them aren't as seriously off as the

1 thoriums were, but we have gone ahead and --

2 **DR. MAURO:** This could be a big one, yeah,
3 because ^ coming in.

4 **MS. BRACKETT:** Right. The numbers that you
5 get in IMBA are generally, some of them are
6 three-to-four times larger than they should be
7 because of the way it --

8 **DR. MAURO:** Because of the biokinetic -- oh,
9 yeah, the thorium is going to be in the body
10 much longer than the radium would be I would
11 imagine. As the radium's going in it's going
12 to move out more quickly than the thorium's
13 going to move out.

14 **MS. BRACKETT:** Right, and it goes to
15 different organs.

16 **DR. MAURO:** It can go different places. But
17 you're saying the wherewithal exists to be
18 able to deal with all this.

19 **MS. BRACKETT:** Yes, yes.

20 **MR. FARVER:** 135.4, tritium exposure
21 reported by the EE in the CATI not considered
22 in the DR. In the CATI report there's a
23 section three on detailed work history. In
24 that part the employee checked that he was
25 exposed to tritium. There was no tritium

1 bioassay records and NIOSH did not assess a
2 tritium dose. So our concern was since the
3 employee said he was exposed to tritium,
4 should he be assessed a tritium dose.

5 **MR. HINNEFELD:** Well, our response is
6 oftentimes on CATI information where it's
7 check a box or something like that, that we
8 will, we kind of weight heavily the site
9 activities and what we know about what we're
10 getting from the records from the site and
11 locations at the site where particular things
12 might have been.

13 For instance, he may have known there
14 was tritium at Y-12 so felt like he was
15 exposed to it and checked that box, when, in
16 fact, he perhaps wasn't particularly in a
17 location to be exposed to tritium to any
18 degree. He just knew it was there so he
19 checked the box.

20 **MR. GRIFFON:** Is this a survivor claim, do
21 you know?

22 **MR. HINNEFELD:** I don't know. I guess Scott
23 could find out.

24 **MR. GRIFFON:** If it wasn't, was there any
25 attempt to follow up with the individual?

1 **MR. HINNEFELD:** I don't know. I don't know.

2 **MR. FARVER:** Are there other tritium results
3 for K-25 and for Y-12?

4 **MR. HINNEFELD:** I don't recall. I haven't
5 seen any doses reconstructed for a long time.
6 I don't remember seeing any tritium --

7 **MR. FARVER:** I mean, if there were other
8 tritium results and none for him, then I might
9 say, well, maybe he wasn't monitored.

10 **MR. HINNEFELD:** Yeah.

11 **MR. SIEBERT:** They were doing them.

12 **MR. GRIFFON:** Yeah, at Y-12 I would imagine
13 there were at least some, weren't there?

14 **MS. MUNN:** Personnel engaged in processing
15 materials with potential were required to
16 submit three urine samples a month for
17 analysis.

18 **MR. HINNEFELD:** I don't know enough about
19 where tritium might have been used at Y-12 to
20 really have an opinion.

21 **MR. GRIFFON:** I'm just pausing for a second
22 to see if you know if it was a survivor claim
23 or a --

24 **MR. SIEBERT:** No, it's the EE.

25 **MR. GRIFFON:** The claimant?

1 **MR. SIEBERT:** Yeah, the claimant is the EE.

2 **MR. GRIFFON:** And no attempt was made to
3 contact them about the CATI or any --

4 **MR. PRESLEY:** He was a machinist --

5 **MR. GRIFFON:** -- that seems like an obvious
6 thing to me if you're not sure.

7 **MR. HINNEFELD:** Our earlier responses say he
8 was a machinist.

9 **MS. MUNN:** Based on the workbook.

10 **MR. GRIFFON:** And to me sometimes a simple
11 phone call can clarify these things, too. And
12 again, that may or may not be warranted in
13 this case. I don't even -- if it was a close
14 case. I guess I would think it would have to
15 be a close case if you're worried about
16 tritium dose. I don't know what the POC was
17 on this one.

18 **MS. BEHLING (by Telephone):** Forty-six
19 percent.

20 **MR. GRIFFON:** Forty-six percent, so you're
21 getting up there.

22 **MS. BRACKETT:** I didn't think there was much
23 potential for tritium.

24 **MR. GRIFFON:** Right, right.

25 **DR. MAURO:** Yeah, I don't remember. We had

1 the Y-12 site profile review, and I know we
2 spent a lot of time worrying about uranium --

3 **MR. HINNEFELD:** Thorium.

4 **DR. MAURO:** -- thorium.

5 **MR. HINNEFELD:** Cyclotron products.

6 **DR. MAURO:** -- yeah, but I don't remember
7 talking about tritium, but it could be in
8 there. I'd have to go check.

9 **MR. FARVER:** It's in the technical basis
10 document.

11 **DR. MAURO:** It is in the TBD.

12 **MR. FARVER:** Yes, however, the internal
13 dosimetry program has included limited
14 monitoring --

15 **MR. GRIFFON:** I'm definitely sure there was
16 some.

17 **MR. FARVER:** -- cesium, technicium, thorium,
18 plutonium, actinium and tritium among other
19 radionuclides.

20 **MS. BRACKETT:** I remember in the '90s there
21 was an incident there with tritium, but it
22 involved gun sites. There was some leaking on
23 them. There was some tritium, but that's
24 pretty minor, and that's not a machinist
25 working with...

1 **MR. FARVER:** And that's just why I ask has
2 anyone seen other tritium data from Y-12.

3 **MR. HINNEFELD:** I've very rarely seen cases
4 anymore. I don't remember seeing any.
5 Normally, the Y-12 bioassay is uranium, either
6 mass or activity units. Oftentimes there'll
7 be whole body results, or ^ tell you that.

8 **MS. BRACKETT:** Or Doug.

9 **MR. HINNEFELD:** Or Doug.

10 **MR. GRIFFON:** To me, I guess, it's just the
11 utility of the CATI. I mean, if an individual
12 checks the box, we can sit around the table
13 and say, oh, we probably assume he checked the
14 wrong box or heard the word tritium once and
15 checked it. On the other hand I can look at,
16 I have a lot of questionnaires, and I see
17 those on questionnaires.

18 Sometimes with chemical and radiation
19 they check every box, and then I, you know,
20 you sort of say, what's the use of this one.
21 But then you see some that very carefully
22 checked only like three items, and then I
23 think, well, this person at least took the
24 time to consider all these things. They
25 didn't just check them all. So I would think

1 follow up with this person, maybe they were
2 involved in something --

3 **MR. FARVER:** And at least --

4 **MR. GRIFFON:** -- special project or
5 whatever.

6 **MR. FARVER:** -- something in the DR that
7 says we reviewed the CATI report. Although
8 the EE says they were exposed to tritium, we
9 could find nothing to support this claim; and
10 therefore, it wasn't assessed. That way it
11 looks like you've considered it but couldn't
12 find anything to support it.

13 **MR. GRIFFON:** Yeah, I mean my point is I
14 don't want it look like we considered it. I
15 want it to be considered.

