

1 here.

2 **MS. ROBERTSON-DEMERS:** -- and demonstrate.

3 **DR. ULSH:** Well, what would you suggest beyond
4 what we've already done, Kathy? I mean we've
5 pulled the dosimetry results and compared it
6 for the time period in question.

7 **MS. ROBERTSON-DEMERS:** Well, a lot of them are
8 complaining about the survey --

9 **DR. ULSH:** Surveys?

10 **MS. ROBERTSON-DEMERS:** -- data and how it
11 doesn't match the survey data.

12 **DR. ULSH:** Well, I think I've already addressed
13 why you might see that kind of a thing.

14 **MS. ROBERTSON-DEMERS:** Well, and I guess
15 another reason why it's probably worth our time
16 is that we have the same operations down at
17 LANL and I'm hearing exactly the same thing.

18 **MR. GRIFFON:** You know, I -- I -- just looking
19 at this, Brant, almost like -- I mean I grant
20 you that this certain rad control tech could
21 have been going in and out and taking spot
22 measurements, but even if he's in there for
23 seconds, I mean you're looking at about 133
24 millirem per minute -- if you -- if we say that
25 his eight R per hour is accurate here in his

1 allegation -- his or her allegation --

2 **DR. ULSH:** At the -- at a certain point in that
3 work area.

4 **MR. GRIFFON:** Right, so if he's in there for
5 seconds, he's probably getting more than ten
6 millirem and you don't even see ten millirem on
7 his --

8 **DR. ULSH:** Keep in mind -- Keep in mind the
9 limit of detection on these dosimeters. If
10 you're talking about a radiation environment
11 that high, he's going to be on a pretty
12 frequent badge exchange cycle, so he's going to
13 be exchanging his badge very frequently, and
14 especially for NTA films, the limit of -- lower
15 limit of detection is 50 -- I'll go with Hans's
16 number of 50, somewhere in that neighborhood.
17 It's --

18 **DR. BEHLING:** That's -- that's being very good.

19 **DR. ULSH:** And you also have to keep in mind
20 that --

21 **MR. GRIFFON:** Oh, that's right, these are
22 quarterly roll-ups.

23 **DR. ULSH:** These are quarterly roll-ups, right.

24 **MR. GRIFFON:** Thinking about that.

25 **DR. BEHLING:** Were these people being monitored

1 by -- by self-reading pocket dosimeters, which
2 could have served as a surrogate --

3 **MR. GRIFFON:** Well, that's what -- that's what
4 Kathy's talking about --

5 **DR. BEHLING:** -- when you have a film badge
6 that fails or a TLD that fails at the end of a
7 readout? I mean that's what's usually done is
8 you default to pocket dosimeters, realizing
9 that's the best surrogate you have.

10 **DR. ULSH:** Yes. Well, I don't want to speak
11 out of school here, Hans, 'cause I can't swear
12 to you that in '82 or '83 they were using
13 pocket dosimeters. Certainly at some time
14 periods at Rocky Flats they were using pocket
15 dosimeters, that's true.

16 **DR. BEHLING:** Well, they were using them
17 probably still today. That's always been part
18 of the process is to assess people on a daily
19 basis, especially high rad areas, as opposed to
20 changing out --

21 **MR. GIBSON:** Could you speak up a little bit,
22 please?

23 **DR. BEHLING:** As opposed to changing film
24 badges or TLDs on a daily basis, which is the
25 only other way of tracking the -- the exposure

1 during a wear cycle, you usually track it by
2 use of pocket dosimeters. And that's still
3 being done today. It was certainly done
4 throughout the '50s and '60s when film badges
5 were used. And whenever you have a film badge
6 that -- or a TLD chip that malfunctions, such
7 as the case with the issue of the oil or the
8 hair, you then default to a pocket dosimeter
9 cumulative readout for that wear period and
10 then use that as your surrogate method. On the
11 same issue when you just ment-- talked about
12 the issue of NTA film being fogged at as little
13 as 500 millirem exposure from low energy
14 photons, again I would assume that NTA film was
15 used for measuring neutrons, but concurrently
16 they were also monitored by means of a beta-
17 gamma dosimeter, which means that you should at
18 least be able to support the issue that the
19 fogging was truly due to photon, which in the
20 absence of a measurement on the beta-gamma
21 dosimeter would not necessarily then serve as
22 your justification for saying must be due to
23 photon exposure therefore you get zero neutron.
24 I think these are all catch-22 situations that
25 you can look at and verify whether the

1 assumptions and default assumptions that were
2 being used are in fact supported.

3 **DR. ULSH:** Well, certainly, Hans, what you said
4 about, you know, cross-checking NTA films that
5 might have been gamma-fogged with the beta-
6 gamma dosimeters themselves to see if it's
7 logically consistent, yeah, that makes good
8 sense and they probably did it. I can't -- I
9 haven't specifically looked to see, on this
10 particular instance, whether they did that.
11 I'm not even sure that you would see that in
12 the file.

13 **DR. BEHLING:** But for instance, what Kathy was
14 reading did not allude to that as the solution
15 of -- of assigning a value. In other words,
16 what she read to me did not smack of a guidance
17 that says hey, check the -- the -- the beta-
18 gamma dosimeter and if it's more than 500 from
19 americium, then there's justification for
20 coming to that conclusion. But in the absence
21 of that, I see no justification for saying just
22 assign a zero dose now.

23 **DR. ULSH:** I haven't -- I can't really comment
24 at length on a memorandum I haven't seen.

25 **MR. GRIFFON:** Right.

1 **DR. ULSH:** I don't know. I'd have to look at
2 it.

3 **MR. GRIFFON:** To get back to this case, I -- I
4 think if -- I don't know that we have secondary
5 dosimetry data that goes --

6 **DR. ULSH:** I can't say one way or the other. I
7 would say to you, though, that if you had a
8 dosimeter for which you were able -- you know,
9 that there's no problem with, that you got a
10 reading from, and you had a pocket ionization
11 chamber and the two disagreed -- you know the
12 limitations of pocket ionization chambers; if
13 you bang them, they go high -- I would trust
14 the TLD, absent any reason to suspect it.

15 **MR. GRIFFON:** It seems to me -- here you're in
16 the '80s, too. I'm not sure we're dealing with
17 50 millirem --

18 **DR. BEHLING:** Well, TLDs in the '80s should
19 have had a sensitivity level of 10, 15.

20 **DR. ULSH:** Right, right. The numbers may
21 change over time, but that --

22 **MR. GRIFFON:** I'm not sure that -- you know,
23 what this person -- I think I'd have to go back
24 sort of to what Mike's saying. This person is
25 a rad control tech, you know.

1 **DR. ULSH:** Yes.

2 **MR. GRIFFON:** If you -- if you believe that he
3 was even spot-measuring eight R per hour, you
4 think he'd have higher than zeroes during that
5 job. I mean even if you were exchanging your
6 badges weekly.

7 **MS. MUNN:** If you had a consistent field of
8 eight R, but it says --

9 **MR. GRIFFON:** No, even spot measurements. I
10 mean it takes more than a few seconds. You're
11 going to take -- you have to go in and make a
12 measurement, you're there for 15 seconds, 20
13 seconds, you're getting a little dose.

14 **MS. MUNN:** If he's the one who's making the
15 eight R measurement, yeah.

16 **MR. GRIFFON:** That's right.

17 **DR. ULSH:** Okay. This was an issue in the
18 affidavit. We're prepared a response, but it
19 sounds like there's still some reservations.
20 What further would you like us to do on this?

21 **MR. GRIFFON:** That's the hard part. Right?

22 **DR. ULSH:** I mean I'm open to suggestion. If
23 there's something else you'd like to see, let
24 me know what it is and I'll try to get it, but
25 --

1 **MR. GRIFFON:** I think part of what I've been
2 trying to grapple with all along is -- is to
3 look at some of these in aggregate, you know,
4 that -- that if we start to see a number of
5 these that -- that --

6 **DR. ULSH:** Some of -- we might be going down
7 that road a little bit on the safety concerns
8 issue.

9 **MR. GRIFFON:** Right.

10 **DR. ULSH:** Is that somewhere else on the
11 matrix? I don't recall.

12 **MR. GRIFFON:** I think --

13 **MR. FITZGERALD:** It is.

14 **DR. ULSH:** Okay. I'll hold details till later,
15 but there were -- I looked through personally a
16 spreadsheet of about 5,000 safety concern
17 document, looked -- I think this is probably
18 similar to what SC&A did to identify the
19 original seven of interest. I read the short
20 description and went with it. And out of that
21 -- those 5,000, I identified a few tens, maybe
22 up to 30, I don't remember exactly how many,
23 that the title suggested we should look at
24 further. And so I think you're right, Mark, if
25 we see a consistent pattern in these safety

1 concerns, that might be something that we would
2 -- certainly something --

3 **MR. GRIFFON:** And the other thing --

4 **DR. ULSH:** -- (unintelligible).

5 **MR. GRIFFON:** -- for this individual I'd be
6 interested in seeing is before and after this
7 was he getting measurements and here he's --
8 he's putting testimony out or -- or an
9 affidavit, that says this was a high job I
10 remember particularly where I think I should
11 have -- you know, I should have higher readings
12 in my records. If he had higher readings
13 before and after, then all these sort of near-
14 zero readings in the middle, I'd be saying --

15 **DR. ULSH:** Well, keep in mind what the affi--
16 keep in mind --

17 **MR. GRIFFON:** If he had zeroes all along, then
18 you could say well, --

19 **DR. ULSH:** Keep in mind what the affidavit
20 said, though, Mark. In 1982 and '83 loading
21 nuclear material into the stacker retriever.
22 We don't know whether he was doing that job --
23 that same job before and after.

24 **MR. GRIFFON:** Right, we don't.

25 **DR. ULSH:** If he was, then you're right, if you

1 saw --

2 **MR. GRIFFON:** But -- but he's citing this as
3 one -- it seems to me he's citing this as one
4 of his higher --

5 **DR. ULSH:** Yes, he is.

6 **MR. GRIFFON:** -- potential exposure jobs.

7 **DR. ULSH:** So you might --

8 **MR. GRIFFON:** So if he, prior to this, had
9 higher readings, and after this had higher
10 readings --

11 **DR. ULSH:** Okay, would you like to see the
12 dosimeter results for this person?

13 **MR. GRIFFON:** I think it might be -- you --
14 you asked --

15 **DR. ULSH:** In the bounding years?

16 **MR. GRIFFON:** Is there a path forward to go on
17 this.

18 **DR. ULSH:** We can do that.

19 **DR. BEHLING:** How about RWPs? I mean I'm sure
20 that there must be RWPs in place that identify
21 the times that -- that -- a coworker that might
22 have been part of that job coverage that he was
23 doing and -- and you simply cross-reference --

24 **MR. GRIFFON:** The coworker is an interesting
25 question. It could be tricky, like you said,

1 because the people doing the work could get
2 different exposures than the -- than the rad
3 worker tech.

4 **DR. ULSH:** The -- okay, first of all, I think
5 it's very possible -- I can probably get this
6 very quickly, the dosimetry results for this
7 individual in the years -- well, this -- this
8 affidavit's '82/'83. I can get you '81 and
9 '84.

10 **MR. GRIFFON:** It should be all in HIS-20.
11 Right? So we should only --

12 **DR. ULSH:** I've got his rad file in the
13 computer back in my office. I can pull it
14 pretty easily, I think. So yeah, I can -- I
15 can -- sure, I can do that. I'll get that --
16 mark that as an action item, please.

17 **DR. MAKHIJANI:** Mark, there's also an internal
18 dosimetry component to the affidavit, so maybe
19 if we could just look at the whole -- look at
20 it in perspective as to, you know, whether the
21 -- the internal --

22 **MR. GRIFFON:** (Unintelligible) case or --

23 **DR. MAKHIJANI:** Well, yeah, he says -- well,
24 Mel, could I -- I don't know what happened to
25 my copy, if I could borrow yours?

1 **MR. CHEW:** Of course.

2 **DR. MAKHIJANI:** He said that he was
3 contaminated from head to toe in 1987 or '88.

4 **MS. MUNN:** That's a different --

5 **DR. MAKHIJANI:** Yeah, different -- that's why
6 I'm saying if we can look at the whole --

7 **DR. ULSH:** Same affidavit, different concern.

8 **DR. MAKHIJANI:** Same affidavit, but if we could
9 look at the whole dose record in some
10 perspective and settle the second issue, also,
11 or address it in some way.

12 **DR. ULSH:** I think that should be easy to do,
13 too, Arjun. I could check in his rad file for
14 an incident report during -- during those
15 years. I would ask you to perhaps wait and --
16 and hear the discussion on the Kittinger log,
17 because there were several incidents like this
18 in the Kittinger log that we've looked, and I
19 would like to discuss -- after we discuss that
20 -- a path forward on that. But yeah, if -- if
21 the Board -- if the working group decides that
22 you want me to look for an incident report
23 there, I would be happy to do it. Not a
24 problem.

25 **DR. MAKHIJANI:** Kathy, has somebody -- have we

1 interviewed this person?

2 **MR. GRIFFON:** The only reason I think this is
3 worthwhile taking a look --

4 **MS. ROBERTSON-DEMERS:** Well, not having it --
5 not having it in front of me, I'm not quite
6 sure.

7 **DR. ULSH:** And we can't really say the name
8 over the air.

9 **MR. GRIFFON:** You can ask her during the break
10 'cause we're going to take one in a few
11 minutes.

12 **DR. MAKHIJANI:** Yeah -- yeah, I'll call you --
13 I'll call you during the break and have --
14 yeah.

15 **MS. ROBERTSON-DEMERS:** Okay.

16 **MR. GRIFFON:** The only reason I think it might
17 be useful to pull the string a little further
18 on this case 'cause I --

19 **DR. ULSH:** Sure.

20 **MR. GRIFFON:** -- I can see, you know, we can't
21 do this with all these cases, you know, but
22 this -- this person has a fair amount of
23 specificity in -- in the allegation, so --

24 **DR. ULSH:** And this really gets to, Mark, what
25 I've been thinking all along here. I mean our

1 first obligation, and certainly NIOSH wants to
2 do that. Our first obligation is to give the
3 allegations a full and accurate consideration.
4 Second to that is the timeliness issue. And I
5 know that we're working towards supporting a
6 Board vote in September, so to the extent that
7 we can be specific -- for instance, when you
8 ask -- get me the dosimeter results on either
9 side, that's something specific, I can do that.
10 Big drift net type operations I think we might
11 need to talk more about, but --

12 **DR. MAURO:** Can I say -- we're -- an
13 interesting --

14 **MR. GIBSON:** Brant, this is Mike Gibson again.

15 **DR. ULSH:** Yes, Mike.

16 **MR. GIBSON:** Again, I just want to stress that
17 when Secretary Richards-- then-Secretary
18 Richardson announced this plan, she said that
19 these workers have not always been protected
20 and the data is sometimes not reliable. So you
21 know, I just have -- I'm just bringing forth
22 the concern that we don't give the same weight
23 to an affidavit from a worker as we do to the
24 data that was unrelia-- sometimes unreliable
25 that caused this whole program to be brought

1 into effect. I just -- I mean I hope that's
2 just a fair statement. And I know you guys are
3 doing the best you can with the raw data that
4 you have, but you know, there's just -- I
5 believe -- missed dose and sometimes -- and now
6 I'll put this mildly, sometimes falsification
7 of records. I can give you a specific example
8 of a Mound where a rad tech was fired for fals-
9 - falsifying records because it was getting
10 late in the day and let a person go home
11 contaminated. So I just -- you know, I just
12 hope you guys take that into perspective to --
13 to these affidavits to what people are saying
14 that really happened in the field.

15 **MR. GRIFFON:** No, you --

16 **DR. ULSH:** Well, I think you're right, Mike --

17 **MR. GRIFFON:** -- you're right, Mark (sic), and
18 I -- Mike, and I think -- I don't even know my
19 own name anymore. No, I -- I think I -- I mean
20 I do agree with Brant on this, that we have to
21 strike a balance here between -- we -- we
22 certainly have to -- these specific allegations
23 by petitioners or public commenters --

24 **MR. GIBSON:** Absolutely.

25 **MR. GRIFFON:** -- but we owe it to take those to

1 ground as best we can. We're also -- we also
2 owe it to all the petitioners to do this as
3 timely -- you know, as efficiently as we can
4 here, so you're right, Mike. I agree.

5 **DR. ULSH:** And I do hope -- not just you, Mike,
6 but all members of the working group, if you
7 think that there is something that -- that we,
8 that NIOSH should do -- I mean I think that
9 we're taking these allegations pretty
10 seriously. I mean we're -- we're doing our
11 best to look into them. But if -- certainly
12 we're open to any suggestions from the working
13 group and we're certainly willing to discuss if
14 you think that there are other things that we
15 should do to address these issues. And that's
16 the whole purpose of this SEC process. I mean
17 it -- as you mentioned, Mike, it was recognized
18 early -- you know, early on Admiral Richardson
19 -- that there -- that the DOE records are not
20 perfect, and that certainly applies to Rocky
21 Flats. It applies to any site. When you've
22 got tens of thousands of workers with up to --
23 upwards of, you know, hundreds of bioassay, I
24 guarantee you you can find isolated -- sorry,
25 that you can find instances where the worker

1 was not monitored when he probably should have
2 been, or there was a problem with his records,
3 something like that. What I think we need to
4 focus on in terms of an SEC context, though,
5 how frequent is this. Does this represent a
6 pattern that would make you date the
7 reliability of the dataset as a whole. And
8 that's kind of the approach that I'm taking
9 here. And I'm -- you know, I understand, too -
10 -

11 **MR. GRIFFON:** That's our -- that's our over-
12 arching concern.

13 **DR. ULSH:** Exactly.

14 **MR. GRIFFON:** Exactly.

15 **MR. GIBSON:** No, and I don't want to give the
16 false impression that I'm this left-wing
17 liberal that wants everyone just blanket
18 covered. I don't -- I don't want anyone neces-
19 - I don't want anyone compensated that doesn't
20 deserve it. But I certainly don't want anyone
21 -- or a group of people -- left out that do
22 deserve it. And so I just want -- I want the
23 fair and balanced treatment between the
24 workers' perspective of what they've witnessed
25 in the field, and I want that weighed against

1 the reliability or the -- whatever word we're
2 using about the validity of the data.

3 **DR. WADE:** And I think that -- this is Lew
4 Wade. I think that's what we all want and --
5 and you know, what we're trying to do is to
6 allow for a process to -- to go on that has
7 point and counterpoint and let -- and lets
8 every allegation or every question be discussed
9 to the satisfaction of all. And you know,
10 hopefully that process is fair and balanced.
11 And you know, if you see instances where you
12 feel it's not, then you need to raise them.
13 And again, that's the perspective of the Board.
14 You know, and we'll pursue this for as long as
15 it needs to be pursued to bring to -- bring
16 these issues to -- to a level of understanding
17 that meets the Board's satisfaction so that
18 it's willing to vote this out. Again, we'll
19 take the time necessary to do that --

20 **MR. GIBSON:** Okay.

21 **DR. WADE:** -- but please raise your --

22 **MR. GIBSON:** Thank you.

23 **DR. WADE:** -- voice if you think that it's not
24 being dealt with in a fair and balanced way.