16 **MR. FARVER:** But I mean if you look --

17 **MR. GRIFFON:** That's the problem that a lot
18 of people in the program have is that they
19 feel like their interview information is being
20 given lip service, not being treated as --

21 **MR. FARVER:** -- I mean, if you look into
22 this, and you don't have any data, you don't
23 have any information that he was exposed, at
24 least put something in there saying that you
25 looked at it.

1 **MR. GRIFFON:** And like I said, if it wasn't,
2 you know, this is a pretty close one, and
3 tritium dose, if it was there, is not going to
4 amount to much.

5 **MR. HINNEFELD:** Well, we can go back and see
6 what we know enough about Y-12 and potential
7 tritium exposures to make a better case for
8 saying that. I think the point, if it
9 strictly comes down to he said it in the CATI,
10 and so we should have at least followed up
11 with him, that's sort of a problematic for
12 this case if this is the only thing. If
13 that's the only thing, because this has been
14 adjudicated for years.

15 **MR. GRIFFON:** Right, it's been adjudicated
16 for years.

17 **MR. HINNEFELD:** And so we really don't have
18 a good way --

19 **MR. GRIFFON:** Oh, yeah, I'm not saying to go
20 back now. I'm just saying --

21 **MR. HINNEFELD:** But it may be at this point
22 forward take a careful look at this CATI,
23 checked boxes and things like that, and if
24 there's information in there that doesn't
25 match up with the kind of exposure records you

1 get, maybe make that follow-up call and say,
2 okay, when you checked this box on what basis
3 did you do that. You know, that kind of thing
4 might be something that may be, enable us to
5 get into the CATI for future portion of
6 things.

7 **MR. GRIFFON:** It is the CATI procedure.
8 We've had this discussion before in different
9 forums, but I mean, I want to even turn this
10 around, and it's probably good that this comes
11 up when Larry's left, but turn it around and
12 ask the question how many times has NIOSH
13 called and asked about a CATI's information.
14 And even better than that, how many times, you
15 know, you ask them to list coworkers, how many
16 times have they followed up on coworkers? I'm
17 not sure it's a lot. I mean --

18 **MR. HINNEFELD:** I'm sure it's not a lot.

19 **MR. GRIFFON:** -- right, I'm guessing that
20 it's not many at all, and you've done
21 thousands of CATIs, so anyway, but I wouldn't
22 say for this case, I wasn't implying that you
23 should go back now and ask this --

24 **MR. HINNEFELD:** Right, but it would be, for
25 instance, it would be a way to behave from

1 this time forward.

2 **MR. GRIFFON:** But I would appreciate at
3 least checking to see if this has any
4 potential validity at all, the tritium
5 exposures during the timeframes that this
6 person worked there, and et cetera.

7 I think we can move on to 136.

8 **MR. FARVER:** 136.1.

9 **MR. GRIFFON:** We've got about a little over
10 half hour by my clock. I mean, I think we can
11 only do so much of this. I'm not just cutting
12 it off arbitrarily, but I kind of am sticking
13 with the five o'clock because I think that's
14 enough. We're going to burn out. We're
15 getting there.

16 **MR. FARVER:** 136.1, photon dosimeter
17 correction factors in the DR are incorrect and
18 not properly referenced. The first part would
19 be incorrect. It looks like it was a typo in
20 the table. The second part has to do with
21 whether OTIB-0027 should be referenced or not.

22 NIOSH believes it does not need to be
23 referenced since it is in the references of
24 the TBD, I believe, yes, since the TBD
25 references OTIB-0027. So there is a typo, so

1 that's one concern, and it went through
2 unchecked or not caught. The other question
3 that comes up is what are the practices of
4 referencing OTIBs? Because sometimes they're
5 referenced; sometimes they're not. And to say
6 that this didn't need to be referenced, well,
7 how do you know?

8 **MR. HINNEFELD:** I don't know if we even have
9 a standard practice for referencing.

10 **MR. FARVER:** I don't think so.

11 **DR. MAURO:** We had this conversation when we
12 discussed site profiles, and one of the
13 criticisms we had of one of the site profiles
14 was there's an awful lot of other documents
15 that need to be referenced in your site
16 profile to make a complete story, but they're
17 not here. And the answer was you never
18 intended the site profile to be the
19 encyclopedia.

20 The way you accommodate all the new
21 information is the ongoing training programs,
22 the fact that you've got a cadre of people
23 that work this particular site, and they're
24 exchanging notes. In other words there's a
25 philosophy. It's important that it be

1 communicated to us. That is that the site
2 profile was never intended to be a complete
3 encyclopedic knowledge of a site and cover
4 every possible situation that might arise.

5 Now, what I'm hearing is in a similar
6 way when you do your dose reconstructions,
7 there's a collective body of knowledge that
8 you draw upon some of which is in the site
9 profile; some of which is in OTIBs. Now, what
10 I'm seeing here is that the site profile
11 apparently references the OTIB?

12 **MR. HINNEFELD:** Apparently.

13 **DR. MAURO:** I guess where I come out is if
14 that's cited in the site profile it
15 effectively captures that, doesn't it? I
16 mean, if the site profile has it, is it
17 necessary for the dose reconstruction to break
18 out the OTIB-0027 separately?

19 **MR. FARVER:** Where it becomes a concern is
20 when you try to review these cases and
21 determine how the numbers were calculated --

22 **DR. MAURO:** It's a struggle.

23 **MR. FARVER:** -- and you just refer to the
24 site profile --

25 **DR. MAURO:** Yeah, it's a struggle.

1 **MR. FARVER:** -- it's not going to tell you
2 sometimes.

3 **DR. MAURO:** I have to say we run into this a
4 lot.

5 **MR. HINNEFELD:** In this case though our
6 response seems to say that the same correction
7 factors that are in OTIB-0027 were in this
8 particular site profile. So if someone is
9 looking for those correction factors, they can
10 find them in this particular site profile.
11 That's what this --

12 **MR. FARVER:** I agree with that, but -- okay,
13 I realize my question was what's the practice
14 on referencing OTIBs.

15 **MR. HINNEFELD:** Well, I would say the
16 practice on referencing in general is
17 reference the document that provides the
18 information you utilized at that point. And
19 so in this case if you're listing correction
20 factors and provide a reference for that
21 information for the correction factors, you
22 could reference either OTIB-0027 or the
23 specific site profile since they both contain
24 that information.

25 **MR. FARVER:** Well, for example, OTIB-0017,

1 how do you do shallow doses, now I assume if
2 you have a case that has shallow doses, you
3 would reference OTIB-0017.

4 **MR. HINNEFELD:** I believe we would.

5 **MR. FARVER:** I mean, that's my opinion.

6 **MR. SIEBERT:** The difference in this one is
7 Rocky Flats-specific. The OTIB was written
8 for that, and then the information for it got
9 folded into the next generation of the TBD.
10 But rather than fold all of the OTIB into the
11 TBD, they just changed the numbers in the TBD
12 and referenced OTIB-0027 in the TBD. And then
13 the TBD becomes more one-stop-shopping for
14 that type of thing. Yes, that's what we
15 referenced in ^. So something like OTIB-0017,
16 it's across the complex and a very different
17 comparison than something that's very site-
18 specific that we've rolled into the TBD.

19 **MR. FARVER:** That's partly for my education,
20 too, so I know when to write up the findings.

21 **MR. HINNEFELD:** I would say if the reference
22 points you, if the DR gives a reference, and
23 that reference contains the information that
24 DR relied on, then that would be a suitable,
25 that's a suitable reference. And whether it's

1 the TF or the site profile or whatever, as
2 long as it provides the information, then it's
3 being utilized at that point in the dose
4 reconstruction.

5 **MR. FARVER:** Now, are these references, is
6 this part of the template that is
7 automatically created?

8 **MR. HINNEFELD:** I don't know. I think so.

9 **MR. SIEBERT:** Yeah.

10 **MR. HINNEFELD:** Yes, I think so.

11 **MR. FARVER:** And then they would, then the
12 dose reconstructor would add references to it
13 or --

14 **MR. SIEBERT:** If needed, or templates are
15 really written with almost all the references
16 you need at that site, and they would delete
17 the ones that they don't use pretty much.

18 **MR. FARVER:** So it's not really tied to the
19 workbook where if the workbook calculates a
20 shallow dose, and then they're going to go
21 pull that reference.

22 **MR. SIEBERT:** No.

23 **MR. FARVER:** Okay, because I have seen cases
24 where there were references in the report that
25 were not needed.

1 **MR. SIEBERT:** Right, and it's up to the dose
2 reconstructor to make sure that the references
3 tie across.

4 **MR. FARVER:** I'm trying to figure out how it
5 works.

6 **MS. MUNN:** So the bottom line on this one is
7 that we have essentially a QA issue with
8 respect to ^, right?

9 **MR. FARVER:** Correct, and that's the same
10 one for 136.2. It has to do with the neutron
11 dosimeter correction factor. It's a typo.

12 **MR. GRIFFON:** Yep.

13 **MR. FARVER:** 136.3, medical X-ray frequency
14 is not consistent with the CATI report for
15 technical basis.

16 **MR. HINNEFELD:** Yeah, yeah, this is --
17 despite the fact that I sent this initial
18 response, I still asked a question about it,
19 and we're still checking on this. It could
20 very well be that the file we had was the
21 medical file, and which the site profile says
22 for this period can't count on the medical
23 file being complete in terms of the number of
24 X-rays.

25 **MR. FARVER:** What this stems from is in the

1 CATI report the employee indicated that there
2 was an annual frequency on X-rays. The table
3 out of the technical basis document listed the
4 examination frequency as being annual, but
5 doses were only assessed for years when there
6 were medical records, actual records. And we
7 kind of felt that you have three pieces of
8 information and two of them say it's annual,
9 that you should assess it annually.

10 **MR. HINNEFELD:** Well, and in this particular
11 case, as you quote in your finding, the site
12 profile itself says that you can't count on
13 certain, up until like '85 or something, you
14 can't count on the medical file being complete
15 --

16 **MR. FARVER:** You're right.

17 **MR. HINNEFELD:** -- in terms of including all
18 the dose. So, yeah, we're dealing with this
19 now. So we do owe additional information
20 despite the fact that we've given this initial
21 response. We do need to provide updated
22 information based on what we learn.

23 **MR. FARVER:** 136.4, uranium material-type is
24 not claimant favorable or consistent with
25 technical basis. This has to do with uranium,

1 Type S or Type M.

2 **MR. GRIFFON:** Has this case been returned by
3 DOL for rework, Super-S question? I mean, it
4 seems like it would not be an issue, but...

5 **MR. SIEBERT:** Well, PER-21, which is Rocky
6 Flats DR method modifications, a different
7 PER, but, yes, it has been returned.

8 **MR. GRIFFON:** So that's for both neutron and
9 -- PER-21, what does that mean? What does
10 that cover? Just Rocky Flats overall?

11 **MR. HINNEFELD:** It's the cover all the
12 changes in Rocky Flats that occurred as the
13 SEC process was going along.

14 **DR. MAURO:** Are we on 136.4?

15 **MR. HINNEFELD:** We're actually getting
16 there. We were about to get to that one.

17 **DR. BRANCHE:** But you interrupted.

18 **MR. HINNEFELD:** We got to that one, and then
19 we asked the question has this one been
20 returned.

21 **DR. MAURO:** Okay, because I was reading here
22 while you were talking about the X-rays. Are
23 we on number four now?

24 **MR. HINNEFELD:** Now we're ready for 136.4.

25 **MR. FARVER:** Okay, 134.4 (sic) has to do

1 with Type S Uranium. When NIOSH did the
2 calculations, they assumed Type...

3 **MR. GRIFFON:** Type M, yeah.

4 **MR. FARVER:** I lost my spot.

5 **DR. MAURO:** You could have a lung dose
6 that's higher by assuming it's Type M. That's
7 a surprise to me.

8 **MR. SIEBERT:** Latency period.

9 **DR. MAURO:** Sure, has to do with the latency
10 period. Oh, between the time of the exposure
11 and the diagnosis?

12 **MR. SIEBERT:** Right.

13 **DR. MAURO:** Oh, how do you like that?

14 **MR. SIEBERT:** If diagnosis had been a lot
15 further in the future, Type S probably would
16 have been --

17 **MR. GRIFFON:** That's why it said Super S is
18 probably not going to be an issue. But I just
19 was curious whether it got sent back.

20 **MS. BRACKETT:** This stuff is not intuitive.

21 **MR. SIEBERT:** Whatever you think it is,
22 maybe it isn't either.

23 **DR. MAURO:** You can't make any assumptions.

24 **MR. SIEBERT:** But they were run side-by-
25 side.

1 **MR. FARVER:** Okay, let me get my, everything
2 in a row.

3 **MR. GRIFFON:** Are those two of the IMBA runs
4 that have been provided? You said side-by-
5 side they'd been run? Were those --

6 **MR. HINNEFELD:** Yes, I believe those are the
7 zip files I sent, I believe.

8 **MR. GRIFFON:** Those are the ones you sent,
9 right?

10 **MR. HINNEFELD:** Yeah, there are two of them
11 are IMBA files. There was one Excel file that
12 showed a comparison of the doses.

13 **DR. MAURO:** So did you know this when you
14 got into this or you just made up a number of
15 -- see, I would have just jumped right to the
16 Type S and made that error. But did you
17 suspect this might be, or did you just get
18 lucky and try a couple of them and see what...

19 **MR. SIEBERT:** Well, we don't get lucky. We
20 try them all. No, we learned early on in the
21 project that it's not intuitive so that's why
22 we have the dose reconstructors run them, run
23 all the possible and go with claimant
24 favorable.

25 **MR. FARVER:** Here's the catch. If you're

1 just using an intake period from 1969 to 1977
2 using Type S, it does fit. It also does give
3 you a larger dose. I can e-mail you --

4 **MS. BRACKETT:** As opposed to what?