25 **DR. MAKHIJANI:** Dr. Wade, I don't know if I'm

1 saying this out of turn, but I -- I think, at
2 least from the perspective that -- that I've
3 taken, I know, on -- on -- in looking at this
4 data is that, because of what workers have
5 said, I am -- at least I am not taking it at
6 face value, and I -- and I regard this process
7 that we're going through as not taking the data
8 at face value. But in the end, if the data are
9 valid, then they can be used and then if -- so
10 I don't think we're taking anything at face
11 value here, and that's why I guess it is taking
12 so long, because it has been quite difficult --
13 at least -- that's -- that's the perspective
14 that I've brought to -- to it when I looked at
15 it.

16 **DR. WADE:** And at the end of the day, a hundred
17 individuals will look at it a hundred different
18 ways. Our purpose is to have a process that
19 lays it out as completely as possible, and then
20 let each individual decide what they think in
21 the case of the people involved in this debate,
22 and eventually the Board in its vote, then
23 eventually the Secretary and the Secretary's
24 decision.

25 **MR. GRIFFON:** Okay. I'm going to use the

1 Chair's prerogative and ask for a comfort break
2 for -- I mean we can keep it short, five --
3 keep it five to ten. If I'm going to say that
4 I might as well say ten, right?

5 (Whereupon, a recess was taken from 3:25 p.m.
6 to 3:40 p.m.)

7 **MR. GRIFFON:** Brant, which item are we on,
8 before we --

9 **DR. ULSH:** Pardon me?

10 **MR. GRIFFON:** Are we on 16?

11 **DR. ULSH:** Oh, hang on, let me look.

12 **MR. PRESLEY:** I think we are, yeah.

13 **MS. MUNN:** Yes, we are on 16.

14 **DR. ULSH:** Only 18 more to go, Mark.

15 **DR. WADE:** Okay, we're back in business.

16 **MR. GRIFFON:** A few "no further action
17 required."

18 Okay, I think everyone is still on the line.
19 We're back -- we're -- we're on the matrix --
20 for those of you who have the updated matrix,
21 we're on number 16 at this point and we're
22 going to continue to work through those.

23 **DR. ULSH:** Actually we're on 18 because 16 and
24 17 are no further action. All right.

25 **MR. GRIFFON:** So number 18 --

1 **DR. ULSH:** Okay, the issue here on the matrix
2 is workers frequently did not wear badges in
3 production areas and did not report non-use of
4 badge. This raises the question of how missed
5 dose is to be interpreted. This is an issue
6 that was raised by the petitioners, certainly
7 in the working group meetings and I think also
8 in the SEC petition itself. Right, Karin?
9 Yeah.

10 **MS. JESSEN:** Yes.

11 **DR. ULSH:** Okay. Oh, yeah, it says right
12 there. I addressed this -- we've talked about
13 this issue on a couple of occasions before in
14 the working group, and I also talked about it
15 at some length at the Denver Advisory Board
16 meeting, about the chain of events that would
17 be required for this to be a problem in terms
18 of the NIOSH dose reconstruction program.
19 Now the action item here, Mark, that you have
20 is -- is NIOSH is further evaluating the issue.
21 This is a status from a while ago. I guess I
22 want to discuss what the current status is. I
23 mean is there something else that you would
24 like to see us do on this particular issue?

25 **MR. GRIFFON:** Did -- did -- I don't recall if

1 -- if SC&A looked at this statistical analysis.

2 Did we --

3 **MR. FITZGERALD:** I can't --

4 **MR. GRIFFON:** -- I'm trying to remember, Brant,
5 I --

6 **DR. ULSH:** I know, so am I, Mark.

7 **MR. FITZGERALD:** I can't remember.

8 **DR. MAKHIJANI:** The background?

9 **MR. FITZGERALD:** Looking at background count,
10 do you remember?

11 **DR. MAKHIJANI:** I -- I did not look at it.

12 **MR. GRIFFON:** Can we -- at this point I think
13 -- let's -- let's put the ball in SC&A's court
14 and the workgroup's. We'll look at the
15 analysis again, 'cause I think if we did look
16 at it, I don't think we remember it. But --

17 **DR. ULSH:** I'm not sure -- Jim Langsted, I know
18 you were -- you were handling this issue. Did
19 we prepare a document that we have given to the
20 working group or -- remember, this was your --

21 **MR. GRIFFON:** This says NIOSH provided. Now
22 maybe that was a verbal --

23 **DR. ULSH:** Oh --

24 **MR. GRIFFON:** -- I don't know.

25 **DR. ULSH:** -- okay.

1 **MR. GRIFFON:** Right? NIOSH provided
2 statistical analysis.

3 **DR. ULSH:** Okay.

4 **MR. GRIFFON:** Was that written, though? I
5 don't know. Usually if it's written I put a
6 document name in there and I don't have it
7 here.

8 **MS. MUNN:** I thought they gave us a sheet. I
9 can't remember where I put it, but --

10 **DR. ULSH:** I'm thinking this is the tailing-off
11 issue, Jim, where we prepared the graphs or
12 something like that, and I just can't remember
13 what the status of that is.

14 **MR. LANGSTED:** And what did we do, Brant? We
15 showed some of those graphs at -- I think it
16 was the September meeting -- I'm sorry, the
17 Denver meeting, but I don't think we ever came
18 up with any statistical conclusion on it.

19 **MR. GRIFFON:** So you didn't have a conclusion
20 on it, or...

21 **DR. ULSH:** Well, I think what we concluded was
22 --

23 **MR. GRIFFON:** That you can't conclude
24 anything?

25 **DR. ULSH:** Yeah, I think so, that that --

1 **MR. GRIFFON:** Right.

2 **DR. ULSH:** Yeah, yeah, yeah, okay. Thank you,
3 Karin. Do these graphs look familiar?

4 **MS. MUNN:** Those, yes, they do.

5 **MR. FITZGERALD:** These?

6 **DR. ULSH:** Yes.

7 **MR. FITZGERALD:** This was an April 20th
8 package.

9 **DR. ULSH:** Thank you. Thank you. Rescued by
10 Joe and Karin, thank you.

11 Okay, so it looks like we've at least provided
12 something, if -- if SC&A and the working group
13 can review --

14 **MR. GRIFFON:** Yeah, let's put it that way
15 'cause I don't -- Joe, you're not in a position
16 to respond --

17 **MR. FITZGERALD:** Yeah, we were just at the
18 session and then we, you know, looked at the
19 graphs. I don't think we actually pursued any,
20 no.

21 **MR. GRIFFON:** Let's close it out that way,
22 though. Let's put an action for SC&A to -- to
23 review those and report back.

24 **DR. ULSH:** Okay, number 19 then, this deals
25 with a con-- some concerns that were expressed

1 in the SEC petition about badges did not
2 properly record organ dose due to organ being
3 closer to the source than the badge, or due to
4 workers wearing badge under their lead aprons.
5 So you've got two issues here imbedded in one
6 concern.

7 One is geometry correction factors. In other
8 words, a badge worn at the lapel, how does that
9 -- how do you have to handle that, how do you
10 have to adjust that reading to account for
11 doses in abdominal organs, primarily -- like,
12 you know, prostate or bladder. And we have
13 written, and I think I've seen these pretty
14 well -- pretty familiar with the glovebox TIB
15 for glovebox workers. That describes the
16 methodology for handling that kind of a
17 situation.

18 Lead aprons, again, this is another issue that
19 Jim Langsted was dealing with, but I think that
20 where we left it was that there were field
21 studies done at Rocky Flats to evaluate the
22 response of the dosimeters when they were worn
23 both -- or, sorry, when they were worn either
24 under or on top of lead aprons. And so the
25 TBD, as I recall, Jim, is being -- some

1 language about how to handle lead apron use is
2 being added to the TBD. Is that correct, Jim?

3 **MR. LANGSTED:** That's exactly right, Brant. A
4 section has been added to the TBD that's in
5 ORAU review right now, and it includes a
6 correction factor for the cases where -- where
7 dosimeters were worn either above or below the
8 leaded apron.

9 **DR. ULSH:** So I -- I don't know, I don't want
10 to go out on a limb too far here, but it seems
11 to me that this is certainly an important dose
12 reconstruction or TBD type issue, but I don't
13 think that it rises to an SEC issue. Would you
14 agree?

15 **DR. MAURO:** Yeah, Brant, I'd agree. Both of
16 these are very tractable problems.

17 **DR. ULSH:** I like that phrase. Thanks, John.

18 **MR. FITZGERALD:** In the -- Ron's external
19 analysis, which we handed around this morning,
20 we also treat the lead apron issue and also
21 treat it as a site profile issue.

22 **DR. ULSH:** Okay.

23 **DR. BEHLING:** How does it affect the issue of
24 skin cancer when you wear it under the apron?

25 **DR. ULSH:** Jim, did you hear that?

1 **MR. LANGSTED:** No, I'm sorry, I couldn't hear
2 that.

3 **DR. BEHLING:** When a -- when a dosimeter's worn
4 under the apron, what do you do to account for
5 a skin exposure?

6 **MR. LANGSTED:** We've got a factor that -- and I
7 believe it's for penetrating dose only -- I'll
8 have to take a look at that. I don't know
9 right off.

10 **DR. ULSH:** So it's a correction factor that
11 adjusts --

12 **DR. BEHLING:** Well, I know the -- certainly
13 account for a penetrating dose -- adjustment
14 factor to account for the attenuation by the
15 lead, but how do you account for a beta
16 component that you wouldn't be able to -- to
17 see if it's worn under the apron, meaning that
18 this is a blank spot in your dosimetry system.

19 **DR. ULSH:** Well, I think, though, Hans, that --
20 Jim, correct me if I'm wrong, but weren't lead
21 aprons used primarily in the plutonium areas?

22 **MR. LANGSTED:** Yes, under -- for the
23 penetrating dose reduction.

24 **DR. ULSH:** And you would be mainly concerned
25 about -- I mean the places at Rocky Flats where

1 you would have a beta problem would be
2 primarily in the uranium areas, which -- I
3 don't think lead aprons were -- I don't want to
4 state this too strongly. I think there -- that
5 lead aprons were primarily used in the
6 plutonium areas, so it may not --

7 **MR. CHEW:** 776 especially.

8 **DR. ULSH:** Does that sort of answer your
9 question?

10 **DR. BEHLING:** Yeah, if -- if that's a focus
11 area for -- for using the apron data, that
12 would probably be okay.

13 **DR. MAURO:** And I would imagine, if you know
14 your source --

15 **DR. BEHLING:** And there's no beta component --

16 **DR. MAURO:** -- and of course you're not going
17 to see your beta contribution, but you know
18 your source, you know your gamma, you -- and
19 you can say okay, what would you anticipate
20 being a plausible upper bound of the skin dose
21 from beta given the source -- I mean I think --
22 again, I think this is very tractable.

23 **DR. ULSH:** The ratio, yeah.

24 **MR. GRIFFON:** I think it might be a good point
25 -- as a reminder, and a reminder to the whole

1 workgroup, that we're going for SEC issues. It
2 doesn't mean we're not going to cover these in
3 our overview of the site profile, so we'll have
4 a chance to look back at that section. I know,
5 I know, it's painful to think about sometimes,
6 but --

7 **DR. ULSH:** You're absolutely right.

8 **MR. GRIFFON:** -- discussing this at lunch, that
9 we got through Y-12, but we actually --

10 **DR. ULSH:** Now the fun starts.

11 **MR. GRIFFON:** -- the site profile that we kind
12 of skipped over the matrix, and Wanda insisted
13 that we go back and get all those things.

14 **UNIDENTIFIED:** Now, Wanda --

15 **MS. MUNN:** Well, (unintelligible) --

16 **MR. GRIFFON:** And she wants to do it tonight -
17 - no.

18 **DR. ULSH:** Well, I think that brings us to
19 issue 20. We can get through this pretty quick
20 because we've already talked about it prior to
21 the break. This is the affidavit from the
22 petition about the guy who worked in the
23 stacker retriever area, so we've already talked
24 about that. And the follow-up items, I
25 believe, there are we will get you the

1 dosimetry on either side of that time period.

2 **MR. MEYER:** And incident (unintelligible) --

3 **DR. ULSH:** Oh, right, right, and I'll take a
4 look through the rad file, see if I can find an
5 incident.

6 Okay, that leads us to 21. The concern
7 expressed is bioassays redone when they
8 indicated high exposure. There are two
9 examples cited that claim that bioassays were
10 redone on -- on individuals -- I'm sorry -- or
11 individuals were recounted when the readings
12 were high, and subsequent results were declared
13 as having no exposure or false positives.
14 Our response -- or I'm looking at the status
15 column now, and if a worker was enrolled in a
16 bioassay program, we would assign missed dose
17 for bioassay results below the detection limit.
18 We -- we don't think that we have a peculiar
19 situation at Rocky Flats that would make what
20 we're doing at other sites not apply here.
21 An additional point to note here is that in
22 situations like this where you had a bioassay
23 that was considered by the dosimetry department
24 at the site to be suspect, and then there were
25 subsequent confirmatory bioassays taken, NIOSH

1 -- when we receive data from DOE, we get all of
2 the -- well, we're at least supposed to get all
3 of the bioassay results, whether or not they
4 were -- the site concluded that they were false
5 positives. And NIOSH is not in the practice of
6 excluding any bioassay points, even if they
7 were concluded to be false positives. So I
8 think that that is our response on that issue.

9 **DR. MAURO:** Brant, I --

10 **DR. ULSH:** Yes, sir.

11 **DR. MAURO:** -- I had a thought about several of
12 these affidavits and the way we're dealing with
13 them. It's sort of like we have an individual
14 that has a concern, and then we're saying okay,
15 that concern is going to be investigated as
16 part of our data reliability that -- whether or
17 not it has some implications regarding the
18 integrity of the data and -- and I think
19 everything that we've designed and implemented
20 to date has gone toward that end.

21 But then I -- and as we spoke about this, it
22 dawned on me that there's another side that
23 might -- we may want to think about, and that
24 is the person himself that made that claim.
25 He's looking for some satisfaction out of this,

1 also. So when we give a -- let's say a general
2 answer -- oh, a plausible scenario why that
3 happened and I think that satisfies -- with
4 some degree of evidence by looking at these
5 other records. At the same time -- and this is
6 something that I just put -- I'd like to put
7 before the working group. At the same time, as
8 a form of bedside manner, wouldn't it be very
9 satisfying to the claimant himself who brought
10 this issue up for us to talk about him or her
11 and -- and the work that was done to fully
12 appreciate -- in the sort of a way the way we
13 do the individual audits of dose
14 reconstructions for individual people, year by
15 year and check out every number to understand
16 exactly what was this person doing and do his
17 records make sense, do the input to the IREP
18 make sense given the records and -- and his job
19 history. What I'm getting at is I'm sort of
20 like looking at the other side of the coin now.
21 To what degree do you think it will benefit the
22 program to not only answer the questions that
23 these folks raise from more of a generic data
24 reliability issue, but in the -- at the same
25 time try to satisfy the -- the petitioner that

1 we looked at him and -- or her case as an
2 individual with his -- his -- his own concerns
3 so that he can walk away feeling as if he was
4 not short-changed.

5 Now I realize we ne-- we haven't talked about
6 this before and -- but I think it's something
7 wor-- I'm thinking in terms of credibility and
8 bedside manner. We haven't done very much of
9 that. And I think that if there -- if a -- if
10 that person could be -- if we could talk to
11 that person that we looked at that -- closely,
12 specifically -- and right now we're talking
13 about looking at either side of this time
14 period as being part of it, but the more I
15 think about it, to tell his story back to him
16 the way we understand it and why we believe
17 what we believe about him, I think might buy a
18 lot of credibility, which is half of what we're
19 trying to do here.

20 **DR. ULSH:** Okay, I'll take a shot at it, John,
21 but I might -- I'm looking over at Lew, and
22 hopefully he'll have something to say about
23 this, too.

24 I think it's a noble goal. I do. And in an --
25 given unlimited resources and unlimited time, I

1 would like to go back to every individual who
2 made a public com-- every one that's going to
3 be included in Karin's write-up and call them
4 up or interview them and -- and tell them how
5 we resolved their concern. That would be a
6 great thing to do.

7 We have to weigh that, though, against
8 timeliness -- you know, how -- how much
9 resources we have to dedicate to that. And
10 keep in mind, you compared it to auditing the
11 dose reconstructions.

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

13 **DR. ULSH:** For those -- we -- we audit a sample
14 of the dose reconstructions. We don't audit
15 the -- all 17--

16 **DR. MAURO:** Absolutely.

17 **DR. ULSH:** -- all 13,000. There's not time to
18 do that. I --

19 **DR. MAURO:** So this might open a door that says
20 -- a flood of how many are you going to look at
21 now. Right?

22 **DR. ULSH:** Well, it might, but -- I don't know
23 --

24 **DR. WADE:** It's a good idea.

25 **DR. ULSH:** I do, I mean --

1 **DR. WADE:** Clearly it's a good idea. I mean
2 NIOSH has recently taken actions to add to
3 staff people who could sort of serve as
4 ombudsmans for -- for -- ombudsmen for SEC
5 petitions. And you know, a lot of thought has
6 gone into sort of the front end sort of
7 assistance, but I think you raise a very valid
8 point. It would be good to have someone who
9 could sit in these discussions, take in the
10 full extent of what has been discussed, and
11 then contact these individuals and tell a
12 story. I mean no one would argue that that's a
13 good thing to do, and we'll take that
14 suggestion back and try and implement it to the
15 degree we can. But it also raises the -- the
16 always pragmatic issue of resources, and that
17 has to be taken into account. But there's no
18 one who would argue that we couldn't do a
19 better job of dealing with the -- the people we
20 affect, and a more sensitive job, and -- and
21 we'll take your suggestion as a very positive
22 one.

23 **MS. MINKS:** This is Erin Minks calling from
24 Senator Salazar's office here in Colorado, and
25 I just wanted to jump into this discussion real

1 quick and just say that we would -- our offices
2 would -- would be happy and pleased to -- to --
3 to find a way to effectively communicate to the
4 individuals that are petitioners for you and
5 constituents of ours, who contact us after
6 these calls, who are probably listening right
7 now, who understand -- to the degree that
8 they've been listening to your discussions --
9 that there's an intricacy that has to go on
10 that they may not fully understand. But you
11 know, if there's a way that we can help to lend
12 credibility to the process, please let us know
13 as well. If it means there needs to be -- when
14 the Board reaches a decision, that there needs
15 to be a -- you know, it's almost a PR dimension
16 to how you're going to do it, but something
17 that our offices would probably want to be a
18 part of or be willing to help you with.

19 **DR. WADE:** Thank you very much and -- but I
20 will carry this back to Laurie Ishak who's been
21 named as the --

22 **MS. MINKS:** Yeah, Laurie. Yeah, definitely.

23 **DR. WADE:** Right. And you know, we'll talk to
24 her about this and -- and we'll certainly use
25 examples that we discussed here today as sort

1 of pilots for this, John, so we appreciate your
2 suggestion.

3 **THE COURT REPORTER:** Dr. Wade, excuse me, this
4 is Ray. Could I get that -- the lady who just
5 spoke, her last name --

6 **MS. MINKS:** Sure, my name -- this is Erin Minks
7 with Ken Salazar's office out here in Colorado.

8 **THE COURT REPORTER:** Okay, thank you.

9 **MS. MINKS:** Yeah, and we can -- off-line we can
10 talk about my contact information. I think
11 that Lew Wade has it there, so --

12 **DR. WADE:** Yes, I do.

13 **MR. GIBSON:** This is Mike Gibson. Could I ask
14 a question also?