5 **MR. FARVER:** As opposed to Type M for the
6 entire employment period.

7 **MS. BRACKETT:** Well, why would you stop it,
8 I mean, why would you choose that other one?

9 **MR. FARVER:** That I would have to go back
10 and look to see if he actually had any
11 positive results in that second -- I thought
12 what you did you divided it into two periods.

13 **MS. BRACKETT:** Did the MDA change over time?

14 **MR. FARVER:** That's what I was trying to
15 read. I'm pretty much just going by what was
16 written in the report. It says fitting the
17 uranium lung count and urine data to Type S U-
18 234 yields a chronic intake of 233 dpm per day
19 from 1969 to 1997, NIOSH's first intake
20 period.

21 **MR. GRIFFON:** 'Sixty-nine to '97?

22 **MR. FARVER:** To '77.

23 **MR. GRIFFON:** Oh, '77.

24 **MR. FARVER:** So that's why I was assuming
25 that NIOSH broke it down into two intake

1 periods. And when I did run that for that
2 time period and fit the data, the urine and
3 lung data, it did produce that 233.3 and did
4 come up with a larger dose.

5 **MR. SIEBERT:** But you're saying just fitting
6 the first portion.

7 **MR. FARVER:** I believe it also fits the
8 remaining data. I'm not sure there was
9 positive data.

10 **MR. GRIFFON:** What's the entire work period?
11 Is it, it goes beyond that I'm assuming?

12 **MR. FARVER:** And I can e-mail you the IMBA
13 run.

14 **MR. GRIFFON:** Yeah, maybe we should see
15 that. Let's just share IMBA files and look at
16 this. You'll e-mail that to the work group
17 and NIOSH.

18 **MS. MUNN:** Change in job title, John.
19 There's a place to account for that, too.

20 **MR. SIEBERT:** And this is based on MDA
21 changes.

22 **MS. MUNN:** Okay.

23 **MR. GRIFFON:** I think we can table that one,
24 right?

25 **MS. MUNN:** Yes.

1 **MR. FARVER:** Yes. 136.5, failure to
2 properly apply CATI information to uranium
3 assessment.

4 **MR. GRIFFON:** And what did the CATI, what
5 light did the CATI shed on this? I'm just
6 curious.

7 **MR. FARVER:** Umm.

8 **MR. GRIFFON:** So there was no work in 776.
9 It was 444. Is that part of it?

10 **MR. FARVER:** The CATI says the main fires at
11 the Rocky Flats plant occurred before the EE's
12 Rocky Flats plant employment. However, to
13 account for any small fires he may have been
14 involved in, the assumption of insoluble
15 material was assumed. I assume they were
16 referring to plutonium in that statement.
17 That was from the DR report.

18 From the CATI the employee worked in
19 the building that caught fire, 444. The
20 technical basis lists Building 444 as depleted
21 uranium and beryllium. So the assumption of
22 insoluble material referred to in the DR
23 report should be also referred to the uranium
24 one where they use class M instead of class S.

25 **MR. SIEBERT:** But which once again goes back

1 to point four that if we thought M was more
2 claimant favorable --

3 **MR. GRIFFON:** You'd stick with M.

4 **MR. HINNEFELD:** We'd use that M.

5 **MR. SIEBERT:** Even if insoluble was --

6 **MR. FARVER:** So there are, those two
7 findings are really kind of connected.

8 **MR. SIEBERT:** Right.

9 **MR. FARVER:** So I imagine once we resolve
10 four, five will go away.

11 **MR. GRIFFON:** 137.1. I think we're not
12 going to get through the entire matrix today,
13 but we're getting close. You know, we're
14 getting close. We have about a half hour
15 left.

16 **MR. FARVER:** On 137.1, unable to reproduce
17 missed photon dose for years 1977 to 1980.

18 **MR. GRIFFON:** Is this Paducah, this site?

19 **MR. FARVER:** This is, yes.

20 **MR. GRIFFON:** A lengthy response.

21 **MR. FARVER:** What it comes down to is, they
22 did follow OTIB-0017. So because the reviewer
23 was unable to figure it out -- I mean, they
24 did follow what they were supposed to do in
25 OTIB-0017 so that's okay.

1 **MR. GRIFFON:** SC&A agrees, okay.

2 **MR. FARVER:** 137.2, inappropriate LOD used
3 for missed photon dose. Is there some debate
4 going on about the proper LOD for Paducah,
5 Portsmouth for the photon doses that I'm not
6 aware of?

7 **MR. HINNEFELD:** I can't think of any.

8 **MR. FARVER:** Okay. As near as I could tell
9 everything was done according to OTIB-0017, so
10 I'm not going to say that the OTIB was
11 incorrect or correct. I'm saying they
12 followed the LOD that was in the OTIB. So
13 really, that one's okay.

14 **MR. GRIFFON:** Well --

15 **MR. FARVER:** In other words if you're
16 agreeing that the LODs are, there's no
17 question that those are correct, then I'm
18 fine. They followed the OTIB procedure, the
19 OTIB-0017 guidelines.

20 **MR. GRIFFON:** But how did you come to the
21 conclusion that it was an inappropriate LOD?

22 **MR. FARVER:** I didn't.

23 **MR. GRIFFON:** I thought it said
24 inappropriate LOD used for missed photon dose.

25 **MR. FARVER:** Yes, the reviewer did.

1 **MR. GRIFFON:** Oh, you didn't -- oh, okay.
2 Kathy?

3 **MS. BEHLING (by Telephone):** It wasn't me.
4 It wasn't me.

5 **MR. GRIFFON:** Hans?

6 **MS. BEHLING (by Telephone):** That's it.

7 **MR. GRIFFON:** Get him on the phone.

8 **MR. FARVER:** That's why I said I went back
9 to the OTIB to see if they followed what they
10 should have been done, and they did. Now the
11 reviewer just didn't figure that out that they
12 followed OTIB-0017. And that's why I asked if
13 there was a question about LOD.

14 **MR. GRIFFON:** But I mean, is there a root
15 concern that the LOD in TIB-0017 is
16 inappropriate. I mean, that's what I'm trying
17 to understand.

18 **MR. FARVER:** Not that I know of. The reason
19 I bring that up is I believe it's been brought
20 to my attention like for the shallow doses at
21 Portsmouth there's a question about what LOD
22 to use for shallow doses.

23 **MS. BEHLING (by Telephone):** I think we
24 actually have quite a few questions on the
25 shallow dose and the use of the film badges

1 and whether they properly accounted for the
2 shallow dose at Portsmouth and Paducah. But
3 those are site profile issues, and I don't
4 think they were incorporated into this dose
5 reconstruction.

6 **MR. FARVER:** Okay, because the way I was
7 reading this report the wording was it was
8 kind of strange, and it led me to believe that
9 maybe there was a question about the LOD being
10 incorrect, not using the printed number that,
11 they used the correct number, it's just
12 there's a question about the number being
13 correct.

14 **MS. BEHLING (by Telephone):** Yeah, I don't
15 believe that's the case in either issue.
16 We're really questioning the recorded doses,
17 shallow doses, for both those sites. I think
18 initially to be honest, OTIB-0017, when you
19 first read through it, is fairly complex, and
20 it is somewhat confusing until you get a
21 better understanding of what's being done.

22 **MR. GRIFFON:** So you think there is
23 agreement then?

24 **MR. FARVER:** Yes.

25 **DR. MAURO:** I've got a question though. Now

1 here we have a case where, let's say, they're
2 following correctly their procedures. But
3 let's say we've got a serious problem with the
4 site profile for the OTIB-0017. What do we do
5 -- and I know that's going to be addressed.
6 There's probably a procedure review group and
7 also, of course --

8 **MR. GRIFFON:** Yeah, but we're not just doing
9 a procedures review and so --

10 **DR. MAURO:** -- but I'm saying you will, so -
11 -

12 **MR. GRIFFON:** -- yeah, and I think I know
13 where you're going.

14 **DR. MAURO:** -- so what do you do about this?
15 What do you do about this? The fact is I have
16 a problem with the way in which shallow dose
17 is calculated at these enrichment facilities.
18 But right now we're accepting this dose
19 reconstruction as if it's, we can believe it.

20 **MR. GRIFFON:** Well, I would defer -- if this
21 is a -- yeah, that's a good question. I mean,
22 I would tend to defer that to the site profile
23 discussion.

24 **DR. MAURO:** Oh, all right.

25 **MR. GRIFFON:** I wouldn't want to lose it.

1 **MR. SIEBERT:** He followed the steps and
2 procedures in place at the time.

3 **MR. FARVER:** John, what we're starting to do
4 is --

5 **MR. GRIFFON:** But that's sort of a
6 procedures review approach. We're saying did
7 you get it right?

8 **DR. MAURO:** I mean, this has come up time
9 and again.

10 **MR. FARVER:** That's been an issue at
11 Portsmouth, I know, correct?

12 **DR. MAURO:** Yes, correct.

13 **MR. FARVER:** And what we've started to do in
14 our reports is add findings from the site
15 profiles, which I believe that is one.

16 **DR. MAURO:** Yes, it is.

17 **MR. FARVER:** So it would fall under and be
18 in the report, but now how we handle those
19 findings is another question.

20 **DR. MAURO:** Well, that's for the tracking
21 system.

22 **MR. GRIFFON:** Well, that's why I asked if
23 you were worried about the root number, the
24 root LOD in this situation. Is there still
25 concerns about that for Paducah?

1 **MR. FARVER:** That's why I asked.

2 **DR. MAURO:** No, but my concern is not with
3 the LOD. It has to do with just the way in
4 which you -- in other words is it possible
5 that this person could have had ^ dose or
6 breast dose but that was not captured by the
7 film badge because of geometry issues, because
8 of the positive material.

9 We talked about this material. You
10 had mentioned to me. We talked about it
11 before. Not uncommon for especially these
12 sites for uranium to deposit on a person's
13 neck and there's sweat, and it goes right down
14 the collar and accumulates in the axilla. In
15 other words there are all these ways in which
16 you can get localized, relatively high
17 exposures.

18 But that's not -- right now, I guess,
19 we're in a discussion with NIOSH on this
20 matter in how to deal with that scenario. And
21 now given that, eventually we'll resolve that,
22 but I think it goes toward this case. What do
23 we do about this case? In other words, or
24 this issue for this particular case. How do
25 we track that? Do we track it?

1 **MR. GRIFFON:** But I'm asking does it or does
2 it not go toward this finding? Is it linked
3 to this particular finding?

4 **DR. MAURO:** I don't think you would even
5 have this finding in here. I mean, it should
6 be.

7 **MR. GRIFFON:** That's what I'm saying, it's
8 not related to this finding necessarily.

9 **DR. MAURO:** No.

10 **MR. GRIFFON:** If it were I'd say you have to
11 track it and transfer it to a site profile
12 review, and until it's resolved there, you
13 can't resolve -- yeah, that's how we've been
14 handling it.

15 Is that right, Stu?

16 **MR. HINNEFELD:** Yeah, I would just say that
17 it would be resolved, I think, presumably it
18 will eventually be resolved, whatever that
19 resolution is. If that's different than what
20 has been done up to that time, then the cases
21 would have to be pulled out and reconsidered
22 at that time. As I understand it, that's not
23 this issue here.

24 **MR. GRIFFON:** That's not this issue. That's
25 what I'm trying to get at. I don't think --

1 **DR. MAURO:** It's important that what I'm
2 hearing is let's say we have a case in front
3 of us that's four or five, six, seven issues,
4 and we're going through them, but some of the
5 issues that are in the site profile review
6 don't make it here, just don't make it here
7 for whatever reason. That's okay because we
8 will catch it anyway. And if we do catch it
9 over there, it will find its way back here
10 through a PER process.

11 **MR. HINNEFELD:** Yeah, and if you try to drag
12 those in that sort of muddies the dose
13 reconstruction.

14 **DR. MAURO:** That helps me out.

15 **MR. FARVER:** 137.3, NIOSH failed to consider
16 missed neutron dose. Apparently, the employee
17 was sandblasted cylinders in the cylinder
18 yard, and there is a Section 6.5.3 of the
19 technical basis that says dose reconstructors
20 should add a neutron component to annual dose
21 of individuals who worked in the cylinder yard
22 before 1998. However, careful consideration
23 should be given to work history. In general,
24 only workers who were near cylinders for
25 extended periods have the potential for

1 neutron exposure.

2 So the question becomes how long did
3 this guy work in the cylinder yard, how many
4 cylinders did he blast, and should we assess a
5 neutron dose? And as NIOSH points out, the
6 application is based on the judgment of the
7 dose reconstructor, and it's not clear how
8 much time was spent in the cylinder yard. And
9 due to the uncertainty, that uncertainty and
10 the fact that the neutron dose will not likely
11 affect the claim, neutron dose should not be
12 included.

13 I guess I feel the other way around,
14 that you should go ahead and include it even
15 though it's not going to affect the claim. If
16 there's a possibility that, well, it's
17 documented he worked in the cylinder yard, and
18 your technical basis says if people worked in
19 the cylinder yard you should consider this. I
20 would add neutron dose.

21 **MR. HINNEFELD:** So you say it should be
22 included.

23 **MR. FARVER:** I do. I think it should.

24 **MR. HINNEFELD:** So do we.

25 **MR. SIEBERT:** There's no "not" there.

1 **MR. HINNEFELD:** There's no "not" there.

2 **MR. FARVER:** I had them put a "not" in
3 there.

4 **MS. MUNN:** Yeah, it's as it should be.

5 **MR. FARVER:** Oh, well, I'll find something
6 else to argue with you about. Never mind.

7 **MR. HINNEFELD:** Just a personality trait.

8 **MR. FARVER:** Come on, I'm going to argue.

9 **MR. HINNEFELD:** Well, I mean, ultimately we
10 probably owe, if we can get a resolution of
11 all these things, just go ahead and put it in
12 there and demonstrate what the change in the
13 case is. I mean, that would be --

14 **MR. FARVER:** Never mind, I'll get you on the
15 next one.