15 My concern is if there's a -- a positive
16 bioassay result that's seemingly unusually
17 high, then they -- the DOE rule of thumb seems
18 to be you take two more bioassay samples and
19 the two out of three rule wins. If the next
20 two come back negative, it's a false positive.
21 But you know, if -- if you take a bioassay
22 sample and it comes back below the MDA, below
23 the minimum detectable amount, there's no two
24 or three samples to make sure that one was
25 right. How far has NIOSH went to verify the

1 qualifications and the certifications and the
2 quality at the lab?

3 **DR. ULSH:** Well, Mike, let me take a shot at
4 some of that. I think you're -- you're right
5 about the -- certainly at Rocky Flats, and I'm
6 thinking of at least in the '90s, and probably
7 well before that, it was policy to, when you
8 had a positive bioassay, to then follow up with
9 confirmatory bioassay results. And the
10 thinking here is that there are -- there are
11 circumstances that could lead to a false
12 positive. For instance --

13 **MR. GIBSON:** Correct.

14 **DR. ULSH:** -- you know, contamination of the
15 sample or -- or the reader or -- or whatever.
16 It's -- it's more difficult to envision a
17 situation where a sample would have radioactive
18 material in it that -- a false negative, what
19 I'm saying. I think a false negative is a less
20 likely -- far less likely outcome. And also
21 keep in mind that these people were -- the
22 workers were on routine bioassay, so even if
23 you had a -- one particular bioassay, you have
24 to consider that in the overall context that
25 they were sampled on a periodic basis. So you,

1 you know, would have an opportunity to pick up,
2 you know, an uptake in subsequent bioassays.
3 Now in terms of what NIOSH has done to -- I'm
4 trying to think of the words that you used,
5 Mike, to -- to verify the -- help me out.

6 **MR. GIBSON:** The -- the quality assurance of
7 the lab.

8 **DR. ULSH:** That is --

9 **MR. GIBSON:** Itself.

10 **DR. ULSH:** That is certainly an issue that --
11 you know, I mentioned earlier in our
12 conversation that there were QA programs in
13 place at DOE sites, including Rocky Flats, and
14 you're probably familiar with the DOELAP
15 accreditation program --

16 **MR. GIBSON:** Yes, I am.

17 **DR. ULSH:** -- which was implemented in the
18 '90s, I think. Before that -- you know, there
19 were predecessors to that. We do have the
20 QA/QC manuals -- I'm looking at Bob, he's
21 nodding his head yes, we do have them -- that
22 were used at Rocky Flats, so that is an issue
23 that we've looked at. Does that answer your
24 question, sort of?

25 **MR. GIBSON:** Well, I -- you know, and again, I

1 have no history at Rocky Flats and I -- I don't
2 know what went on there, but I do have a
3 extensive knowledge of the history at Mound
4 and, for instance, you know, getting to
5 occurrence reporting and Price Anderson, I know
6 that was later, you know, later in the years,
7 but they were DOELAP accredited. They put a
8 new system in. They had the program -- they
9 had the equipment programmed to subtract the
10 background out of the bioassay sample, and then
11 the manager of the bioassay program
12 subsequently backed out that background again,
13 which in essence doubled -- doubled less the
14 minimum detectable amount of what would be seen
15 in a bioassay -- or actually doubled up-wise
16 what would be seen in a bioassay sample. So
17 you know, my question again is how far have you
18 guys looked at the quality assurance, you know,
19 of the labs --

20 **MR. GRIFFON:** Mike, I guess --

21 **MR. GIBSON:** -- whether it was internal or
22 external? Some of our samples were sent, for
23 example, for actinium they were sent off-site
24 to another lab at one point. It was raided by
25 the FBI and busted for falsifying records. So

1 how far are you guys looking at this stuff?

2 **MR. GRIFFON:** And -- and I would just say --
3 you said you have the quality control or
4 quality assurance manuals. Were there any
5 reports, any internal audits or external audits
6 of the bioassay program, of the dosimetry
7 program, you know, prior to DOELAP I think
8 would be the bigger (unintelligible) -- right,
9 right.

10 **DR. ULSH:** Roger or somebody else out there who
11 was involved in the internal dosimetry program,
12 can you give us any insight on-- in that?

13 (No responses)

14 Roger, are you on mute?

15 **MR. FALK:** I have just gotten to the captain's
16 chair here. I don't have anything really
17 concrete, because the bioassay labs were
18 essentially a -- were essentially the separate
19 entities, but they did -- they did regular,
20 like maybe annual, essentially cross-checks
21 with the other laboratories, that -- that I
22 know happened, but I don't have the data for
23 that. But yes, there -- yes, the laboratories
24 did essentially cross-check samples with other
25 labs, and I think they did some with the EML,

1 which is the Environmental Measurements Lab up
2 in New York that was a DOE facility. But I
3 don't -- I don't -- I don't have access to the
4 specific reports.

5 **MR. GIBSON:** Okay, what I'm --

6 **MR. GRIFFON:** I don't -- I don't think they
7 took --

8 **MR. GIBSON:** -- saying is -- and I know that --
9 at least at Mound anyway, I mean they even did
10 a blank and a spiked check with each batch,
11 which I believe was 12 or 24 samples that went
12 through, but this still fell through the
13 cracks.

14 **MR. MEYER:** Yeah, the -- the round robin is
15 what will catch that, and that's why they --
16 that's why they did it, if -- if another lab
17 analyzes the same or -- or a duplicate, you
18 know, working on (unintelligible) --

19 **MR. GIBSON:** I'm sorry, I didn't hear you.
20 Sir?

21 **MR. MEYER:** I'm sorry. Yeah, I'm sorry. A
22 round robin check with another lab will catch
23 that and I'm -- something's tickling at me. I
24 think I have seen some of that, but -- but I
25 can't -- I can't put my finger on it virtually

1 here, so --

2 **DR. ULSH:** I think that's pretty much what
3 you're describing, Mike. You know, with blanks
4 and spikes, it's pretty much standard procedure
5 and I'm -- I would be extremely surprised if
6 Rocky Flats didn't do exactly that.

7 **MR. MEYER:** They were doing that, but that'll -
8 - that'll miss the background, the double
9 background issue and -- but the round robin
10 will catch that and --

11 **MR. GIBSON:** A round robin is what, sir?

12 **MR. MEYER:** I'm sorry, sending the same sample
13 or --

14 **MR. GIBSON:** Who am I talking to?

15 **MR. MEYER:** This is Bob Meyer, I'm sorry, the -
16 - with -- with ORAU team --

17 **MR. GIBSON:** Okay.

18 **MR. MEYER:** -- the document owner for the Rocky
19 Flats site profile. What I -- and I'm sorry,
20 what I meant by round robin is -- or -- or an
21 exchange, sending the same or an exact
22 duplicate sample off to another laboratory, the
23 reas-- one of the reasons for doing that is to
24 catch that sort of an error. The other lab
25 then will come back with a -- a result that's

1 quite different and that leads to trying to
2 figure out why -- why that happened, whereas
3 the in -- in-house will miss that type of an
4 error. That's -- that's an interesting
5 (unintelligible).

6 **MR. GIBSON:** And how often did Rocky Flats do
7 that? Was that on every perceived false
8 positive or was that on just a routine or --
9 basis or --

10 **MR. MEYER:** Roger actually has the answer to
11 that. Typically that's done on a routine basis
12 to catch this sort of problem, and then when
13 it's caught -- if -- if an error is discovered,
14 a person -- the lab has to go back and recount
15 the samples or correct -- in this case you'd
16 simply un-subtract it, if that makes sense, to
17 correct the background subtraction error. But
18 it's typically done routinely, and the reason
19 is to catch that sort of an error.

20 **MR. GIBSON:** And routinely is how often?

21 **DR. ULSH:** Roger?

22 **MR. FALK:** I don't know how often they did the
23 round robin type of the exchange of samples
24 with the other labs, but that would probably
25 have been done some -- something like annually.

1 Also, starting in -- in the early '80s, the lab
2 had its own quality assurance officer who
3 basically oversaw the -- the quality of the
4 data and did routine checks, but -- but that
5 was a lab function. But I'm sure there are
6 probably -- be log books that would actually
7 document that. I've not seen them, however.

8 **MR. GRIFFON:** Do they -- I would imagine they
9 must have generated reports over the time
10 period.

11 **MR. MEYER:** I'm just trying to think what they
12 would --

13 **MR. GRIFFON:** It might have been part of a rad
14 program report or something -- no?

15 **DR. ULSH:** That seems -- that seems logical,
16 but I can't say what's in it.

17 **MR. GRIFFON:** (Unintelligible) that have
18 quality assurance, you know, (unintelligible).

19 **MR. GIBSON:** I think I would be interested in
20 seeing, 'cause -- and again, I'm not -- I'm
21 just basing my experience at Mound and asking -
22 - generating these questions based on Rocky,
23 but I think it'd be interesting for the working
24 group or -- or full Advisory Board to see how
25 that happened or how often that happened and

1 what kind of quality assurance plan they had.

2 **DR. ULSH:** Okay, let's -- I'm looking around
3 the table to working group members. I'd like
4 to just maybe firm up what the action item is
5 here if -- okay, so we're interested in looking
6 at QA/QC type reports on the bioassay program.

7 **MR. GRIFFON:** Yeah, or determining if they --
8 if they're readily available, I guess --

9 **DR. ULSH:** Okay. Yeah, that's going to be the
10 first step.

11 **MR. GIBSON:** And how often this round robin
12 test happened --

13 **MR. GRIFFON:** Sampling was done, right.

14 **MR. MEYER:** Yeah, and I --

15 **MR. GIBSON:** -- to verify --

16 **MR. MEYER:** -- let -- let's use a different
17 name for that, I'm sorry, just an exchange with
18 another laboratory that's certified in some
19 way. Round robin, what I mean there was
20 oftentimes labs will pass samples from one lab
21 to the next, and that may well have happened
22 within the complex, too. They all check the
23 same sample and they -- and they inter-compare
24 results, and actually studies are -- there were
25 studies done, now that I'm thinking about this,

1 'cause I saw them at Oak Ridge so I'll be
2 surprised if we don't see that here.

3 **DR. ULSH:** So I guess what we'll commit to --
4 right now, anyway -- is that we'll take a look
5 and see if we can find those readily and --
6 this is another one -- I mean if we get them,
7 we'll just post them on the O drive and let all
8 the working group members and SC&A know that
9 they're there.

10 **MR. GRIFFON:** (Unintelligible)

11 **DR. ULSH:** Okay. And if we have problems for
12 some reason, we'll also let you know that.
13 Okay.

14 **MR. GIBSON:** Yeah, I'd like to see those
15 results, please.

16 **DR. ULSH:** Okay.

17 **MR. GRIFFON:** The other -- back to the
18 specific in 21, I was wondering if you -- to
19 sort of go back to John's point, did -- did you
20 look at these I guess two ca-- I'm trying to
21 remember which case this is, but it had two
22 specific -- it says there are two examples
23 cited in the claim.

24 **DR. ULSH:** Which one are we on?

25 **MR. GRIFFON:** Where bioassays were redone on

1 individuals -- 21.

2 **DR. ULSH:** Twenty-one --

3 **MR. GRIFFON:** (Unintelligible) was talking
4 about false positives and we kind of got off
5 with the false positive question, but in the
6 original allegation it says there are two
7 examples cited that claim that bioassays were
8 redone on -- on individuals --

9 **MS. JESSEN:** I don't have that section done
10 yet.

11 **MR. GRIFFON:** I wonder if we track that back
12 to those -- those two cases, it may be worth
13 doing that, too.

14 **DR. ULSH:** Okay, we can get back to you on
15 that. That -- depending on who it is, I may or
16 may not have the rad file on hand. We might
17 have to request it.

18 **MR. GRIFFON:** If it's not possible, it's not
19 possible.

20 **DR. ULSH:** Well, I'm not saying it's not
21 possible, it's just that it -- if I -- if I
22 have it in my office, it'll be quick. If I
23 have to request it from Scott, it'll take a
24 little bit.

25 **MR. GRIFFON:** You can tell us, Karin.

1 **MS. JESSEN:** (Unintelligible)

2 **DR. ULSH:** I've got it. I think I've got it.
3 Okay. Did you get that as an action item, too,
4 this specific one?

5 **MR. MEYER:** Yeah.

6 **DR. ULSH:** All right. Are we ready for 22,
7 Mark, or --

8 **MR. GRIFFON:** Yeah.

9 **DR. ULSH:** Okay. This is the "no data
10 available" issue, and I think we've already
11 talked about -- okay, we've talked about this
12 issue in general. This one is a specific
13 example from an affidavit that was provided in
14 the petition. The individual stated that --
15 let me see -- okay. This individual stated
16 that there was -- the film was blackened with
17 exposure and he was -- he got this "no data
18 available" when the film was blackened with
19 exposure, and the work was in a high exposure
20 area, americium-241 processing, which we do
21 know that was a high dose area, americium
22 processing. By contrast, accor-- the -- the
23 affidavit -- the affidavit states that by
24 contrast, there were issues for positive dose
25 at a time when this worker was serving in the

1 military in Korea.

2 Unfortunately I didn't go back and copy this
3 out of an earlier comment set, but I -- I
4 remember the specifics on this. We went back
5 and checked the worker's radiation file and in
6 fact there were -- we had the -- the work
7 history for this individual and it did reflect
8 military service, that he left the site for
9 military service and then it showed his return.
10 And in fact there was -- there were no
11 dosimetry results for that period, and we
12 presented that in previous comment set, so
13 that's -- that --

14 **MS. ROBERTSON-DEMERS:** I have a question about
15 that.

16 **DR. ULSH:** Okay.

17 **MS. ROBERTSON-DEMERS:** Did you check the NDRP
18 to see if it had readings for those two years?

19 **DR. ULSH:** Kathy, I don't recall off the top of
20 my head whether we checked the NDRP. I'd have
21 to go back and look.

22 **MR. FALK:** Brant, this is Roger.

23 **DR. ULSH:** Yes, sir.

24 **MR. FALK:** It turns out -- yes, we (inaudible)
25 asked and there were no entries during the time

1 when he was in military service.

2 **DR. ULSH:** Okay. Thank you. But this does
3 give --

4 **MR. GRIFFON:** I'm trying to remember, I
5 thought -- I thought there was an entry on --
6 he went in the middle of a quarter or
7 something, so there was some --

8 **DR. ULSH:** Yes, that's right, Mark. That is
9 right.

10 **MR. GRIFFON:** -- that was (unintelligible) --

11 **DR. ULSH:** You're refreshing my memory.

12 **MR. GRIFFON:** The person's confusion was that
13 he had --

14 **DR. ULSH:** Could very well be.

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

16 **DR. ULSH:** Could very well be.

17 **MS. JESSEN:** I think that's right.

18 **MR. GRIFFON:** I do, but I can't find it right
19 now.

20 **MS. MUNN:** I know, that's what I'm looking for.

21 **DR. ULSH:** You're absolutely right, Mark. I --
22 he did leave in the middle of a -- of a
23 dosimetry cycle.

24 **MR. GRIFFON:** Monitoring cycle.

25 **DR. ULSH:** Yeah, yeah, yeah. Okay.

1 **MR. GRIFFON:** But at any rate, your explanation
2 was certainly plausible.

3 **DR. ULSH:** Plausible, yeah. Is there any
4 follow-up action on this item?

5 **MR. GRIFFON:** Yeah, I don't think so.

6 **DR. ULSH:** Okay. Number 23 is -- the concern
7 expressed was most exposed workers were not
8 monitored for neutrons -- I don't -- and it
9 says -- the petition cites Roger Falk as saying
10 that until July, 1958 the most exposed workers
11 were not monitored for neutrons, raising a
12 question about how the neutron data in the NDRP
13 study are to be used, even if the re-reading of
14 the badges is accepted as sound. And it is
15 true that until -- until about 1958 most
16 workers were not monitored for neutrons. That
17 was the reason for -- one of the reasons for
18 the NDRP was to go back and deal with that kind
19 of a situation. And this goes back to our
20 disc--

21 **MR. GRIFFON:** I think one follow-up was -- what
22 Joe asked for earlier was --

23 **DR. ULSH:** Yeah, N/P ratios.

24 **MR. FITZGERALD:** Some of the -- some of the
25 parameters as back-up for the early years, that

1 was the -- one caveat.

2 **DR. ULSH:** Yeah, the way that we would handle a
3 situation like that where a worker was
4 plausibly exposed to neutrons and didn't have
5 them directly measured is an N/P ratio and we
6 talked about -- and we talked about that this
7 morning, so --

8 **MR. FITZGERALD:** Yeah, with that one caveat, I
9 think we're okay on that analysis.

10 **DR. ULSH:** Okay, let me see, that brings us to
11 24, neutron -- the concern expressed is that
12 the neutron badge reading was defective --

13 **DR. WADE:** There's no further action required
14 then on 24.

15 **DR. ULSH:** Well, I --

16 **MR. GRIFFON:** (Unintelligible)

17 **DR. ULSH:** Oh, I'm sorry. Thank you. I don't
18 have to spend time on that one then.

19 **DR. WADE:** And 25 is the same.

20 **DR. ULSH:** Twenty-- okay, we're flying -- 26.
21 This deals with incidents that -- that the
22 petitioner was concerned that the -- there were
23 incidents that occurred that were not reported
24 or recorded, and the -- the concern here was
25 that that situation could lead to missed

1 internal dose. And let's see, the -- in the
2 status column, Mark, we have NIOSH contends
3 that exposures from incidents would be covered
4 by coworker approach. I don't -- I don't know
5 that that was our response. I'd have to go
6 back and look. I think what we would say there
7 is that when we -- when we have incident
8 reports, it is helpful -- it can be helpful for
9 identifying the exact -- or the probable date
10 of an intake. But in situations where we don't
11 have that, as long as we have bioassay, we can
12 do dose reconstructions in a claimant-favorable
13 manner by making assumptions -- I'm looking
14 over here at Liz, she can jump in and give you
15 much more details than I can. The -- the fact
16 -- and we do agree, by the way, that incidents
17 were handled on a -- on the floor, unless they
18 required whole body -- you know, sent to the
19 whole body counter or they couldn't be
20 decontaminated. I think that's right. Jim and
21 whoever else is out there, correct me.

22 **DR. MAKHIJANI:** Brant --

23 **DR. ULSH:** Yes, sir.

24 **DR. MAKHIJANI:** -- handled on the floor without
25 a report?

1 **DR. ULSH:** I think that -- let me -- let me
2 page through -- I think that is true -- could
3 be true, Arjun, that an incident, unless it
4 rose to a certain level of significance and
5 people were required to go to medical or con--
6 there was contamination that couldn't be
7 removed, those incidents might have -- might
8 very well have been handled on the floor.

9 **MR. CHEW:** Posi-- positive nose swipes and
10 things like this -- positive nose swipes, for
11 example.

12 **DR. ULSH:** You're saying that that would have
13 been handled on the floor and not --

14 **MR. CHEW:** No, it would have gone up to
15 (unintelligible).

16 **DR. ULSH:** Okay. Thank you. You were scaring
17 me there, Mel. So yeah --

18 **MR. CHEW:** It's one thing you do very quickly,
19 you take a Q-tip and put it in the nose and
20 take a -- monitor and -- and we had counters
21 right nearby and they brought them up to the
22 next level.