16 137.4, NIOSH failed to assess shallow
17 dose from potential exposure to thorium and TC
18 scanned clothing contamination events. The
19 employee worked in C-400 Building where TC-99
20 recovery operations were performed as well as
21 a couple other buildings, C-340, C-410 and C-
22 420, which had greatest potential for things
23 like thorium.

24 **MR. GRIFFON:** Is this your shallow dose?

25 **DR. MAURO:** Yes, it is.

1 **MR. GRIFFON:** It sure is. So here we go.
2 What if we transferred this to the site
3 profile review team?

4 **DR. MAURO:** That's where you're going to go.

5 **MR. GRIFFON:** Is there a site profile review
6 work group for Paducah?

7 **MS. BRACKETT:** For Paducah? No.

8 **DR. MAURO:** We haven't opened one up yet.

9 **MR. GRIFFON:** Oh, so we can't defer it to
10 that work group.

11 **DR. MAURO:** But there is a review of OTIB-
12 0017, which is silent on this, and it's on the
13 list.

14 **MR. GRIFFON:** What is it?

15 **DR. MAURO:** OTIB-0017 is on the list which
16 deals with this issue.

17 **MS. MUNN:** Yes, it is on the list.

18 **DR. MAURO:** It's on the list, so we'll get
19 to it some way or the other.

20 **MR. FARVER:** Well, I have this listed as
21 open. I really didn't --

22 **MR. GRIFFON:** But is OTIB-0017 used -- all
23 kidding aside, is OTIB-0017 -- I mean, because
24 in this it references the Paducah site profile
25 section. It doesn't really reference TIB-

1 0017. Is OTIB-0017 used across different
2 sites to assess this issue or is it a site-
3 specific kind of...

4 **MR. FARVER:** No, I think this finding has
5 more to do with the work location and the
6 nuclides, and OTIB-0017 was how you deal with
7 shallow dose readings on the dosimeter.

8 **MR. GRIFFON:** Right. But even the shallow
9 dose readings on the dosimeter --

10 **DR. MAURO:** Yes, it's silent on this other
11 matter.

12 **MR. FARVER:** Correct.

13 **DR. MAURO:** That's the problem with -0017;
14 it's silent on contamination problems.

15 **MR. GRIFFON:** Okay. So we have to deal with
16 it somewhere, either here or -- it's not going
17 to be picked up in TIB-0017 necessarily, the
18 issue you're talking about.

19 **DR. MAURO:** Well, I've already raised it.
20 When I did my review of TIB-0017, I put that
21 in. It was more of a question. Did you
22 deliberately not address this. In other words
23 have you deliberately constrained TIB-0017 to
24 only deal with beta exposure at a distance and
25 not consider...

1 **MR. GRIFFON:** Yeah, but it's at least being
2 partially addressed in TIB-0017 in the
3 Procedures work group. I'm not sure what else
4 to say here.

5 **DR. MAURO:** And it's definitely in the site
6 profile but you haven't opened it up yet.

7 **MR. GRIFFON:** The site profile work group,
8 right. We'll leave it open on this
9 Subcommittee as well for now, but --

10 **DR. MAURO:** It's also being addressed at the
11 Nevada Test Site.

12 **MR. FARVER:** 137.5, inappropriate surrogate
13 organ used for the skin of the left forearm,
14 and this has to do with X-rays, medical X-
15 rays. So there really is no organ for the
16 skin of the left forearm, the surrogate organ,
17 the breast, was used, and SC&A believes a more
18 appropriate surrogate organ for the left
19 forearm is the stomach which is more claimant
20 favorable.

21 NIOSH responds either the breast or
22 the stomach could be considered an appropriate
23 surrogate organ. Surrogate organ selection
24 for calculating dose for medical X-ray exams
25 is not prescribed by available guidance. It

1 is left to the dose reconstructor's judgment.
2 I'd suggest developing some guidance on how to
3 select surrogate organs.

4 **MS. MUNN:** Why did the reviewer feel that
5 the stomach was more appropriate than the
6 breast?

7 **MR. FARVER:** Probably because it's down like
8 this, and if you're on the left forearm, it's
9 probably more in line than up here. That'd be
10 my guess.

11 **MS. MUNN:** I guess I could make some
12 arguments in --

13 **DR. MAURO:** -- facing the film, right?

14 **MS. MUNN:** Yeah.

15 **MR. FARVER:** And it gives a slightly higher
16 organ dose. In other words if you used the
17 breast it's 14 millirem. If you use the
18 stomach, it's 20 millirem.

19 **MR. GRIFFON:** So it's more --

20 **MR. FARVER:** Well, actually 200 millirem to
21 140 millirem. So it's more claimant favorable
22 to use the stomach than it is breast.

23 **MS. MUNN:** It really sounds like a judgment
24 call to me.

25 **MR. GRIFFON:** And I guess if you have --

1 what was the basis of the breast being chosen,
2 Stu? Do you have any --

3 **MR. HINNEFELD:** No, I don't know.

4 **MR. CLAWSON:** That comes up that's the
5 choice of the --

6 **MR. HINNEFELD:** You want something in
7 proximity to the beam similar to your target
8 like the stomach is, too. So you want --

9 **MR. GRIFFON:** But they could be working --

10 **MR. HINNEFELD:** There's something to be said
11 for everybody doing it the same, and the
12 guidance, and saying here you go. This is
13 what you do. If it's here, if it's in your
14 upper arm, you know, use the breast. If it's
15 your lower arm, use the stomach or whatever.
16 They even talk about maybe other organs
17 outside the beam as what's the appropriate
18 surrogate.

19 **DR. BRANCHE:** Are you saying that there's no
20 algorithm?

21 **MR. HINNEFELD:** I'm saying that it may not
22 be right. Maybe there should be a
23 specifically prescribed surrogate --

24 **MR. FARVER:** This comes up on a lot of skin
25 cancers where you'll see skin cancers on the

1 neck, back, shoulder, and they just
2 approximate it.

3 **MS. MUNN:** We're talking X-ray exams here,
4 right?

5 **MR. HINNEFELD:** Yeah.

6 **MS. MUNN:** So where was the primary beam?

7 **MR. HINNEFELD:** It was PHF so it would have
8 been from behind the shield.

9 **MS. MUNN:** The chest, and therefore,
10 wouldn't the breast have been closer
11 regardless of --

12 **MR. HINNEFELD:** Well, I don't know what the
13 DCFs are. Theoretically, it would seem to me
14 it would be, too, but you have the ribs back
15 there so you may have been shielded, the
16 breasts may have be shielded and so that might
17 be why the DCF was lower. I mean, there's a
18 table of DCFs. There's one for the breast.
19 There's one for the stomach. Apparently, the
20 stomach is not --

21 **MR. GRIFFON:** The stomach is higher, yeah,
22 obviously.

23 **MR. HINNEFELD:** The stomach is higher.

24 **MR. GRIFFON:** Yeah.

25 **MR. HINNEFELD:** Now, I don't know why that

1 is unless maybe the breast is shielded by the
2 ribs or something.

3 **MR. SIEBERT:** This might be addressed in
4 Attachment C in the update to Procedure-61.

5 **MR. HINNEFELD:** We may have some now.

6 **MR. SIEBERT:** Which was just January of this
7 year.

8 **MR. GRIFFON:** Is that PROC-61?

9 **MR. SIEBERT:** Procedure 61.

10 **MR. GRIFFON:** Well, I put a note down to
11 check that. Do you think that's the right
12 one, Scott?

13 **MR. HINNEFELD:** There's some guidance here.
14 I think maybe there may need to be some more.

15 **MR. GRIFFON:** Yeah, maybe you can look at
16 that and I put down NIOSH is considering
17 developing of guidance and then see PROC-61,
18 Attachment C, as a starting point or maybe
19 that says it all.

20 **MR. FARVER:** 137.6, reviewer questions
21 appropriateness of solubility assumptions.
22 This has to do with the solubility of uranium.
23 Dose reconstructor could have selected Type F
24 or Type M. Based on the work locations they
25 chose Type F, and this is not the most

1 claimant favorable type.

2 NIOSH's response, solubility type
3 should have been evaluated and selection made
4 by ^ the bioassay data or to be claimant
5 favorable, and the basis should be provided in
6 the report and the appropriate file should be
7 maintained to demonstrate the decision. Well,
8 basis wasn't in the DR and the files were not
9 included. I couldn't find them.

10 **DR. MAURO:** And you're saying your
11 calculations, it is not correct.

12 **MR. FARVER:** Well, there's, when the
13 reviewer looked at this they determined that
14 Type M would have been more claimant
15 favorable. And what I'm saying is you can't
16 tell from the files because the files weren't
17 included, and there was no basis described in
18 the dose report.

19 **MS. MUNN:** Now, was this done prior to the
20 time that we began routinely running all
21 potential solubility tests?

22 **MR. HINNEFELD:** I don't know. We've been
23 doing that for awhile.

24 **DR. MAURO:** According to your answer it
25 looks like you looked at the bioassay data to

1 see which chemical form best fit the bioassay
2 data, not so much what would give you the
3 highest dose. In other words, am I correct?
4 The way I read these words that, no, you
5 aren't looking for the chemical form that
6 would give you the highest dose, you were
7 looking at chemical forms that best fit the
8 bioassay data and then use that chemical form
9 to do the dose reconstruction.

10 **MS. BRACKETT:** But it says, or to be
11 claimant favorable.

12 **DR. MAURO:** Or to be claimant favorable.

13 **MS. BRACKETT:** It looks like somebody just
14 wrote a generic answer.

15 **MR. HINNEFELD:** Yeah, I don't know that
16 we've got a real specific answer here.

17 **DR. MAURO:** That's sort of like --

18 **MR. GRIFFON:** So NIOSH can follow up on this
19 one. Was this a POC on this? Do you have a
20 POC on this?

21 **MS. MUNN:** It's hard for me to tell reading
22 the response whether you're saying as best we
23 know, we looked at everything. Or whether
24 you're saying it should have been done, and we
25 don't know whether it was done or not. We

1 can't tell from that.

2 **MS. BEHLING (by Telephone):** POC is 43
3 percent.

4 **MR. GRIFFON:** Yeah, we got it, thanks,
5 Kathy.

6 **MR. FARVER:** Three skins.

7 **MR. GRIFFON:** Three skin cancers.

8 **MS. MUNN:** Thanks, Kathy. Sounds like we
9 need a more descriptive response from NIOSH.

10 **MR. GRIFFON:** That action's going back to
11 NIOSH.

12 137.7, we're almost done here. We'll
13 finish up 137, then we're going to cut it off.

14 **MR. FARVER:** NIOSH failed to calculate
15 internal doses from fission products. This
16 has to do with the fact the employee was
17 monitored for fission products as shown in the
18 records, but they did not assess doses for
19 fission products. And you can read NIOSH's
20 response. And in this case the employee was
21 monitored for Strontium-90, tritium, Tech-99 -

22 -

23 **MR. GRIFFON:** Cesium.

24 **MR. FARVER:** -- I think a few other things,
25 cesium.

1 **MR. GRIFFON:** For some reason.

2 **MR. FARVER:** If you look at the bioassay
3 data, those were his results there.

4 **MR. HINNEFELD:** Well, I can't talk to the in
5 vitro results because I don't know about that.
6 But you refer to an in vivo result, ^ on the
7 cesium printout ^.

8 **MR. FARVER:** Actually, I was looking at the
9 doc-bio file for this which lists their
10 bioassay data, in vitro, in vivo and
11 everything, incidents.

12 **MR. HINNEFELD:** Well, the in vivo data that
13 they listed Cesium-137 or something, but he
14 said listed both?

15 **MR. FARVER:** Well, I know he was monitored
16 for in vitro for Strontium-90, tritium and
17 Tech-99.

18 **MR. HINNEFELD:** I understand those. I don't
19 know why it would have been monitored either.

20 **MR. FARVER:** If I had to guess, it looks
21 like it was some experimental program that was
22 done in 2000, like maybe they were just
23 sampling people and then analyzing for
24 everything. I don't know.

25 **MR. GRIFFON:** This is current, 2000.

1 **MR. FARVER:** I believe it was later on.

2 **MS. MUNN:** What was the employment period
3 for this claimant?

4 **MR. SIEBERT:** 'Seventy-four to present.

5 **MS. MUNN:** 'Seventy-four to what?

6 **MR. SIEBERT:** Present. If it's in 2000, all
7 cancers were diagnosed by '98.

8 **MR. HINNEFELD:** It's an issue of whether he
9 was exposed or not. Do you suppose they did a
10 series of sampling in response to the issue of
11 recycled uranium at Paducah? That you would
12 think would have occurred before 2000,
13 wouldn't it?

14 **MS. BRACKETT:** I know it was before 2000.

15 **MR. HINNEFELD:** Well, I don't know.

16 **MR. FARVER:** But if he was monitored, it
17 should be considered, and your consideration
18 might be, well, it falls outside the diagnosis
19 date or something like that.

20 **MR. HINNEFELD:** Well, it would be nice to
21 know a little bit more about it, that series
22 of in vitro sampling. What I was going to say
23 about in vivo data -- now, did Paducah use the
24 portable counter or not?

25 **MS. BRACKETT:** I thought they used a Y-12.

1 **MR. HINNEFELD:** The Y-12 portable?

2 **MR. FARVER:** Well, that late they did, but
3 they also had the portable up there sometimes.

4 **MS. BRACKETT:** Was the portable Helgeson or
5 which --

6 **MR. FARVER:** I think it was just a sodium
7 iodide, wasn't it?

8 **MR. HINNEFELD:** I think it was the Y-12
9 mobile. I think that went to Paducah. I
10 think that went to Paducah and Fernald and
11 Portsmouth.

12 **MR. GRIFFON:** I know I saw the Y-12 mobile.