23 **DR. ULSH:** Right. So that -- the situation
24 described in the concern is certainly something
25 that sounds very plausible. What -- what --

1 our response, though, is that as long as a
2 person had bioassay, we could handle that
3 situation. Liz, do you want to add to that?

4 **MS. BRACKETT:** Yes, for example, with plutonium
5 and uranium, the excretion would last for quite
6 some time. There would be --

7 **MR. GIBSON:** Could you speak up, please?

8 **MS. BRACKETT:** I've got the microphone in my
9 hand. With plutonium and uranium, they're
10 retained in the body for a long time and
11 therefore excreted for a long time, so even if
12 at a later date there was nothing detectable,
13 we would still perform a missed dose on -- on
14 that results so that if -- if the intake had
15 resulted in something that would yield a result
16 less than the MDA at -- at a later sample we
17 would basically be overestimating the intake.
18 We can put -- you know, we can estimate what
19 the intake and subsequent dose would have been
20 based on later bioassay data. And if the
21 person were not monitored at all, we do have a
22 coworker study that's being done for -- for
23 Rocky Flats. I thi-- I believe it was just
24 approved within the last week, and that's based
25 on all of the available bioassay data at the

1 Rocky -- Rocky Flats site.

2 DR. ULSH: So TIB-38 or 50 --

3 MS. BRACKETT: 38, I believe -- yes.

4 DR. ULSH: -- 38, yeah.

5 MR. GRIFFON: That was kind of a blanket answer
6 for unmonitored workers --

7 DR. ULSH: For unmonitored, right.

8 MR. GRIFFON: -- that coworker approach, but
9 the allegation's a little different so I think
10 I've got to reword that response.

11 DR. ULSH: Okay. Thank you, Liz. Is there
12 anything else you want to discuss on that
13 issue?

14 MR. GRIFFON: I don't think there is.

15 DR. ULSH: Okay. Number 27 is a no further
16 action required, same with number 28. Number
17 29 I think we handled this morning when we
18 discussed Arjun's write-up on other
19 radionuclides. I see nods so I guess we're
20 okay there.

21 **SAFETY CONCERNS**

22 Okay, that brings us to number 30 and these are
23 the safety concerns. Let me walk you through
24 the history of this issue. SC&A expressed some
25 concern about -- I believe it was seven safety

1 concerns -- not concern, but they identified
2 them as being of interest. And I went back and
3 pulled those seven safety concerns and
4 presented an evaluation of them. I know that
5 in the write-up that Joe sent over this past
6 week there was some discussion on I think two
7 of them.

8 **MR. FITZGERALD:** Two of them, with one in
9 particular. But Kathy can certainly go through
10 that.

11 **DR. ULSH:** Do you want to go into those, Mark,
12 those two in particular, or -- because -- well,
13 let me just give you the rest of the picture
14 and then we can decide whether we want to go
15 into these.

16 At the last working group meeting -- I can't
17 remember who said it, it may have been Tony
18 DeMaiori, made us aware that there was a
19 database or, you know, a collection of these
20 safety concern documents, and so the working
21 group asked us to identify that -- determine
22 whether that database was around and we could
23 access it. We did find a spreadsheet that
24 presents about 5,000 of the safety concerns.
25 The earliest one in that spreadsheet is in

1 1970. Now you might have seen an earlier e-
2 mail, Mark, that I sent to Kathy. I don't know
3 if that's a function of the database -- in
4 other words, the database only captures them
5 starting in 1970, or if this mechanism of
6 dealing with issues through the safety concern
7 system only started in 1970. I don't know
8 exactly, you know, why we started in '70. But
9 it goes from '70 all the way up into the 2000s.
10 And I went -- and there are 5,000,
11 approximately, safety concerns listed and that
12 has been posted on the O drive.

13 I went through and examined -- I suspect this
14 is similar to what SC&A did to identify the
15 original seven -- looked for anything that
16 looked interesting in terms of a data integrity
17 -- you know, the title or the short description
18 suggested might have some relevance to data
19 integrity. A lot of these are going to be --
20 once we get them, turn out not to be, just like
21 the original seven, I suspect.

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

23 **DR. ULSH:** Yeah. But I've requested those from
24 the folks at Mountain View. They have sent me
25 all of them but maybe three over the course of

1 very late last week and early this week.

2 **MR. MEYER:** We've -- actually I think we got
3 the last ones in yesterday (unintelligible)
4 quite a stack (unintelligible).

5 **DR. ULSH:** Yes. I have not obviously had time
6 to review those, but I will do an analysis on
7 the second set similar to the first seven and,
8 you know, sub--

9 **MR. GRIFFON:** Did SC&A give you input on
10 selections --

11 **DR. ULSH:** No, this -- no, this is one thing
12 that perhaps we should talk about. I went
13 through the list myself when I got it. It's
14 posted on the O drive. You know, if there are
15 additional ones that you're interested in, let
16 me know and we'll, you know --

17 **MR. GRIFFON:** I was just -- it might be
18 worthwhile for SC&A to -- to do the same with
19 that list, look it over and...

20 **DR. ULSH:** Have fun, there's 5,000 of them.

21 **MR. GRIFFON:** Also -- also, you know, search
22 it or whatever, look it over, sort it, but also
23 look at what Brant's already requested and --

24 **MR. FITZGERALD:** Right, that -- we --

25 **MR. GRIFFON:** -- make a determination if it's

1 representative of what you're seeing. I mean -
2 -

3 **MR. FITZGERALD:** Yeah.

4 **MR. GRIFFON:** -- I don't think we have to get
5 every one, you know.

6 **DR. ULSH:** And I did -- I did include -- this
7 is an Excel spreadsheet. I did include the
8 master list, which includes all 5,000, and then
9 two separate work sheets, one that identifies
10 the one that I thought were interesting and in
11 a separate work sheet the ones that I thought
12 were probably not -- I want to be careful how I
13 say that -- might be relevant to data
14 integrity. I don't mean that they're not
15 important, but...

16 Okay. Now -- but let's go back to this issue
17 with the original seven. When I analyzed --
18 when I evaluated the original seven, I -- my
19 conclusion was that none of them really
20 presented a data integrity issue. I think that
21 SC&A may not agree completely with -- with that
22 for two of them that they've listed here.

23 **MR. GRIFFON:** One of them --

24 **DR. ULSH:** Is it just one --

25 **MR. FITZGERALD:** One of them in particular.

1 **DR. ULSH:** Oh, I'm sorry.

2 **MR. FITZGERALD:** The other one's sort of
3 (unintelligible).

4 **DR. ULSH:** Okay. One of them -- was it 71-4,
5 is that --

6 **MS. ROBERTSON-DEMERS:** That's the one.

7 **DR. ULSH:** Okay, I'm trying to -- I'm looking
8 through your write-up here -- ah, here it is.

9 **MS. ROBERTSON-DEMERS:** Basically it comes down
10 to the -- the same type of issue where the
11 employee says that he got his badge results for
12 December of '70 and they did not reflect the
13 high neutron exposure which was out in the
14 field. And this is kind of being addressed in
15 some of the other items already.

16 **DR. ULSH:** Okay. I see where you're -- what
17 you're saying, Kathy. This is an issue that
18 we've already discussed at this meeting. There
19 was one part that kind of puzzled me, though,
20 and that's -- well, I guess there's no page
21 number. It's right before Section 2, the two
22 paragraphs right above that, and it says that -
23 - well, first of all, let me give you some
24 background on this.

25 Like Kathy said, this -- this -- the concern

1 expressed in this safety concern was that the
2 film badge results didn't reflect the
3 conditions in the field. And my response --
4 oh, okay. The -- in the SC&A write-up it says
5 that this is closely related to the concerns
6 over "no current data available" results on
7 badge reports. And I didn't see a connection
8 there. Maybe you can elaborate on that.

9 **MS. ROBERTSON-DEMERS:** Well, all of this really
10 gets down to they don't believe what dose they
11 were given, and maybe that's not the right --
12 the right -- maybe I need to be broader in that
13 statement.

14 **DR. ULSH:** Okay.

15 **MS. ROBERTSON-DEMERS:** But --

16 **DR. ULSH:** I mean it seems to me that --

17 **MS. ROBERTSON-DEMERS:** -- a lot of the -- a lot
18 of the examples that are given in the petitions
19 are very, very, very similar to -- to this
20 safety concern.

21 **DR. ULSH:** I agree, and -- and I think -- I
22 mean we have frequently heard this, both in the
23 petition and in the public comments. The "no
24 current data available" I think is an important
25 issue, but I don't think it's the one that

1 we're dealing with on this particular safety
2 concern. It's more with I don't believe my
3 badge results.

4 **MR. FITZGERALD:** Right, I think that's what
5 she's saying, too. That was -- that was her
6 intent on that one.

7 **DR. ULSH:** Okay, good. Good. I guess that was
8 the only thing I wanted to --

9 **MR. FITZGERALD:** Which is the same issue we
10 discussed earlier, so I'm not sure, you know,
11 beyond continuing what we're continuing. The
12 action, as I understand it, is to validate the
13 representativeness of these seven by looking at
14 the --

15 **MR. GRIFFON:** Yeah, if you can review the list
16 also --

17 **DR. ULSH:** Well, it's not the seven, it's the
18 additional --

19 **MR. FITZGERALD:** No, the -- yeah.

20 **MR. GRIFFON:** The additional ones that's in
21 his requested --

22 **DR. ULSH:** -- ones yet.

23 **MR. FITZGERALD:** Yeah, the 5,000. I thought I
24 heard that right.

25 **DR. ULSH:** If there are other individual ones

1 that you want me to get, I'll get them.

2 **MR. GRIFFON:** How many did you -- I -- I'm
3 refreshing my...

4 **DR. ULSH:** On the order of 30 or so, 20 or 30.

5 **MR. GRIFFON:** It wasn't hundreds.

6 **DR. ULSH:** No, no.

7 **MR. FITZGERALD:** Where do these sit now,
8 they're on the --

9 **DR. ULSH:** They're on the O drive --

10 **MR. FITZGERALD:** -- the O drive now, right.

11 **DR. ULSH:** -- in the normal place. If there
12 are additional -- you know, a couple of ones
13 you want me to get, I'll do that. If -- if you
14 want several hundred, let's talk.

15 **MR. GRIFFON:** No, I mean -- I mean I would say
16 you should look at it in the light of there's a
17 few others that look interesting, but you think
18 that Brant's list is representative. I don't
19 think we need to go there, you know.

20 **MR. FITZGERALD:** Right, right.

21 **MR. GIBSON:** This is Mike Gibson. I guess --
22 you know, my only comment would be, too, if --
23 if there's that many complaints -- and again, I
24 know we need to pare them down somewhat, but if
25 there's that many complaints, let's -- let's

1 put it on the scale here and let's see are the
2 workers right or is the program right, you
3 know. I'm not saying look into every one of
4 the -- the cases, but -- but there again, if
5 there's that many, you know, there's not that
6 many workers that are going to make complaints
7 if -- if there's something they see that's not
8 -- I mean these are Q-cleared, well-trained --
9 God knows, DOE put us through enough training,
10 you know, the -- it seems to me there would be
11 enough weight there that you almost have to put
12 it on a scale and weigh the balance.

13 **MR. GRIFFON:** Well, I -- I was wondering -- it
14 might be useful -- I don't know if -- did this
15 in any way when you looked through these. It
16 might be useful to characterize them where --

17 **DR. ULSH:** I was just going to do that, Mark --

18 **MR. GRIFFON:** -- you know, where there's
19 different -- I mean there's safety concerns,
20 then there's ones that are sort of specific to
21 dosimetry issues -- right? -- and that's where
22 you tried to (unintelligible) but can you sort
23 of give us (unintelligible) out of the 5,000
24 what categories do they fall into, maybe.

25 **DR. ULSH:** Mike, I would encourage you to take

1 a look at the -- at the spreadsheet because a
2 very great number of these are obviously not --
3 they're related to safety issues only in a very
4 indirect way. For instance --

5 **MR. GRIFFON:** I mean here's -- here's one like
6 lack of proper equipment to complete safe drum
7 movement. There's a -- there's a lot of safety
8 stuff in here --

9 **DR. ULSH:** That's an important issue. There
10 are some that -- the locker rooms are filthy.
11 Well, that's certainly an important issue, but
12 it doesn't really, you know, rise to a data
13 integrity -- I think what -- what I was really
14 keeping an eye out for was anything that
15 indicated a pattern. You know, a concern that
16 kept coming up over and over and over again,
17 and I'll be prepared to discuss whether there
18 is that kind of a pattern or is not that kind
19 of a pattern once I finish the analysis on
20 these. So I would encourage you, Mike, it's --
21 it's on the O drive there. Take a look and get
22 a feel for the kind of concerns that are
23 expressed here. Some of them are certainly
24 safety related. Some of them are perhaps not.

25 **MR. GRIFFON:** Or -- or -- or some are rad

1 safety related --

2 **DR. ULSH:** Or industrial hygiene.

3 **MR. GRIFFON:** -- some are -- some are
4 industrial hygiene or industrial safety --

5 **DR. ULSH:** Or just general hygiene if the
6 locker rooms are filthy.

7 **MR. GIBSON:** Right, and believe me, being a
8 past union president, you know, I know people
9 have told me that they didn't like the color of
10 the clothes that the company issued them. I
11 understand all that --

12 **DR. ULSH:** Well, there are some of those in
13 there.

14 **MR. GIBSON:** -- so I understand there's
15 ridiculous claims, you know, this and that, but
16 -- yeah, I'll look over that.

17 **DR. ULSH:** Yeah, and please --

18 **MR. GRIFFON:** I'm not even saying ridiculous,
19 I'm just saying maybe not rad -- rad-
20 applicable, you know, radiation-applicable.

21 **DR. ULSH:** And please don't misunderstand me.
22 I'm not saying that they're all that way.
23 There are certainly some very important safety
24 issues raised in some of these concerns, but --
25 but there's also a set in there that really

1 aren't, I don't think.

2 **DR. MAKHIJANI:** Brant, where is this -- where
3 is this --

4 **MR. GIBSON:** Right, I'm just -- well, I'm just
5 saying I've been down that road, but -- you
6 know, let's --

7 **DR. ULSH:** You want to know the location,
8 Arjun?

9 **MR. GIBSON:** -- let's not discount -- let's not
10 discount them all, let's --

11 **DR. ULSH:** Oh, no -- no, no.

12 **MR. GIBSON:** -- you know, and certainly not
13 inspect them all, but you know, at least let's
14 look at it fair and balanced.

15 **DR. ULSH:** I agree.

16 **DR. MAKHIJANI:** Where is this 5,000 safety
17 concern spreadsheet? I'm not finding it.

18 **DR. ULSH:** It's -- okay, I can get you at least
19 part of the way there. It's on the O drive at
20 document review --

21 **MR. GRIFFON:** AB document review.

22 **DR. ULSH:** -- AB document review Rocky Flats.
23 Now there are two folders, it could be --

24 **MR. GRIFFON:** July 26th meeting.

25 **DR. ULSH:** Thank you, Mark.

1 all of the rad files that match until I find
2 the right person. And I did that in NOCTS. If
3 I didn't get a hit there, I went back to Scott
4 Raines* at the DOE and said give me all the rad
5 files for anyone with this name, and I went
6 through, got those rad files and checked them.
7 So let me characterize -- I'd like to bin
8 these.

9 **MR. GRIFFON:** What happened to HIS-20?

10 **DR. ULSH:** Well --

11 **MR. GRIFFON:** I mean I would have done this a
12 little quicker.

13 **DR. ULSH:** No, no, not -- not really, because
14 what we're talking about are --

15 **MR. GRIFFON:** Name, date, I'm there, you know.

16 **DR. ULSH:** But the concern is that the worker's
17 record doesn't reflect --

18 **MR. GRIFFON:** Well, if --

19 **DR. ULSH:** Well, I understand, Mark, but I
20 wanted to --

21 **MR. GRIFFON:** (Unintelligible)

22 **DR. ULSH:** Yeah, but some of these -- when you
23 look through here, some of these are going to
24 be -- well, like I said, in order to get to
25 HIS-20 I'm going to have to have, you know, the

1 worker's identifiers and, you know, I was just
2 dealing with last names here, so --

3 **MR. GRIFFON:** Not necessarily, but go -- go
4 ahead -- go -- go ahead.

5 **DR. ULSH:** Right, in some ca-- in most cases
6 there were just last names. Sometimes he gave
7 the badge number.

8 **MR. GRIFFON:** I mean I found -- I found almost
9 all the design cases in HIS-20 and I still
10 don't have an identified database.

11 **DR. ULSH:** Right, but some of these -- some of
12 these --

13 **MR. GRIFFON:** As I've said before.

14 **DR. ULSH:** -- some of these, too, are incident
15 reports.

16 **MR. GRIFFON:** Yeah, yeah.

17 **DR. ULSH:** So I -- I just thought it was
18 prudent to go to the -- to the rad file for
19 them.

20 Now I'd like to characterize -- bin these into
21 what I found. One category could have been
22 there was a disagreement between the rad file
23 and the log book. That would obviously be a
24 very great concern. I didn't find any of
25 those, so far.

1 And now let me tell you where I am in this
2 analysis. I found approximately I think 80
3 specific things I could check -- on the order
4 of 80. Let's see, 31 and nine is 40 -- yeah,
5 about 80; 39 of them I'm still investigating.
6 I haven't found a match, but there are other
7 rad files out there that are candidates.
8 Thirty-one of these agree completely. There's
9 an exact agreement between the log book and the
10 worker's rad file. In other words -- let me
11 give you an example.
12 Well, for instance, on page 3 of my write-up,
13 Mr. Kittinger -- Kittinger listed some
14 dosimetry results for particular individuals,
15 and there are several here that -- where I
16 categorized them as "agree with Kittinger log,"
17 and in that case I had a very -- I had an exact
18 dosimetry result. Say for instance, the first
19 entry, 3160 millirem for that particular
20 quarter, I found that number at -- in the -- in
21 the rad file, agreed completely. There were 31
22 of those.
23 There were a second set -- second category of
24 entries that I found where I don't want to
25 categorize it as an exact match because the

1 information either in the log book or in the
2 rad file was not specific enough for me to say
3 the numbers match exactly. But in general,
4 they appeared to be in agreement. An example
5 here that I've presented on the first page, on
6 page 82 of the log book, for instance, an
7 employee's hand exposure is given as 19,265
8 millirem for the 4th quarter through December
9 8th of '67. Well, when I went to the rad file
10 for this particular employee, I've got the
11 quarterly dose, the entire 4th quarter dose of
12 22,125 millirem. So the -- the log gave you a
13 partial result for the quarter. I pulled out
14 the quarterly result from the rad file, and it
15 looks to be on the same order of magnitude.
16 The numbers are a little different because the
17 rad file has the whole quarter.
18 Those I categorized as being consistent. I
19 didn't characterize it as agreement because he
20 didn't have exactly the same number, but
21 they're consistent.
22 And then, as I said, the other category, there
23 are 39 of them that I'm still investigating.
24 And finally, instances where there was definite
25 disagreement, I've found zero so far.

1 Now I think at this point I want to open up for
2 discussion with the working group and SC&A the
3 path forward on these log books. Let me first
4 of all give you a feel for the magnitude of the
5 number of rad files that we looked through.
6 Now this list that I'm handing around is only
7 the ones that I could not find in NOCTS, the
8 ones that I retrieved from Scott Raines, so
9 there are probably 20 or 30 percent higher than
10 this actual number. And you'll see it takes up
11 three single-spaced pages. I've gone through
12 all of these rad files, and I told you that
13 they range up to 600 pages -- 200 is typical.
14 I was fortunate in that the Kittinger log --
15 this seems like a trivial consideration, but it
16 really isn't. Mr. Kittinger kept very legible
17 logs, very organized. His writing is good. I
18 can read them fairly quickly. I'm sending
19 around some example pages from Mr. Kittinger's
20 log and some example pages from another log.
21 So the bottom line is that this -- the review
22 of this log represents a significant investment
23 in resources. So far I've spent approximately
24 40 hours reviewing this and I've resolved about
25 half the cases -- half of the data points from

1 the Kittinger log. You can anticipate that by
2 the time it's done, it might approach 80 hours
3 -- 80 man hours.

4 The Kittinger log, as I mentioned, is a very
5 legible one. If you look in the handout I just
6 provided, I've also provided some example pages
7 from another log just to give you an example of
8 probably both ends of the spectrum. And what
9 I'm -- what I'd like you to do is -- is think
10 to yourself, how long would it take to review a
11 log with this kind of entry compared to the
12 Kittinger log. It would take a long time. The
13 writing is pretty bad, the copy quality is not
14 great. So what I'm saying is that the
15 Kittinger log probably represents the best case
16 and this one represents more towards the worst
17 case.

18 Now with regard to how we should proceed on
19 these log books -- and I'm not including the
20 urinalysis log. We've already discussed that
21 separately. But in terms of, you know, like
22 the daily decon logs or the foreman's logs or
23 the RCT logs, what I'd like to open up for
24 discussion -- what I'd like to suggest to you
25 is that these large-scale drift net type

1 operations -- we put out a net and see what we
2 can dredge up -- may not -- may not be the best
3 return on our investment. What I'm thinking is
4 if there are specific examples, specific
5 concerns -- a worker has expressed a concern
6 about a particular time frame -- we should
7 focus on those. That's where we're most likely
8 to see the problems anyway.

9 But what we're finding with the Kittinger log
10 so far is agreement. I mean it's not done, the
11 analysis is not complete --

12 **MR. GRIFFON:** But where you find --
13 (unintelligible) I think so. I knew that that
14 was the upshot of this anyway, but I mean 39
15 that you don't know yet. Right?

16 **DR. ULSH:** Yeah, you're right, I'm half done,
17 so --

18 **MR. GRIFFON:** So what does that mean? You say
19 you have zero that disagree, but 39 you're
20 still investigating --

21 **DR. ULSH:** Let me give you an example, Mark.

22 **MR. GRIFFON:** -- It's not clear.

23 **DR. ULSH:** Take the -- take the first -- this
24 handout. When I say I'm still investigating,
25 the first name on the list here, there are one,

1 two, three, four -- five of them. I've maybe
2 reviewed two of them and haven't found a match.
3 I'm still waiting on the other three to come
4 in. Those would fall into the other -- they
5 would fall into the category of under
6 investigation.

7 **MR. LITTLE:** Because you have -- there are five
8 of the same name and only the last name.

9 **DR. ULSH:** Yes, exactly. I mean these are the
10 candidates right here, and you can see that for
11 some of the more common names there are --
12 there are significant numbers of them.

13 Now I would propose that I finish this analysis
14 on the Kittinger log. I mean we started it, we
15 might as well -- I might as well finish it.

16 But in terms of looking forward to the other
17 log books and how we approach them, I think we
18 need to discuss what makes sense, keeping in
19 mind that -- so far, anyway; I'm only half done
20 with the Kittinger log --

21 **MR. GRIFFON:** I think (unintelligible).

22 **DR. ULSH:** -- so far I'm not finding the kind
23 of issues that we were looking for.

24 **MR. GRIFFON:** All right. You want to hear my -
25 - my simplistic approach? I mean I -- I think

1 you're -- you're -- you've made the argument
2 again and again to us that HIS-20 is
3 representative so I think we've got two prongs
4 that I'm interested in. One, I'm asking for
5 you to validate and verify, or at least check
6 reliability of is our sort of phrase, HIS-20.
7 On the other hand, you know, you're -- you sort
8 of -- you have these logs that have
9 individuals' datas in -- individual data, in
10 some cases, in -- not all --

11 **DR. ULSH:** In some cases.

12 **MR. GRIFFON:** -- not -- not all of it's that.

13 **DR. ULSH:** Right.

14 **MR. GRIFFON:** I've looked at a few of the
15 others just last night, and you can pick out
16 some points, so you have a data point and a
17 name, and I'd say go to HIS-20 and if you don't
18 get a match --

19 **DR. ULSH:** That's certainly --

20 **MR. GRIFFON:** -- then you note that.

21 **DR. ULSH:** That's certainly a possibility where
22 we have a specific number for an external
23 dosimetry result. I didn't --

24 **MR. GRIFFON:** To pull the full rad file, I
25 agree, is just -- I think --

1 **DR. ULSH:** But that's the only place we're
2 going to see some of this stuff in the log.

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

4 **DR. ULSH:** So maybe what you're suggesting is
5 that we --

6 **MR. GRIFFON:** Triage this maybe and say let's
7 look at this --

8 **DR. ULSH:** That's what I'm getting at. Let's
9 talk about --

10 **MR. GRIFFON:** -- database first and if there --
11 I mean if there's large discrepancies there,
12 then we -- we have to consider other
13 alternatives. But if you have very good
14 agreement there, then I think I'm with you.

15 **DR. ULSH:** Okay, but that --

16 **MR. GRIFFON:** -- this confirms that.

17 **DR. ULSH:** Keep in mind that's going to limit -
18 - okay, if I'm -- if I'm talking about the
19 Kittinger log and to the extent that it's
20 representative, that's going to limit the
21 number of entries that we can check to only
22 those that have information contained in HIS-
23 20. Like a particular dosimetry result for a
24 particular badge exchange cycle, we can -- we
25 can check those.

1 **MR. GRIFFON:** Right, and give us a sense --
2 'cause we just got this stuff, but give us a
3 sense of how that -- out of your list of about
4 100 or so -- was it about 100, or more?

5 **DR. ULSH:** Eighty.

6 **MR. GRIFFON:** Eighty. Out of your list of 80,
7 how are -- how many of that would -- would have
8 names and the specific data?

9 **DR. ULSH:** Specific external dosimetry results?

10 **MR. GRIFFON:** Or -- or internal. I mean I
11 found some internal. I don't know if this one
12 has internal, but --

13 **DR. ULSH:** The Kittinger log I think does not
14 have internal results, because that's really
15 not something that Kittinger would have had
16 access to.

17 **MR. GRIFFON:** I don't know who -- who he is.

18 **DR. ULSH:** I think --

19 **MS. ROBERTSON-DEMERS:** He does have reference
20 to sending people to the whole body counter.

21 **DR. ULSH:** Yes. Yes, he does have reference to
22 that, and that is usually tied to a specific --
23 specific incident that occurred, and so I went
24 in and checked the rad file for an incident
25 report and a whole body count on that date. An

1 incident report is not something you're going
2 to be able to check with HIS-20.

3 **MR. GRIFFON:** But -- but if you look for a --

4 **DR. ULSH:** Whole body count, you probably
5 could.

6 **MR. GRIFFON:** -- on that given date --

7 **DR. ULSH:** Yes, you probably could do that.

8 **MR. GRIFFON:** -- HIS-20. Right?

9 **DR. ULSH:** Yeah, so there are certainly a sub-
10 set of these that can be checked, and maybe
11 that's the answer.

12 **MR. GRIFFON:** No, I mean is it -- out of 80 is
13 it five or 50 --

14 **DR. ULSH:** Oh, out of 80 -- I'm just guessing
15 here, Mark, maybe 20 or 30. This is my gut
16 feel.

17 **MR. GRIFFON:** And what's the nature of the rest
18 of them? I'm just scanning through, but an
19 incident occurred or something like that or --

20 **DR. ULSH:** Yes, or a person was placed on
21 restriction. I don't know, I'm just looking
22 here -- yeah, someone was overexposed, but he
23 doesn't really give quantitatively what that
24 means exactly.

25 **MR. GRIFFON:** But he gives a name.

1 **DR. ULSH:** Yes, it does give a name, yes. That
2 kind of thing. I mean other things that you
3 couldn't -- you know, I'll let you look through
4 this at leisure. I just wanted to give the
5 working group a feel for the magnitude of what
6 we're talking about when we're talking about
7 reviewing these logs, and get a feel for what
8 exactly it is you want us to do -- how to
9 approach these logs. So Mark, what I'm hearing
10 --

11 **MR. GRIFFON:** (Unintelligible) sense -- my
12 main -- my sense would be to -- to sample some
13 more of these logs, but do it against HIS-20
14 only and -- and then if -- you might -- I mean
15 you might have a couple of different answers
16 still. You might have agrees, disagrees or
17 inconclusive, because of -- a number of
18 reasons. You might have only Smith and you
19 can't -- you know, you just can't discern which
20 Smith it was in the database.

21 **DR. ULSH:** Right.

22 **MR. GRIFFON:** You know, so you will -- may
23 still have that issue, but I would think that -
24 - and -- and if you were getting, you know,
25 over a certain percentage that matches, I think

1 that adds to the check on the reliability of
2 the database, so --

3 **DR. ULSH:** Okay. If I can --

4 **MR. GRIFFON:** -- that's the way I would
5 approach it. I don't know if SC&A --

6 **MR. FITZGERALD:** Well, yeah, I -- I think -- my
7 sense was -- I think triage is a good word. I
8 think you're scanning these and looking for
9 instances where you might have a high anomalous
10 reading of some sort, then you would run that
11 against the database and see if it shows up. I
12 mean if it doesn't, this is -- sort of
13 corroborates some of the concerns the workers
14 have expressed that maybe these fields have
15 existed but for some reason or another they
16 didn't get a -- a reading. And if you check
17 maybe a dozen instances over these logs of that
18 -- in that case and you found all of them
19 matched, I think that would go a ways to settle
20 that issue, to some -- you know, to that
21 extent.

22 **DR. ULSH:** Is that the kind of thing you're
23 thinking about, Mark, maybe a dozen instances
24 pulled from various logs? Is that what you're
25 thinking?

1 **MR. FITZGERALD:** Well, the number I think is
2 not the point I'm trying to make. I'm just
3 saying that instead of taking one log book, and
4 I think -- certainly the Kittinger example is
5 an example of doing something that's very, very
6 rigorous; you know, chasing down every single
7 reference in there. But taking a look at --
8 across the different log books, identify
9 instances -- you know, I think we've talked
10 about this case. I think Kathy's raised these
11 cases and the workers have raised these cases
12 where these fields have existed over time, it's
13 sort of anecdotal and if you actually found a
14 reference in a log book you could actually run
15 to ground by comparing it with the HIS
16 database, then you could, you know, establish
17 okay, it -- you know, whether it's a dozen or
18 20, whatever you find, I mean across these
19 different log books, that would tend to
20 validate that -- it seems like you could
21 actually track these down and establish the
22 reading that goes along with the -- the
23 reference by the -- the log.

24 **DR. ULSH:** Okay, keep in mind that -- I mean
25 regardless of what kind of analysis we do, we

1 have to -- when we pick a log book to look
2 through, we're going to have to, you know, read
3 through the whole log book, so that's an
4 investment that's not going to be -- not going
5 to get around -- we're not going to get around,
6 but -- so I guess I'd like to --

7 **MR. GRIFFON:** But that's not insurmountable if
8 you -- if you're --

9 **DR. ULSH:** No, it's -- well --

10 **MR. GRIFFON:** -- scanning for names and numbers
11 -- I don't know, I was doing in last night.
12 Like I said, you can get --

13 **DR. ULSH:** Okay, I guess I want --

14 **MR. GRIFFON:** -- like me, it's a little longer.

15 **DR. ULSH:** Or me. Okay, I'm not --

16 **MS. MUNN:** Well, good, Mark's already done it
17 for you.

18 **DR. ULSH:** Mark, why don't you report to us
19 what you found?

20 **MR. GRIFFON:** What I find.

21 **DR. ULSH:** Well, I guess --

22 **MR. GRIFFON:** I mean there's some -- and
23 there's some -- some obvious ones, but there's
24 also some a little more subtle that are not
25 completely quantitative, but the one you -- the

1 example you just gave, that they were whole
2 body counted, there's no number there but you
3 can check that they were whole -- you know,
4 that there is something there -- some data from
5 --

6 **DR. ULSH:** Right.

7 **MR. GRIFFON:** -- the one that I -- and I
8 haven't found many, just scanning last night,
9 but one that I recall is the individual was
10 involved in a neptunium -- and that stood out
11 to me -- neptunium spill and a highly pure
12 plutonium spill and, you know, the thought went
13 through my mind they had a badge number and
14 name, follow up to see if -- if it -- now that
15 might be an inconclusive one --

16 **DR. ULSH:** Yeah, you won't find it --

17 **MR. GRIFFON:** -- 'cause you don't know
18 necessarily that they were -- it didn't -- the
19 log didn't say -- it said so-and-so was
20 involved in this -- in this spill with this and
21 this. Now were they followed up with gross
22 alpha or were they followed up at all, but it
23 interested me 'cause I was curious whether they
24 were doing neptunium-specific urinalysis, and
25 probably not --

1 **DR. ULSH:** They're not, they're absolut--
2 they're definitely not.

3 **MR. GRIFFON:** -- but they would have -- right,
4 but they might have had gross alpha there,
5 so...

6 **DR. ULSH:** Might have. Okay, so I guess in the
7 interest of making sure that we're all on the
8 same page, I just want to pull the string a
9 little bit further about what your expectations
10 are and what you would like us to do. So we've
11 got some different kinds of logs. We've got
12 foremen's logs, which I think everyone was in
13 agreement about at the last working group
14 meeting that those may not be the most helpful
15 type of logs to look at. But then we also have
16 the Kittinger logs, which I think Kittinger was
17 a health physics supervisor. We've got
18 radiation con-- RCT logs, and we've got daily
19 decon logs, I think.

20 **MR. MEYER:** Yeah, right.

21 **DR. ULSH:** So what kind of log books are we
22 interested in looking at? Probably not
23 foremen, but now we've got RCT, daily decon or
24 -- and -- did I forget one?

25 **MR. FITZGERALD:** Decon. Tony raised the --

1 **DR. ULSH:** The daily decon.

2 **MR. FITZGERALD:** -- the daily decon's a good
3 place to look in terms of those kind of things.

4 **DR. ULSH:** So maybe pick a representative from
5 each of those categories and look?

6 **MR. FITZGERALD:** Kathy, do you have any
7 perspective? You spent some time on these.

8 **MS. ROBERTSON-DEMERS:** Well, I think there --
9 they should cover different areas. Kittinger
10 was the 700 area, 771 in particular.

11 **MR. GRIFFON:** So we want -- we're --

12 **MS. ROBERTSON-DEMERS:** So --

13 **MR. GRIFFON:** -- sample across different
14 buildings and also by different types of --
15 those three different types of logs maybe?

16 **MS. ROBERTSON-DEMERS:** Right.

17 **DR. ULSH:** Okay. Now you keep in mind that
18 every variable you add here is a multiplier.

19 **MR. GRIFFON:** Right.

20 **MR. FITZGERALD:** Why don't we establish how
21 many variables we're talking about before --
22 and maybe that's the piece of information that
23 no one has at this point.

24 **DR. ULSH:** So we've got the different kids of
25 log books.

1 **MR. FITZGERALD:** Three kinds, right.

2 **DR. ULSH:** Three kinds. Now we've got
3 buildings.

4 **MS. MUNN:** How many buildings?

5 **DR. ULSH:** I don't know.

6 **MS. ROBERTSON-DEMERS:** I would do it by area,
7 A, B, C and D.

8 **MS. MUNN:** Okay, three times three, that's
9 nine.

10 **MR. GRIFFON:** Four -- four times three.

11 **MS. MUNN:** Four times three -- oh --

12 **MR. GRIFFON:** It's a little late for Wanda.

13 **DR. ULSH:** You see where I'm going with this?
14 We're already at 12 logs and I've --

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

16 **MR. FITZGERALD:** Yeah.

17 **DR. ULSH:** And now you've got to multiply by
18 the number of things that we check out of each
19 log. That's the big one. Give me a feel for
20 what you want I guess is --

21 **MS. MUNN:** Is this the kind of number that has
22 an exclamation point after it?

23 **DR. ULSH:** Uh-huh.

24 **MR. GRIFFON:** You know, you -- you -- part --
25 part of the problem is -- I mean I think we're

1 not expecting Kittinger (unintelligible) this
2 time, so you go through one of these logs and
3 compare it against HIS-20, what do you -- what
4 do you expect that would take --

5 **MS. ROBERTSON-DEMERS:** Actually --

6 **MR. GRIFFON:** -- ten -- ten work -- ten or 20
7 work hours?

8 **DR. MAURO:** Could we step back a little bit?
9 I'm too -- I'm lost in the woods.

10 **DR. ULSH:** Okay.

11 **DR. MAURO:** Okay. It sounds to me that there
12 is a record of worker exposures that is the
13 record -- a record that DOE provides to NIOSH
14 that says when you do your dose reconstructions
15 for this worker, here's the numbers you use,
16 here's -- here's all the -- here's the records.
17 That becomes the thing that we are supposed to
18 trust as being -- we're going to do a dose
19 reconstruction. Here's the records that DOE
20 has provided.

21 Now, during this process the perturbation comes
22 in. A large number of people don't believe
23 that those records can be trusted -- or some --
24 not a lot -- some people, some people
25 (unintelligible) -- you have to bear with me,

1 I'm stepping back. Now -- so then a judgment
2 is made collectively by the working group and
3 SC&A that well, you know, there are other
4 documents out there that contain information,
5 and I'm presuming that they contain information
6 that somehow are decoupled from the information
7 that DOE is providing to NIOSH. In other
8 words, if there is a conspiracy to falsify
9 records, what's going to happen -- I mean I use
10 -- be very blunt -- to try to systematically
11 cover up the true doses a group of people may
12 have experienced. What I'm hearing is, by
13 going to these other places -- no one's that
14 good at covering their trail. Okay? That's
15 what we're getting at. Is anyone that good at
16 covering their trail, because there are --
17 there are six, seven different types of
18 documents -- Kittinger log is just one of
19 several -- where my God, you've got to really
20 be good if you're going to try to falsify
21 records across such a range of different places
22 where information's contained. Okay?
23 Now, so -- so what we're trying to do right
24 here is say well, what are we going to look at
25 that's going to give us a degree of confidence

1 that, for all intents and purposes, the records
2 that DOE provides NIOSH can be -- are a
3 faithful representation and were prepared in
4 good faith as best they can, and one of the
5 things we can do is look at some of these other
6 things because we believe they're decoupled.
7 Okay? I guess first and foremost, is everyone
8 comfortable with the fact that they're
9 decoupled? That is, there's no linkage between
10 the work that was done to create the data fi--
11 the original records that a work-- you're using
12 for doing dose reconstruction and what
13 Kittinger did? They're not -- sort of like --
14 this is separate. Kittinger did his own thing,
15 so that -- I mean this is what we're buying in
16 on right now. Am I making sense?

17 **MS. MUNN:** Yes, this is separate from the DOE
18 or AEC -- separate.

19 **DR. MAURO:** It's separate, yeah. Okay. Now --
20 all right. Now what I just heard you say is
21 that okay, let's see -- they're separate.