13 **MR. HINNEFELD:** Well, the Y-12 mobile
14 printed out a cesium result and printed out
15 results of several photon-emitting nuclides,
16 not because of exposure.

17 **MS. BRACKETT:** Right, it doesn't explain the
18 ^ and tritium though.

19 **MR. HINNEFELD:** It doesn't explain those at
20 all. I was just talking about that. And if
21 there was an in vitro for cesium, I certainly
22 can't explain that. But when you see an in
23 vivo for some of these oddball photon-
24 emitters, the mobile printer just printed
25 those out. It doesn't mean that anybody was

1 exposed or being monitored for them.

2 **MR. FARVER:** Well, I mean, if the results
3 are there.

4 **MR. HINNEFELD:** Well, the in vitro results
5 are very puzzling, and so I think it deserves
6 a little better understanding of why the
7 results --

8 **MR. FARVER:** And in general, I mean, if the
9 results are there, I think it should be
10 assessed or acknowledged anyway.

11 **MR. HINNEFELD:** Yes.

12 **MS. BRACKETT:** We could contact the site and
13 ask them --

14 **MR. HINNEFELD:** Might need to. What were
15 you guys doing?

16 **MS. BRACKETT:** I think Kenny Duncan's still
17 there, isn't he?

18 **MR. FARVER:** As I said, I don't know. I
19 didn't hear anything different. Just give
20 Kenny a call. He'll remember.

21 137.8, NIOSH failed --

22 **DR. BRANCHE:** I thought we were just talking
23 at 137, what we just did.

24 **MR. GRIFFON:** No, we're stopping at the end
25 of 137, Christine.

1 **MR. FARVER:** 137.8, NIOSH failed to properly
2 address potential radiological incidents.

3 **MR. GRIFFON:** So in the second paragraph
4 there you say that an evaluation of potential
5 skin contamination incidents should have been
6 included. Did you do any assessment of that?
7 I mean, this is not real close, but 43
8 percent, you know, and it is skin cancers.

9 **MR. FARVER:** Yes, and then what this comes
10 down to is in the CATI report the employee
11 indicated he was exposed to TC-99 and in vitro
12 monitoring was conducted for TC-99 so there
13 was some potential. And also, the technical
14 basis document says some skin contamination
15 events involving TC-99 could have occurred
16 without being detected at the time. That's
17 what the basis for the finding is.

18 **MR. GRIFFON:** I have no doubt about that,
19 especially if he goes back to '74.

20 **MR. HINNEFELD:** There's a whole series of
21 137. There's a whole series of these 137
22 findings where ^ is not complete. And so we
23 need to go back and provide a more complete
24 answer.

25 **DR. BRANCHE:** Are we done?

1 **MR. GRIFFON:** Yes. Just follow up again.

2 **MR. HINNEFELD:** Well, just in 137 in
3 general, NIOSH is to provide better, more
4 complete response to several of the 137 files.

5 **MR. GRIFFON:** Since we didn't finish, we're
6 going to need time on the agenda in St. Louis
7 -- no, just kidding. There is no time on the
8 agenda in St. Louis. Wanda's taking it all.
9 Any time we have for R and R, Wanda's filled
10 it with a work group meeting.

11 **DR. BRANCHE:** The public comment section is
12 very important so I wouldn't joke about that.

13 **MR. GRIFFON:** I know.

14 **MS. MUNN:** We can always slide over into
15 Friday.

16 **MR. GRIFFON:** I think we're going to call it
17 quits today. I'm not going to miss this
18 flight tonight.

19 **DR. BRANCHE:** But do you want to go ahead
20 and schedule when you want this group to meet
21 next?

22 **MR. GRIFFON:** I think we'll do that in St.
23 Louis if that's okay.

24 **DR. BRANCHE:** That's up to you.

25 **MR. GRIFFON:** We'll figure out, yeah, I'll

1 do a report in St. Louis and update on where
2 we're at, and then we can look at our
3 calendars and figure out when best it makes
4 sense to meet again. But this format's best,
5 I think, for everybody. It's better than
6 doing it in front of the Board meeting because
7 we get more of the detailed stuff done this
8 way.

9 **DR. BRANCHE:** I think you cover a lot more
10 territory.

11 **MR. GRIFFON:** Exactly, yeah.

12 **DR. BRANCHE:** Painful though it is I will
13 admit, but you cover a lot more territory.

14 **MR. GRIFFON:** Enlightening is what we call
15 it, not painful. Okay, having said that I
16 think we're meeting adjourned, right?
17 Anything else?

18 **MR. HINNEFELD:** Oh, I have one thing to add.
19 The eighth set report is out. So it's either
20 time for an eighth set matrix or a database.
21 Are we going to go with a matrix, a course
22 file matrix?

23 **DR. MAURO:** Kathy, you still with us?

24 **MS. BEHLING (by Telephone):** I'm still here.
25 Yeah, I did put out a matrix, but I just sent

1 it to the Subcommittee at the moment. But it
2 seems to me that we should have the database
3 in place, and we could probably start on the
4 database with the eighth set.

5 **MR. HINNEFELD:** I'm only asking whether, if
6 there's a matrix, we'll work from the matrix.

7 **DR. MAURO:** Both, yeah, both, that's what
8 she said.

9 **MS. MUNN:** The matrix is out.

10 **DR. MAURO:** Yeah, you have your choice.

11 **MR. HINNEFELD:** Okay, could you send us the
12 matrix, too? Send it to me?

13 **MS. BEHLING (by Telephone):** Yes.

14 **MR. GRIFFON:** Yeah, send the matrix --

15 **DR. BRANCHE:** And me, too, please.

16 **MS. ADAMS:** Hey, Kathy?

17 **MS. BEHLING (by Telephone):** Yes.

18 **MS. ADAMS:** This is Nancy. When is a good
19 opportunity for us to get together and talk
20 about the database for this in St. Louis?

21 **MS. BEHLING (by Telephone):** I am having,
22 I've done some testing, and I'm having Don
23 make just a few changes. And I will also
24 incorporate this PER issue we talked about
25 today. And as soon as he's able to do that, I

1 will give you a call. Is that okay?

2 **MS. ADAMS:** That's great.

3 **MS. BEHLING (by Telephone):** It should be a
4 few days.

5 **MR. GRIFFON:** Kathy, are you going to be in
6 St. Louis?

7 **MS. BEHLING (by Telephone):** I'm not
8 planning on it.

9 **MR. GRIFFON:** Okay.

10 **DR. BRANCHE:** So that answers my question to
11 Wanda then.

12 **MR. GRIFFON:** Because I was thinking the
13 three of us could meet there, but --

14 **DR. BRANCHE:** Well, Wanda wants her there,
15 too, so you might be able to convince her in
16 another separate forum. We're going to
17 adjourn this call.

18 **MR. GRIFFON:** Okay, thanks everyone.

19 **DR. BRANCHE:** Thanks all of you.

20 (Whereupon, the meeting was adjourned at
21 5:15 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 June 10, 2008; 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 18th day of March, 2009.

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