22 (Unintelligible) in and grab, as best you can
23 out of these -- there's a list of names of
24 people -- I'm not sure how many work log -- how
25 many -- how many people -- and not -- not --

1 did you end up being able to capture and look
2 at and then compare back to see if
3 (unintelligible)?

4 **MR. LITTLE:** Over 80 instances and he's done
5 about half of them.

6 **DR. MAURO:** And out of the half that you've
7 done, everything matched.

8 **DR. ULSH:** Everything has been either in
9 complete agreement or consistent.

10 **DR. MAURO:** Close enough. Close enough.

11 **DR. ULSH:** Yes.

12 **DR. MAURO:** Okay. So what we're saying is --
13 so for the ones you could look at, you got 40
14 out of -- 40 that you said -- and now what
15 we're saying now is -- we're asking ourselves a
16 question. What's the likelihood that there is
17 some kind of systematic error or deliberate
18 falsification in the records that were provided
19 to you by DOE for dose reconstruction, and you
20 did not catch one of them when you looked at
21 this thing? Okay? It's a -- and my -- my
22 intuition tells me, and I don't know the time
23 period covered in those buildings so it sounds
24 like there's these time and building issue, but
25 at least with the buildings and the time period

1 covered by the ones you looked at, what you
2 just told me is there sure as hell wasn't any
3 cover-up or falsification here.

4 **DR. ULSH:** No evidence of it yet.

5 **DR. MAURO:** And that -- no evi-- and -- at 40
6 out of 40 --

7 **DR. ULSH:** Yes.

8 **DR. MAURO:** -- the probability that you missed
9 one -- I mean -- so I mean -- what I'm getting
10 at is that -- all right, now, so there's -- now
11 we're saying that -- wait a minute, there are
12 other -- there -- there are other time periods
13 that Kittinger covers, at least -- there are
14 other documents that are separate from
15 Kittinger that can be looked at. And what
16 we're trying to say is when are we going to get
17 to the point -- have we -- have we hit -- after
18 everything that you've done, have we hit
19 anything that says you know what, this one
20 stinks? Other words, I don't like what I'm
21 looking at here. I can't explain to myself.
22 Is there anything that -- I mean that -- you
23 sort of like take -- you take your hat off and
24 say listen, is there anything that you've seen
25 so far that says you know, this is bothering

1 me. I can't figure out what -- why this
2 happened. Or -- and did you have any of those
3 right now?

4 **DR. ULSH:** Not yet. Now I will caution you to
5 keep in mind the degree of completeness in my
6 analysis. I've analyzed about half of this one
7 Kittinger log. I haven't found anything yet.

8 **DR. MAURO:** But -- and at the same time now --
9 so while that's going on, there's also these
10 individuals that have -- or these named
11 individuals in the affidavits --

12 **DR. ULSH:** Yes.

13 **DR. MAURO:** -- who've raised issues.

14 **DR. ULSH:** Yes.

15 **DR. MAURO:** And to the best of your ability --
16 so this is almost an independent line of
17 inquiry now. Now we're going to look at
18 complaints who -- who believe that something's
19 wrong, which is almost like different than what
20 you're doing here, and you're saying okay, can
21 I find anything there that says I don't like
22 it? For example, I know Hans has mentioned to
23 me there's one case about a lady who had 80
24 millirem in her record and then it was zeroed
25 out and -- and I know that -- my conversations

1 with our SC&A people, that seems to be an
2 unusual thing to happen. Now there may be some
3 reasons for it, there may not be. So bear --
4 I'm sorry, I'm just sort of get-- trying to get
5 my arms around this thing.

6 **DR. ULSH:** Remind me and I'll give you an
7 update on that one, but go ahead.

8 **DR. MAURO:** Oh, okay. So -- and I -- I'm
9 getting to the point where I'm -- what I'm
10 hearing is -- I don't see too much stink coming
11 out of the records. I'm hearing --

12 **MR. GRIFFON:** You want to hear the glass is
13 half empty view of this?

14 **DR. MAURO:** Well, yeah. I mean I'll take --

15 **MR. GRIFFON:** I'm hearing the glass is --

16 **DR. MAURO:** I'm waiting to --

17 **MR. GRIFFON:** -- half full.

18 **DR. MAURO:** No, no, I'm waiting --

19 **MR. GRIFFON:** The glass is half empty is -- is
20 you've got 40 out of 80 that seem to be in
21 agreement, and -- and John, maybe you're a
22 quicker study than I am of this data, but I
23 haven't looked through these so --

24 **DR. MAURO:** No, I'm --

25 **MR. GRIFFON:** -- so assuming there's 40 out of

1 80, I'm also assuming that the other 40 --
2 Brant's probably not going to rush in and say
3 well, I -- you know, I've got this workgroup
4 meeting coming up and I can't really track
5 these yet but I'm going to say right now that
6 they're not consistent with the Kittinger, so
7 they're under investigation.

8 **DR. ULSH:** I'm not making any judgment about it
9 at all.

10 **MR. GRIFFON:** Right, right, they're still under
11 investigation. So I mean I think the --

12 **DR. BEHLING:** The problem wouldn't show up --
13 would certainly show up in the 40 --

14 **DR. MAURO:** Would show up in the first 40 --
15 So -- I mean to go to the next 40, the
16 probability on there -- I mean I get -- I -- I
17 -- my reaction -- right now my reaction is,
18 listening to the probings this ocean that
19 you're sampling from, you know -- this -- the
20 Kittinger really did it for me, actually got --
21 got to me, got to me. When I heard you looked
22 at 40 and you couldn't find any -- and you --
23 you, for all intents and purposes, matched them
24 all, they -- at least for that time period, for
25 that facility, that was captured in this

1 particular look-see, I'm convinced there's
2 nothing -- no shenanigans going on there.

3 **DR. ULSH:** Well, now keep in mind that this is
4 not -- the Kittinger log was not selected at
5 random. Kathy, maybe you can speak to why the
6 Kittinger log in particular was of interest,
7 because I don't really know that.

8 **MS. ROBERTSON-DEMERS:** Oh, I just -- I just
9 threw that out because it was one that I knew
10 had a lot of dose rates and names in it.

11 **DR. MAURO:** Had a what? Sorry, Kathy.

12 **MR. FITZGERALD:** Had dose rates and names.

13 **DR. MAURO:** Oh, yes. So you selected one to
14 see if there was anything that stinks.

15 **MS. MUNN:** And from -- not only that, the time
16 period that it covers is a very interesting
17 time period. We've heard so much about --

18 **DR. MAURO:** It was a nasty time period.

19 **MS. MUNN:** -- '68, '69, all of the things that
20 went on, this is the time this log covers, so
21 that's doubly interesting. It does not,
22 however, address the time frame that we have
23 listed on our matrix, which appears to me to be
24 a logical next look, which is '85/'86. So if -
25 - if we're going to -- if we're going to -- and

1 -- and I agree with you, John, from any
2 statistical point of view, I -- it looks to me
3 as though the Kittinger log is complete. You
4 know, this -- this time period, this building -
5 -

6 **DR. MAURO:** This house is clean.

7 **MS. MUNN:** -- is okay, yeah. There are the
8 other houses. How much you want to look at is
9 the issue that I think must be looked at now.

10 **MR. FITZGERALD:** This is the 100 percent
11 sampling, which I think is reassuring for the
12 time period in question. Now we're saying
13 let's go to a less rigorous sampling to cover
14 other time periods, other locations, not go to
15 this -- this 100 percent sampling, but get
16 enough of a sampling that gives us that
17 assurance to go -- walk away from this. I
18 don't think you need to keep doing 100 percent
19 samplings. I think this one's reassuring from
20 that standpoint.

21 **DR. MAKHIJANI:** Yeah. Could I say a couple of
22 things? I think you -- you picked the 40 --
23 how did you pick the 40 that you looked at
24 versus people you haven't looked at yet?

25 **DR. ULSH:** I didn't pick 40, Arjun. What I did

1 was I started with NOCTS and identified any
2 matches, and then I requested the rest from
3 Scott Raines, and as they came in I analyzed
4 them. So I didn't --

5 **DR. MAKHIJANI:** Okay, so it was sort of, in a
6 way, a -- a fairly random --

7 **DR. ULSH:** Yes, yes.

8 **MR. MEYER:** Yes, Scott -- Scott had no agenda
9 at all.

10 **DR. MAKHIJANI:** My -- my feeling, Mark, is it's
11 not a glass half full/half empty. I think I'm
12 more in John's corner, that if you have done --
13 if you have done a random check of 50 percent
14 of the file and found nothing, it's very
15 unlikely -- if you're -- it's possible you'll
16 find some problems in the other 40, but they're
17 not going to fall into a pattern of data
18 fabrication. I think -- I think that -- in --
19 I -- I -- there are some hunches I have about
20 what kinds of data fabrication problems that I
21 would hesitate to say them on the record, but --
22 -- because I -- because they're just hunches.
23 But what I will say is I think -- I think we
24 need to have a more selective -- if we're going
25 to do this cut across facilities and time

1 periods, we -- we do need to observe some rules
2 of random -- random sampling and -- and sample
3 a few names. And then -- out of the different
4 periods. And my -- my feeling is that we've
5 had a lot of complaints out of the later
6 periods -- obviously because we're hearing
7 people who are -- who worked in the later
8 periods. And if only for that reason, we ought
9 to be looking at these later periods to make
10 sure -- Ms. Munn has just said '85/'86, but I
11 think -- but I -- I think that from the '70s
12 through the '90s would -- would be an
13 interesting period to look at. But here we
14 didn't have '69, so we didn't cover the --
15 **DR. ULSH:** You're right, this -- the --
16 **DR. MAKHIJANI:** -- we didn't cover the --
17 **DR. ULSH:** -- Kittinger log --
18 **DR. MAKHIJANI:** And that's the year that I
19 would look at.
20 **DR. ULSH:** '69?
21 **DR. MAKHIJANI:** Yeah.
22 **DR. ULSH:** So Arjun's put a couple of --
23 **DR. MAKHIJANI:** (Unintelligible)
24 **DR. ULSH:** Arjun's put a couple of ideas on the
25 table. One I like -- well, sorry, that's not -

1 - that -- that didn't sound right. One I
2 especially liked -- one I especially liked, and
3 that is to look at a log book in particular in
4 '69. That is the year of interest. We might
5 want to make a non-random selection there.
6 That I think is a good -- is a really good
7 idea.

8 Now Wanda, where on the matrix were you looking
9 when you said 1985 and 6?

10 **MS. MUNN:** The end of item number 31.

11 **DR. ULSH:** Oh, okay.

12 **MS. MUNN:** It says NIOSH will review -- that --
13 that's the time frame given in --

14 **DR. ULSH:** Oh, this is the one, though, that
15 was in the -- Table 2 of that write-up, I
16 think, Kathy identified from the log, the
17 dosimetry problem log book.

18 **MS. MUNN:** Then it's done.

19 **DR. ULSH:** It's not done. It's not done. But
20 what I'm saying is that -- well, there's
21 another non-random selection that we might want
22 to make. We might definitely want to make, we
23 want to track those down.

24 And now you're talking -- Arjun, you also
25 mentioned the time periods '70 to '90?

1 **DR. MAKHIJANI:** Personally I would -- I would
2 pick -- I would -- if you're going to pick
3 years, I would pick from the '70s onward.

4 **DR. ULSH:** So let's say '69 forward.

5 **DR. MAKHIJANI:** We've looked a lot at the early
6 -- we've looked a lot at the early data. I
7 think -- we haven't found data fabrication
8 problems. We also looked at data fabrication
9 issues in Mallinckrodt in the '50s and did not
10 find problems there. We -- there have been
11 many complaints from later era workers about
12 data fabrication. Mike -- Mike has -- Mike has
13 issues at Mound, for example, and I think it
14 would be --

15 (Telephone interference)

16 **MR. PRESLEY:** Somebody mute their phone,
17 please.

18 (Pause)

19 **DR. ULSH:** Okay, so how about this. Taking all
20 of this into consideration, what everyone has
21 said, we'll look at the -- we'll take a sample
22 of the urinalysis log books, that's one thing.
23 We'll track down the specific instances
24 mentioned in SC&A's write-up Table 2, the
25 '85/'86 dosimetry problem log book, we'll look

1 at those. I -- I'm hearing that it may not be
2 worthwhile to continue to pursue the Kittinger
3 log, that we might be satisfied with the
4 analysis there, or we're not?

5 **MR. GRIFFON:** Oh, yeah, for Kittinger.

6 **DR. ULSH:** Okay, so we're done with --

7 **DR. MAKHIJANI:** I think it's not worthwhile to
8 do the rest.

9 **DR. ULSH:** Okay, we're done with this
10 particular Kittinger log. From the remaining
11 years, '69 especially but extending up to maybe
12 1990, we'll take a sample of the RCT, the daily
13 decon log books, and we'll try to identify
14 maybe five or ten external dosimetry or whole
15 body counts, something that we can bounce out
16 of HIS-- once -- bounce against HIS-20.

17 **DR. MAKHIJANI:** Now are you omitting the '90s
18 because it's decommissioning, or --

19 **DR. ULSH:** No, only because you said up to the
20 '90s.

21 **DR. MAKHIJANI:** No, I said '70s through '90s --
22 no, no.

23 **DR. ULSH:** Okay, so up to 2000.

24 **DR. MAKHIJANI:** Yeah.

25 **DR. ULSH:** All right. Does that sound like a

1 reasonable plan forward? I just want to make
2 this as specific as possible so that I give you
3 what you -- what you want.

4 **MR. MEYER:** Do you want to randomize the
5 selection, maybe, within the -- the notebook,
6 every ten pages?

7 **DR. ULSH:** Well, I'll just -- I'll just start
8 skipping through.

9 **DR. MAKHIJANI:** If you take every fifth name or
10 every tenth name, it's --

11 **DR. ULSH:** I'll just start skipping through
12 pages till I find --

13 **DR. MAKHIJANI:** -- automatically random.

14 **DR. ULSH:** -- you know, five or so or
15 something.

16 **DR. MAKHIJANI:** It doesn't have -- the
17 randomization of selection of names doesn't
18 have to be complicated because it -- it wasn't
19 made to be checked in this way, so if you just
20 pick every tenth name you're going to be all
21 right -- or however many you want to do.

22 **DR. ULSH:** Okay, I think that's an approach
23 forward that I can -- we can accomplish.

24 **MR. GIBSON:** Could I -- this is Mike. Could I
25 (unintelligible) this -- now what -- what kind

1 of selections are you talking about and how --
2 how late in time?

3 **DR. ULSH:** Well, we were going to go up to
4 2000, Mike -- that was Arjun's suggestion --
5 focusing on '69 because that was a year of
6 particular interest. But --

7 **MR. GIBSON:** Right.

8 **DR. ULSH:** -- up through 2000, you know,
9 through the '90s. What was your other
10 question, selection?

11 **MR. GIBSON:** I would just like to suggest that
12 there be a specific look at -- probably when
13 these sites -- well, Rocky, when Rocky went
14 from production to decommission, and
15 specifically when these common contractors who
16 -- they're through a revolving door -- some of
17 their top officials ended up in DOE offices in
18 Washington. I think some of these common
19 contractors -- you know, from that time frame
20 forward, be it the probably -- into the '90s, I
21 think it needs to look into the D&D phase as
22 far as the production phase.

23 **DR. ULSH:** That's a good point, Mike. I think
24 that transition occurred at Rocky Flats in the
25 -- in the early '90s.

1 **MR. FITZGERALD:** '92/'93.

2 **DR. ULSH:** So the time period that we've talked
3 about will include that D&D phase.

4 **MR. FITZGERALD:** The variables you're talking
5 about are the three log book types. The time
6 period -- time frame certainly is established.
7 And now this question about --

8 **MR. GRIFFON:** Areas.

9 **MR. FITZGERALD:** Areas? What are you going to
10 --

11 **DR. ULSH:** I don't know, let's talk about that.

12 **MR. GIBSON:** And are there -- are there log
13 books also available -- how many have you
14 retrieved from the '90 time frame -- or from
15 the '69 time frame up to the -- the current
16 time frame and are they available on the O
17 drive?

18 **DR. ULSH:** I can tell you what's available on
19 the O drive, Mike, and that is -- I don't know,
20 Kathy, how many were on that disk that you
21 requested, maybe -- maybe 10, 15-ish?

22 **MS. ROBERTSON-DEMERS:** Something like that.

23 **DR. ULSH:** Something like that, so that's an
24 order of magnitude, Mike, of what's posted
25 currently on the O drive, plus this Kittinger

1 log that we've been talking about.

2 **MR. GIBSON:** Right.

3 **DR. ULSH:** Now Bob is going to tell you maybe
4 how many log books have been retrieved.

5 **MR. MEYER:** Well, we -- you know, there are
6 thousands of log books available. It's that
7 size problem. We were just trying to remember
8 the number, and it's huge, so -- of all
9 different types --

10 **DR. ULSH:** Maybe what we can do is take a look
11 at the log books that are available. We'll
12 come up with some kind of a crite-- you know, a
13 list, and put it out to the working group and -
14 -

15 **MR. GRIFFON:** We should be able to narrow the
16 areas by the areas of most concern.

17 **MR. FITZGERALD:** Yeah, I think once -- once you
18 come up with the matrix and just say here --
19 here's the best sampling we could come up with.

20 **DR. ULSH:** I'm thinking the primary divisions
21 are plutonium and uranium.

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

23 **DR. ULSH:** Let's make it two areas.

24 **MR. FITZGERALD:** And as -- as Mike's pointing
25 out, D&D would be the 1990s. That would be a -

1 - a good place to look.

2 **DR. ULSH:** Okay.

3 **MR. GIBSON:** Right, after Bush announced the
4 end -- Bush One announced the end of the Cold
5 War.

6 **DR. ULSH:** We'll put together a plan and we'll
7 put it out to the working group and to SC&A,
8 and solicit your comments.

9 **MR. GRIFFON:** Yeah, that's fine.

10 **DR. ULSH:** Okay. Make a note of that.

11 **MR. MEYER:** It's a long note.

12 **DR. ULSH:** Yeah, I know. Okay, I -- it's
13 getting late. I think -- that was issue 31 --
14 31?

15 Thirty-two, concern that secondary dosimetry
16 logs, contamination control logs or foreman
17 logs include exposure information which is
18 inconsistent -- that's the same issue, I think.
19 Right?

20 **MR. FITZGERALD:** Same issue.

21 **DR. ULSH:** All right. Thirty-three -- oh, this
22 is the D&D workers, the D&D era. This was an
23 issue that -- Joe and I kind of looked at each
24 other after the Denver Advisory Board meeting,
25 after that -- that movie that showed and we --

1 like holy cow, what about the D&D era?

2 **MR. FITZGERALD:** Yeah, ten years worth of
3 (unintelligible).

4 **DR. ULSH:** Since then -- since then we
5 committed to extending the internal coworker
6 TIB through the D&D era. Dave Allen at NIOSH
7 has been working on that. He's actually
8 extended the table, but we haven't officially
9 incorporated that into the TIB. He just got
10 that finished last week. We'll be getting that
11 out to you. The external already goes through
12 that era.

13 We've talked about -- initially there was some
14 concern about BZ sampling and DAC-hour
15 tracking. I'm -- I'm going to look at Joe or
16 the rest of SC&A for confirmation here. I
17 think we discussed that at the last working
18 group meeting. What -- what concerns remain,
19 if any, about that topic?

20 **MR. FITZGERALD:** Well, yeah, I think the -- the
21 comments that were made by Roger and others
22 about the practice, and I think the sense that
23 rad worker 2-trained people -- who were the
24 only ones allowed to do active D&D -- in fact
25 were routinely bioassayed, I think that was

1 certainly the explanation. But I think the
2 comment was made -- maybe it was Mark -- and
3 the workgroup was saying that sounds fine. Can
4 we validate that by actually coming up with the
5 bioassay data that you can marry up with these
6 rad worker 2-trained people. That would
7 confirm that in fact the data exists and it --
8 it substantiates the fact that people who were
9 in fact involved with D&D, rad worker 2-
10 trained, were bioassayed routinely and not on a
11 special bioassay basis.

12 **DR. ULSH:** Okay, I understand what you're
13 saying.

14 **MR. FITZGERALD:** That was the -- that was the
15 remaining action out of that whole thing, I
16 think.

17 **DR. ULSH:** Okay.

18 **MR. GIBSON:** If -- to add to that -- and again,
19 at least getting back to the commonality of
20 DOE's favorite contractors, there was a routine
21 bioassay program -- at least at Mound -- that
22 was quarterly or monthly, depending on where
23 you were at. It was not RWP-driven or anything
24 else. That was specials. And then when they
25 went into the D&D phase, they went to DAC-hour

1 tracking -- at least at Mound, and I would like
2 to find out if they did this at Rocky, as well
3 -- to assign dose. And then they called --
4 they -- they kept what they called a routine
5 bioassay sampling program, but it was an annual
6 bioassay to substantiate the DAC-hour tracking
7 that they assigned dose with. So it's -- it's
8 a play on terms, it's semantics or whatever,
9 but I would just like to find out if that's
10 true at Rocky, just like it was at Mound
11 because that would have, to me, a very
12 important -- that would weigh heavily on my
13 deliberations.

14 **MS. MUNN:** Mike, it's Wanda. What -- what was
15 the termination you were using about -- before
16 tracking, what -- what name?

17 **DR. ULSH:** DAC-hour.

18 **MR. CHEW:** Device (unintelligible) air
19 concentration. They used that --

20 **MS. MUNN:** Oh, oh --

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

22 **MS. MUNN:** -- excuse me.

23 **MR. GIBSON:** I'm sorry, Wanda, I didn't hear
24 you.

25 **DR. MAURO:** Used (unintelligible), right?

1 **MS. MUNN:** That -- that's all right, yeah.
2 That's all right.

3 **DR. ULSH:** Mike --

4 **MR. GIBSON:** Hey -- I mean it was -- it was
5 commonly -- commonly -- I don't know how to
6 describe it. They would -- they would commonly
7 describe it as -- they would use that to
8 determine if you were expected to receive 100
9 millirem a year.

10 **MS. MUNN:** Yeah, I understand.

11 **MR. GIBSON:** And then they would put you in a
12 bioassay program. But what they actually used
13 was they would use the DAC-hour tracking to
14 assign the dose, and then that fell back to
15 what I brought up at a previous meeting that
16 they would sample one -- they didn't want to
17 buy a breathing air zone detector for every
18 worker, so they would put one on every four
19 workers who entered an area. And typically it
20 would be the RCT, the rad control tech. And as
21 I -- we discussed earlier, they may run in and
22 take a reading, you know, for 15 -- 15 seconds
23 every -- every hour, and then stand in the
24 corner while the workers did the work. So I'm
25 very concerned that there was missed or un--

1 under-reported exposure based on applying dose
2 from DAC-hour tracking they still went down the
3 road with all their paperwork saying we still
4 do routine bioassay. But they changed it from
5 monthly to annually. And I would just like to
6 know if these common contractors did the same
7 thing.

8 **DR. ULSH:** Mike, let me -- let me speak a
9 little bit about the experience at Rocky Flats
10 -- at least what I've heard of it. AT the last
11 meeting Gene Potter and Steve Baker -- Steve is
12 not on the line. Gene, are you still there?

13 **MR. POTTER:** Yes, sir.

14 **DR. ULSH:** Oh, you're in for the haul. I -- I
15 think Gene and Steve are the ones who commented
16 on the monitoring program during the D&D era at
17 Rocky, and Gene, please jump in here, but as I
18 understand it, DAC-hour tracking at Rocky was
19 used to trigger a special bioassay -- or to
20 trigger -- not a special bioassay, but to
21 trigger a bioassay. But that was on top of --
22 layered on top of the routine bioassay program
23 that all the rad worker 2 people were on. Is
24 that correct, Gene?

25 **MR. POTTER:** Yes, sir, you're correct. There

1 was always a routine bioassay program. In our
2 case it was annually for urine samples for the
3 rad workers who were in the program, and lung
4 counting as frequently as workload and
5 equipment and availability would allow, which
6 is -- ran something like 18 months on the
7 average, I would say. And DAC-hour tracking
8 was done in the buildings for their own work-
9 control purposes up until the last few years.
10 It always was a means of triggering special
11 bioassay if you received 40 DAC-hours because
12 that would be an indication that you could have
13 received 100 millirem. That was also confirmed
14 by fecal bioassay, which is the only thing we
15 had that was sensitive enough to detect down
16 into that range.
17 So in the later years, though, we went to a
18 program where we did assign some doses off of
19 DAC-hour tracking, and that would be cases
20 where the 40 DAC-hours, or whatever it was, was
21 accumulated over a fairly long period of time.
22 And then, for those of you who are familiar
23 with it, the -- that makes the -- if you do a
24 fecal sample over -- after a, you know, fairly
25 long period of time, that -- the results become

1 very ambiguous because it could have been a
2 chronic exposure, it could have been an acute
3 at the beginning of the period, it could have
4 been an acute the day before you collected the
5 sample; it was very sensitive to that. So in
6 those cases we would assign some doses off of
7 DAC-hour tracking, even though we did not do a
8 bioassay. But that was just (unintelligible).

9 **DR. ULSH:** Okay. Now let me clarify --

10 **MR. GIBSON:** Okay, and --

11 **DR. ULSH:** Let me jump in here and clarify that
12 that's -- what Gene has just told you is what
13 the site did. They assigned internal doses in
14 some cases based on DAC-hour tracking. But you
15 have to distinguish that from the way that
16 NIOSH does dose reconstructions. We would not
17 calculate internal doses based on DAC-hour
18 tracking. We would use the bioassay results.

19 **MR. GIBSON:** Okay. Well, let me -- this is
20 Mike again, and if I can, Brant, let me ask a
21 couple of questions. And one -- who was the
22 gentleman I was just talking to?

23 **DR. ULSH:** That was Gene Potter on the line.
24 Is that who you mean, Mike?

25 **MR. GIBSON:** Yes, okay. I'm -- Gene, did Rocky

1 have a monthly or quarterly bioassay sampling
2 program at any time, and when did it change and
3 go to the annual?

4 **MR. POTTER:** In the time frame I'm familiar
5 with, which is mid-'90s on till the end, the
6 routine program was as I just described. I
7 don't think there's any need to repeat it. And
8 the old means of detecting intakes that we were
9 concerned about, which was at a regulatory
10 level -- 100 millirem in a year -- you could
11 not do that with a routine bioassay. However,
12 you certainly could detect intakes that were of
13 a health concern by routine bioassay, so that's
14 why we used fecal sampling extensively for our
15 specials.

16 For the larger -- we had two tiers of potential
17 intakes. For larger ones, urine samples and
18 lung counting was collected, also.

19 **MR. GIBSON:** So you don't know if Rocky went
20 from a monthly or quarterly to this DAC-hour --

21 **MR. POTTER:** No, not -- no.

22 **MR. GIBSON:** Not to your knowledge.

23 **MR. POTTER:** Well, the -- no, not during -- not
24 for D&D or anything like you've described from
25 Mound. Very early on, from the records I've

1 looked at -- and Roger could probably speak
2 more accurately on this -- you know, there was
3 at one time programs that would have been semi-
4 annual -- or -- semi-annual, I believe was some
5 of -- would have done some of the earlier ones.
6 I don't know if they ever did quarterly, and I
7 can't tell you exactly when the annual thing
8 came in.

9 **MS. BRACKETT:** Can I jump in here a minute?

10 **MR. GIBSON:** Okay, and so -- and again, I'm not
11 a health physicist, so I'm just going to -- I'm
12 throwing this question out here as -- just as a
13 dumb layman.

14 **MS. BRACKETT:** I'd like to jump in here for a
15 minute.

16 **MR. GRIFFON:** Mike -- Mike, let Liz Brackett --
17 I think she wants to respond for a second.
18 Hold on one second.

19 **MR. GIBSON:** Okay.

20 **MS. BRACKETT:** Right, the -- going from --

21 **MR. GIBSON:** Could you please speak up, please?

22 (Pause)

23 **MS. BRACKETT:** Going from monthly or quarterly
24 sampling for plutonium is not going to change
25 the dose that you can detect in a year, and

1 that's one of the reasons why that change was
2 made. Because it drops off relatively rapidly,
3 unless you have a known intake that you collect
4 the sample within a few days of the intake,
5 then whether you collect a sample a month, a
6 quarter or a year later, you would calculate
7 the same dose, pretty much. And the DAC-hour
8 tracking went into effect in fact to try to
9 compensate for that, because it's what DOE
10 termed a technology shortfall in that the --
11 the bioassay method that was in use, which was
12 urine sampling, was not capable of detecting
13 the requirements in the order or in the rule.
14 And so DAC-hour tracking was put into place to
15 try and catch the smaller intakes, at which
16 time then -- you know, when you reached a
17 certain level, then you could take a bioassay
18 sample. So -- so like I said, going from
19 quarterly to an annual sample is not going to
20 cause you to miss any more dose, unless you
21 happen to collect the quarterly sample within a
22 few days of having an intake.

23 **MR. GIBSON:** Okay. Then, again, let me throw
24 this question out a different way and -- and I
25 don't know that it happened at Rocky, but given

1 the fact that I've seen the health physics
2 people jet back and forth between Rocky and
3 Mound, between the common contractors in the
4 D&D days, number one, did they put a breathing
5 air sampler on every worker or did they do it
6 on say one out of every four, is one question -
7 - or two questions.

8 And number two -- number three -- and a lot of
9 times, you know, it was the hourly workers
10 being in a full-face mask or a bubble suit or
11 whatever else or whatever they were in, they
12 didn't want the extra weight of carrying this
13 device so the RCT wore it and stood in the
14 corner while the people had their face in the
15 work, and the RCT would walk up ever once in a
16 while. Now you know, that, to me, would not
17 show an accurate dose of record. And number
18 two, you have to question accuracy of the BAZs.
19 The reason they didn't want to buy them,
20 obviously, is the cost and the batteries. And
21 once you're in there for a while and the
22 batteries wear down, are they going to take an
23 accurate reading?

24 And I'm sorry it's a five or six-stage question
25 and I -- I don't mean to belabor things but...

1 **DR. ULSH:** Well, Mike, it seems like you're --
2 you're pretty concerned about some aspects of -
3 - of BZ sampling. But the point I want to come
4 back to is that's not what we rely on for dose
5 reconstruction -- for NIOSH dose
6 reconstruction. We rely on the bioassay
7 results, so --

8 **MR. GRIFFON:** Well, and that -- that gets to
9 the heart of my question, which is much
10 (unintelligible) than where we've gone so far,
11 which is do all these people have annuals even?
12 You know, if they have annuals, then you've got
13 a data point and you can reconstruct dose, in
14 my opinion.

15 **MR. GIBSON:** What'd you say, Mark -- Mark --

16 **MR. GRIFFON:** The question is -- the question
17 is did --

18 **MR. GIBSON:** -- could you repeat that?

19 **MR. GRIFFON:** I'm saying, you know, they --
20 they did go to an annual program, Mike, and --
21 and, you know, they -- the question of
22 sensitivity -- you know, we can debate that a
23 little, but -- but at the end of the day, for
24 NIOSH's DR purposes, if they have data, you
25 know, annually to the end of their career, then

1 they can reconstruct internal doses because
2 they'll -- they'll -- they'll just assign the -
3 - even if it's less than the MDA value, they'll
4 assume MDA and back-calculate from there an
5 intake.

6 My question more was did some of the
7 subcontractors and others -- I guess two prongs
8 on this, since we're getting into multiple
9 level questions -- were -- were all the subs
10 included, but secondly, my experience tells me
11 that rad worker training depended on how rad
12 areas were defined, and that is very -- at some
13 sites that could be a very big issue. Rad work
14 issues were defined, and then the areas started
15 to be ripped out and they realized -- oh, God,
16 all of a sudden we've got a rad area. We
17 should have had these people on -- you know --
18 so there are those issues, too. But I mean sub
19 -- subs were the big issue. And then the rad
20 worker -- if the rad worker 2 training was the
21 criteria to get in the monitoring program,
22 which it seems to be stated, can we cross-check
23 that and see. Did those people have da-- is
24 there data there for these people and can you
25 use your regular method to reconstruct dose.

1 That's the question. Or do you have to go over
2 to this air sampling data, which we're -- would
3 be a little more concerned about, you know.

4 **MR. GIBSON:** And tasks, this -- and you know, I
5 -- you know, I trust your judgment, Mark, but I
6 -- and I'm not a health physicist, but if I
7 have an annual bioassay and at the end of the
8 year it turns up that -- so many picocuries or
9 nanocuries or whatever else, does that mean I
10 got the dose the day before or does that mean
11 that I got the dose a year ago and I have -- I
12 have been excreting this and -- and -- wouldn't
13 that change the amount of dose a person got?

14 **MS. BRACKETT:** What we do for this project,
15 given unknown intake dates, which is the case
16 for most of the -- well, for pretty much all
17 the claims that we get --

18 **MR. GIBSON:** I'm sorry, I still can't hear you.

19 **DR. MAURO:** We got to get more microphones in
20 here.

21 **MS. BRACKETT:** Yeah, I have two microphones in
22 front of me. What we assume on this project,
23 because we generally don't know when an intake
24 occurred, is a constant chronic intake for
25 people. So we assume that person started

1 intakes on the day -- their first day of
2 employment and continue all the way through the
3 end of their employment, and that pretty much
4 approximates a series of acute intakes, given -
5 - given the lack of any other data. Certainly
6 if we knew of a particular incident date that
7 the person had, we would use that. But in
8 general we just assume chronic exposure for all
9 the working history.

10 **MR. GRIFFON:** And we -- we've cross-checked
11 this with Jim Neton and -- I'm missing his name
12 right now, but --

13 **DR. ULSH:** Dave Allen.

14 **MR. GRIFFON:** -- Dave Allen, and we've gone
15 down this path before. And it does -- you
16 know, we -- we've --

17 **DR. MAURO:** It works.

18 **MR. GRIFFON:** -- looked at acutes right after
19 the -- you know, bioassay sample an acute the
20 day after and then a year later and still
21 chronic pretty much approaches the same values,
22 so I -- I think that does work, Mike. I think
23 there is a question, though, if all that data's
24 there for all those people or --

25 **DR. ULSH:** Okay, that's a -- that's a good

1 question.

2 **MR. GIBSON:** Again, I just wanted to -- I mean

3 --

4 **MR. GRIFFON:** Yeah.

5 **MR. GIBSON:** -- Mark, you know -- if you
6 remember when we were going through the
7 actinium thing at Mound, they said, you know,
8 we haven't tested these bioassay samples and if
9 we test them now and they come under the MDA,
10 all we can tell you is you haven't had 100 rem
11 of exposure.

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

13 **MR. GIBSON:** So that's -- that's why I'm --

14 **MR. GRIFFON:** That would be -- Mike, that --

15 **MR. GIBSON:** That's what got my -- and again,
16 I'm not a health physicist --

17 **MR. GRIFFON:** But that -- Mike, that's not --
18 that's the exact same thing as here, because in
19 that case you were talking about those samples
20 sitting around for several -- what was it, two
21 years or -- I forget the time frame, but those
22 samples were not analyzed for years --

23 **MR. GIBSON:** Right.

24 **MR. GRIFFON:** -- and they were saying, worst
25 case, if they had an acute intake two years

1 prior to these being analyzed, then the worst
2 case dose could have been X, and that same sort
3 of thing would be applied here, according to
4 Liz and -- and Brant. That's what they're
5 saying is that --

6 **MR. GIBSON:** Okay.

7 **MR. GRIFFON:** -- if they don't know any
8 different, they're going to assume that
9 conservative model to extrapolate in between
10 data points.

11 **MR. GIBSON:** Okay, I'm just not understanding
12 this health physics stuff, so...

13 **MR. GRIFFON:** Good questions, though.

14 **DR. ULSH:** Mark, I would like to go to your
15 questions about --

16 **MR. GRIFFON:** Yeah.

17 **DR. ULSH:** -- who was -- who was included in
18 the monitoring program. Gene, I -- I could
19 almost swear that at the last meeting either
20 you or Steve said that the subs' dosimetry
21 records were collected. Is that the issue that
22 you're concerned about, Mark, that -- that we
23 wouldn't maybe have all their dosimetry
24 records?

25 **MR. GRIFFON:** Well, we -- we heard the policy

1 approach, and I guess all I was asking is that
2 let's verify that the policy was practiced.

3 **DR. ULSH:** Okay. So given that concern, do you
4 have any ideas on how we could address your
5 concern? I --

6 **MR. GRIFFON:** Yeah.

7 **DR. ULSH:** -- mean it's going to be tough to
8 identify subcontractors from others, I think.
9 Do we have an easy way to do that?

10 **MR. GRIFFON:** Well, you need ro-- you need
11 rosters from DOE, probably, and I'm not sure --

12 **MR. CHEW:** Gene, this is Mel. Can you speak to
13 that, what Brant just asked?

14 **MR. POTTER:** Yes, it's possible to identify
15 subcontractors by company name in the site
16 database.

17 **DR. ULSH:** The site database, okay. Is that --
18 Gene, is that something that we can access
19 easily and in a timely --

20 **MR. POTTER:** HIS-20.

21 **DR. ULSH:** Oh, HIS-20, okay.

22 **MR. POTTER:** Yeah, there's a -- there's a
23 company name field in HIS-20.

24 **DR. ULSH:** Okay. So --

25 **MR. GRIFFON:** Maybe you can add that onto our

1 identified database when you get it posted.

2 **DR. ULSH:** I know, I know.

3 **MR. CHEW:** We were doing that for the
4 construction --

5 **MR. GRIFFON:** I got beat up on the log books,
6 so...

7 **DR. ULSH:** Mark, so -- given that we can do
8 that, we can identify subcontractors, what
9 would you like to see us do in terms of -- like
10 pick a sample of them and show that there are
11 dosimet-- bioassay results for them?

12 **MR. GRIFFON:** I think -- there's a certain
13 time period -- I mean I'm asking as much as --
14 I'm not telling, I'm asking, is there a time
15 period after which it was only D&D operations
16 at the site?

17 **MS. MUNN:** '92.

18 **DR. ULSH:** '92, I think.

19 **MR. GRIFFON:** '92, right? So I mean I would
20 say post-'92 you can truncate the database that
21 way, and then --

22 **DR. ULSH:** So pick a sample of people who are
23 identified in HIS-20 as being subcontractors --

24 **MR. GRIFFON:** Subcontractors and -- and are --
25 I mean is there any field that says they were

1 RW2-trained?

2 **DR. ULSH:** How about that, Gene?

3 **MR. GRIFFON:** HIS-20.

4 **DR. ULSH:** Is there a way to easily identify
5 who was RW2-trained?

6 **MR. POTTER:** Now what I'm talking about in HIS-
7 20 would be people who were in the dosimetry
8 program, so we can't compare it to people who
9 were not in the dosimetry program.

10 **MR. GRIFFON:** Right, right, right, so you've
11 got HIS-20, yeah. Then you really need
12 rosters. Right? You need site rosters more
13 than dosimetry rosters -- and they exist. I
14 mean we get it in our medical surveillance
15 program, so they do have site rosters --
16 subcontractors have rosters. They're usually a
17 little more difficult --

18 **MR. POTTER:** Now I think I've talked about this
19 before, but just to maybe mention it again, how
20 people got into the internal dosimetry program
21 was when they were issued an external dosimetry
22 badge, which most areas that anyone would be
23 concerned about on site required an external
24 dosimeter right up till the very end. And
25 people, when they would come to get a badge, if

1 they were rad worker 2, they were sent to
2 internal dosimetry and put into the program.

3 **DR. BEHLING:** How about rad worker 2 training
4 rosters? You just mentioned earlier that that
5 was a requirement for decon work. Can you look
6 at the rad worker 2 training records and then
7 determine who was incorporated into the
8 bioassay program?

9 **MS. MUNN:** (Unintelligible)

10 **DR. BEHLING:** That would be an independent
11 method.

12 **DR. ULSH:** Okay, so I guess what we would be
13 looking for is anyone -- anyone who was rad
14 worker 2-trained that didn't have bioa--
15 bioassay results. That would give us a special
16 interest. Is that right? Is that kind of what
17 you're getting at?

18 Gene, what about the availability of rosters of
19 people who received RW2 training. Is that
20 readily available?

21 **DR. BEHLING:** Should be available.

22 **MR. POTTER:** All of that -- all of that type of
23 information I would assume is archived. We
24 used to have that -- access on-line when we had
25 a site. No longer available, you know,

1 electronically, but I would think that yes,
2 that's archived someplace.

3 **DR. ULSH:** Okay, so how about I commit to do
4 this, Mark. We will work with Scott Raines and
5 Andrea Wilson to try to find rad worker 2
6 training rosters for the time period in
7 question here, the -- after '92. We will also
8 work with them to try to identify site rosters
9 for which we could I guess pick out who was the
10 subcontractor. And then we'll report back to
11 you on our success in getting those.

12 **MR. GRIFFON:** Okay.

13 **DR. ULSH:** Assuming that we get them, then the
14 next step --

15 **DR. MAURO:** Then there's the bioassay, where
16 does that fit into that, those two lists, so --

17 **DR. ULSH:** Yes, assuming that we get those,
18 then the next step is to go after their
19 bioassay data.

20 **DR. BEHLING:** One -- one last question. In
21 addition to annual bioassay, was it a policy to
22 give everyone an exit bioassay on termination?

23 **MR. CHEW:** Gene, did you hear the question?

24 **MR. POTTER:** No, I didn't hear it.

25 **MR. CHEW:** Hans -- Hans --

1 **DR. ULSH:** Did everyone get a termination
2 bioassay, Gene?

3 **DR. BEHLING:** Yes, in addition to annual, was
4 it a policy to give everyone a termination or
5 exit bioassay?

6 **MR. POTTER:** Yes, that was the policy. Well,
7 we kind of -- we kind of talked about this
8 before, too, and basically when someone walks
9 out the door, they were given the opportunity
10 to have a bioassay. They could refuse the
11 bioassay, because all you could do was issue
12 them a kit. You couldn't hold a gun to their
13 head and have them actually fill it.

14 **DR. BEHLING:** Yeah, I remember reading --

15 **MR. GIBSON:** Yes, I know, that's what you said
16 before, but--

17 **DR. BEHLING:** -- that this was a problem, that
18 some people simply didn't respond.

19 **MR. GIBSON:** -- this is Mike and I would just
20 like to say that, you know, a roster is almost
21 what you're going to have to have rather than
22 RW2 training, because I know for the
23 accelerated clean-up sites -- the Rocky, the
24 Mound, Fernald -- that, you know, DOE put in
25 their plan, and I know I'm getting deeper into

1 politics and this and that, but as it came down
2 toward the end they started trying to rush in
3 more contractors to help do this work and, you
4 know, reduce the cost, supposedly. And Mound
5 is still not officially closed. It's like \$434
6 million over-budget from what it was supposed
7 to have been done and -- last year. Rocky did
8 I guess meet its date, according to Tony,
9 working 24/7 with contractors. So they
10 deposited a lot of areas and just acted like it
11 was a demolition rather than a radiological
12 clean-up. So they're -- you know, I -- I can't
13 speak specifically for Rocky, but I know for
14 Mound there was a lot of people that just --
15 contractors that came in and just thought they
16 were doing a demolition job when they may in
17 fact have been doing a radiological demolition
18 job.

19 **MR. GRIFFON:** I mean I just think we need to
20 check this. The subs are a possible place that
21 they might have fallen through the cracks, and
22 if it's a few, that's one thing. But if it's
23 many -- or hundreds, you know, that's another
24 thing I think. If they all -- if a large
25 majority of them had a termination survey -- I

1 don't disagree with you that a large majority
2 of them had a termination bioassays, then I
3 think you're pretty much -- you at least have a
4 data point to work with, you know, so --

5 **DR. ULSH:** So does that sound like a reasonable
6 course of action, that we'll get back to you
7 with the availability of these rosters?

8 **MR. GRIFFON:** Right. And I would say you
9 might even look at HIS-20 -- ahead of time look
10 at post-'92 HIS-20 and do a query on names
11 versus number of bioassay samples for -- for
12 the years they were there. And you might come
13 to some conclusions before we get too far down
14 the path, too. You might -- of course that's
15 the people that were in the program, I
16 understand, but as a first step, maybe that
17 might be of use.

18 **DR. ULSH:** So you want --

19 **MR. GRIFFON:** Or if you find that you have,
20 you know -- I don't know how many people were
21 there, but if you have 2,000 people and you
22 only have 1,000 bioassay samples, well, right
23 away you see -- you can see some problems, you
24 know, 'cause you've got specials in there and
25 everything, so everybody -- you know, if they

1 were there -- you know, '92 to 2000.

2 **DR. ULSH:** So what you're asking then is that
3 we look, from the '92 to 2005-ish period that -
4 - the D&D era, you would like us to look at --
5 give you some kind of a feeling for how many
6 bioassay points the people who worked --

7 **MR. GRIFFON:** Yeah, maybe query that database.

8 **DR. ULSH:** -- in those years had.

9 **MR. GRIFFON:** That's a -- that's a easier
10 thing than trying to find this data that you're
11 asking for the rosters and RW2 training logs.

12 **DR. ULSH:** I think that's something we could
13 easily do.

14 **MR. GIBSON:** This is Mike again, and I would
15 also request not only -- 1992 the D&D started,
16 that -- it wasn't until I don't believe 1997,
17 '98, '99, somewhere in that time frame that
18 this accelerated clean-up program started by
19 Jesse Roberson* and Bob Card*, and I think
20 probably from that time frame forward you
21 should see the dif-- look at a roster and see
22 the difference. If Rocky had, you know, 500
23 contractors since 1992 and in 1999 they had
24 1,000 contractors, I think you me -- may need
25 to compare that to the database, too.

1 **DR. ULSH:** Well, I think we would include those
2 years, Mike, starting in '92 and then going all
3 the way forward to the end of D&D.

4 **MR. GIBSON:** To today -- today's date, yes.

5 **DR. ULSH:** Well, the end of D&D. I mean that
6 was 2003.

7 **MR. PRESLEY:** 2003.

8 **MR. GRIFFON:** That's a good point, though,
9 Mike. There might have been different --

10 **DR. ULSH:** Sure.

11 **MR. GRIFFON:** -- change in the program there,
12 yeah.

13 **DR. ULSH:** We'll include those years.

14 **MR. GRIFFON:** So we have our action for that
15 one?

16 **DR. ULSH:** Yes, I think so.

17 **MR. GRIFFON:** I got a note -- Joe had to leave,
18 but I have a note for one -- one last thing, I
19 think -- or -- or we also want to hear from
20 your listing -- right? -- of these other -- or
21 is that ongoing?

22 **DR. ULSH:** That's ongoing.

23 **MS. JESSEN:** That's ongoing.

24 **MR. GRIFFON:** An ongoing investigation, right?
25 One other thing that Joe left me a note on

1 which we -- we talked about earlier and we
2 deferred it to later discussions and never got
3 to was the '69/'70 -- the disposition and
4 validation of zeroes resulting from sideline
5 workers, it says on his note. And this was the
6 -- Ron, I think he -- yeah, he asked you to
7 maybe speak to this a little bit, the zeroes.
8 This is not the other '69 question. Remember,
9 we said the zeroes is a different thing, we'll
10 talk about it later?

11 **DR. ULSH:** Yeah, we had the blanks. That's a
12 separate thing. Now we're talking about
13 zeroes.

14 **MR. GRIFFON:** Zeroes.

15 **MS. JESSEN:** Zeroes were in 1972.

16 **MR. GRIFFON:** Maybe it was '70s, but Ron,
17 yeah, go ahead.

18 **MR. BUCHANAN:** Yeah, that -- '69 and '70s, as
19 this chart I think most of you have shows, that
20 -- I had no explanation for it, but it did
21 raise kind of a red flag why we went along with
22 about ten percent zeroes, and then suddenly for
23 '69 and '70 we ran about 35 percent zeroes, 36
24 percent zeroes. And then the next five years
25 dropped back down to about ten percent zeroes

1 in the external badge dosimetry program. And
2 we -- we wanted to see why -- you know, was
3 there some -- were these zeroes blanks or were
4 they zeroes, were they -- were they monitored
5 at less than detectable limits or were they not
6 monitored and zeroes were entered. It just
7 seemed like an abnormality that we wanted to --
8 to address.

9 **DR. ULSH:** I think what -- what we discussed
10 the last time -- there's an event that happened
11 right around then that would be very consistent
12 with what you're seeing and that is the
13 cessation, temporarily, of plutonium duties due
14 to the fire -- the big fire in, I can never
15 remember -- Mother's --

16 **MS. MUNN:** May of 1969.

17 **DR. ULSH:** Yes, that was the area on the site
18 that contained the higher exposure jobs. Of
19 course after the Mother's Day fire, those
20 operations shut down until they could clean up
21 and -- and repair.

22 **MR. LITTLE:** Also had a strike in '70, I
23 think.

24 **DR. ULSH:** And there was a strike in '70 -- in
25 1970.

1 **DR. ULSH:** But going back to the '69 fire,
2 those workers who ordinarily worked in those
3 fairly high dose rate jobs, relatively
4 speaking, were then reassigned into other jobs
5 where the dose rates were much lower. So that
6 would be consistent with a --

7 **MR. GRIFFON:** And you've -- you've
8 investigated that? I mean I -- I would have
9 assumed that mo-- a lot of those workers would
10 have also been involved in the cleanup of the
11 fire.

12 **DR. ULSH:** Well, they might have been involved
13 in the cleanup, Mark, but even there you
14 wouldn't expect the dose rates to be as high as
15 during plutonium production activities.

16 **MR. GRIFFON:** Right, but they wouldn't have
17 been zeroes probably.

18 **MR. LITTLE:** No, but certainly not all of those
19 (unintelligible) just a percentage we're --

20 **DR. ULSH:** Just the percentage went up.

21 **MR. LITTLE:** Some of them -- some of them were
22 not involved.

23 **MR. GRIFFON:** One possible -- one possible
24 explanation.

25 **DR. ULSH:** It's a possible explanation that's

1 consistent. I can't say that that's --

2 **DR. MAKHIJANI:** Brant, how long was the strike?

3 **DR. ULSH:** It occurred in the summer of 1970, I
4 think. Roger, do you know?

5 (No response)

6 Wake up, Roger.

7 **MR. CHEW:** He's coming on.

8 **MR. FALK:** I'm -- I'm thinking it lasted about
9 three months.

10 **DR. ULSH:** In 1970, summer?

11 **MR. FALK:** Or -- or possibly two and a half
12 months, in the summer of 1970.

13 **DR. MAKHIJANI:** So it was quite long.

14 **MR. BUCHANAN:** How long did the fire displace
15 the plutonium production -- how long a period?

16 **DR. ULSH:** Do you know when the plutonium
17 production operations resumed, Roger -- or
18 anybody?

19 **MR. MEYER:** About a year and a half.

20 **MR. CHEW:** It was about a year and a half.

21 I think they were cleaning up even after two
22 years, but they started production in the other
23 areas, so you're talking about
24 (unintelligible).

25 **MR. FALK:** Let me -- let me add one thing to

1 that. It was transferred to Building 707,
2 which had the engineered -- which had the --
3 which had the engineered shielding and also had
4 the modularization, so it was a much better-
5 controlled external dose type of situation,
6 also.

7 **DR. MAKHIJANI:** But then the -- but then the
8 percentage of zeroes should not have gone down
9 after 1972. That would be a reason for a high
10 percentage of zeroes to continue, so that --
11 that can't possibly be an explanation.

12 **MR. FALK:** Well, I'm not -- I've not -- I'm not
13 answering that question. I was answering the
14 question when did the plutonium metal
15 production resume, and it basically resumed
16 when they got Building 707 on line, and just
17 pointing out that it would be a lower dose rate
18 than what they had experienced in buildings 77
19 -- 76 and 77. I don't have the other answer
20 about the number of zeroes.

21 **DR. ULSH:** The do-- it could be consistent --
22 everything you're saying could be consistent.
23 The dose rates could have been lower starting
24 in 707 and later years, but not zero, so --

25 **MR. GRIFFON:** I think the other possibility

1 here is -- is you've got a couple of files of
2 data from '69. Right?

3 **DR. ULSH:** Yes.

4 **MR. GRIFFON:** Raw records?

5 **DR. ULSH:** Yes.

6 **MR. GRIFFON:** So maybe -- I hate to put -- put
7 stock into records I haven't seen, but maybe
8 these'll answer some of these questions. I
9 mean if we have raw data to compare to the
10 database --

11 **DR. ULSH:** It could -- yeah.

12 **MR. GRIFFON:** -- they can at least tell us that
13 it wasn't -- you know, zero it out in the
14 database accidentally or inadvertently or
15 whatever.

16 **DR. ULSH:** That's a possibility.

17 **MR. BUCHANAN:** Well, can you tell the
18 difference between zero entry and -- and not --
19 not monitoring blanks in '69 and '70?

20 **MR. MEYER:** Yes, that dataset shows a code, a
21 01 code where a badge was not returned, and it
22 shows zeroes where the badge was read as
23 zeroes. It actually has blanks and a 01 code
24 where the badge was not returned -- at least
25 the 100 or so I've looked at so far that are --

1 are coded 01.

2 **MR. GRIFFON:** So you can make a distinction.

3 **MR. CHEW:** That's good, yeah.

4 **MR. MEYER:** And also there are codes that were
5 -- were --

6 **MR. GRIFFON:** That's in the raw records where
7 you can make that distinction?

8 **MR. MEYER:** Handwritten raw records.

9 **MR. GRIFFON:** Not in the database.

10 **MR. MEYER:** No, it's in the raw records.

11 **MR. GRIFFON:** So that's another way we can
12 check that. I guess that's a follow-up on that
13 item -- right? -- is to check the raw records.

14 **DR. ULSH:** Oh, yeah, yeah, for sure.

15 **MR. GRIFFON:** But I don't know that there's
16 any other follow-up, is there?

17 **DR. ULSH:** Help me out, what do you mean,
18 follow-up on...

19 **MR. GRIFFON:** Follow-up on the '69/'70 ze--
20 you know, this higher percentage of zeroes.

21 **DR. ULSH:** Well, I don't -- I don't know.

22 **MR. GRIFFON:** I mean you've given your
23 possibil-- possible explanations.

24 **MR. BUCHANAN:** I did -- what about internal
25 dose? It might just be helpful to shed some

1 light on it. Did the internal dose follow the
2 same scenario, and I haven't seen any results
3 and I don't know how to get ahold of that. But
4 if we could compare it with internal and see if
5 it's -- verifies it or contradicts it.

6 **DR. ULSH:** I don't know the answer to that,
7 Ron.

8 **MR. BUCHANAN:** That would be one suggestion
9 that might help shed light on it.

10 **MR. MEYER:** I don't have an answer for that.

11 **MR. GRIFFON:** And you would look at a sort of
12 percentage of less than detectables for
13 plutonium for that time period or...

14 **MR. BUCHANAN:** Yeah, for whatever they were
15 doing for bioassay and see if it came along
16 with a large percent of zeroes. That would
17 enforce the fact that the workers weren't in a
18 radiation area. If the bioassays remained
19 fairly constant during those 12 years,
20 including '69 and '70, well, then that would
21 kind of not reinforce.

22 **MR. CHEW:** You mean positive bioassays?

23 **MR. BUCHANAN:** Right.

24 **DR. ULSH:** But it's -- it's possible that if
25 they weren't working in plutonium areas, then

1 they wouldn't have been getting plutonium
2 bioassay during that period. What do you
3 think, Roger, is that...

4 **MR. GRIFFON:** They wouldn't have stayed on
5 some -- some program --

6 **DR. ULSH:** I don't know. I really don't know,
7 I'm just saying that --

8 **MR. BUCHANAN:** Well, we can look at see if the
9 number of positive bioassays -- the percent of
10 positive bioassays --

11 **MR. CHEW:** These are -- these are not the
12 (unintelligible) --

13 **DR. MAKHIJANI:** We can see a number of bio--
14 these are -- (unintelligible) some with number,
15 but we can see whether the number went up or
16 down. In '68, '69 and '70 the number of -- the
17 number of bioassays didn't go down in '69 and
18 '70 compared to '68. They went up -- they --
19 they went up in '71.

20 **MR. CHEW:** But these are just the number of
21 bioassays, not the (unintelligible).

22 **DR. MAKHIJANI:** Just the number.

23 **DR. ULSH:** Well, that might argue against what
24 I was saying, that they might not have been --
25 they might have just kept on --

1 **MR. GRIFFON:** Maybe we could look at that --
2 Those two things, look at the raw data for the
3 external and the internal (unintelligible) time
4 period.

5 **DR. WADE:** Okay.

6 **MR. GRIFFON:** And let's see if there was
7 anything else. I think -- I think we're
8 wrapped up. Right? We're all ready to wrap
9 up, anyway.

10 **FUTURE PLANS**

11 **DR. WADE:** He needs to talk briefly about a
12 path forward. You know, when does the working
13 group want to come back together, what would it
14 like to see at that point. You know, we have
15 the call coming up on August the 8th, and then
16 we have the mid-September meeting in Nevada,
17 where it's the hope that Rocky Flats could be
18 voted out -- could possibly be voted out, the
19 SEC petition, so it's up to you, Mark, to think
20 about --

21 **MR. GRIFFON:** Yeah, I mean I -- I think we
22 need another meeting at the end of August or
23 so, and maybe -- and then I would -- I would
24 like to shoot for the end of August, and then
25 if we need something between the end of August

1 and September 15th, whenever the meeting is,
2 maybe we can do a call or whatever, you know,
3 something -- a final phone call meeting.

4 **DR. ULSH:** And given where we're at in the
5 process, we'll be pumping things out as we
6 finish them. We aren't going to hold them
7 until the workgroup meeting, so --

8 **DR. WADE:** Do you want to tentatively pick a
9 date?

10 **MR. GRIFFON:** Yeah, let's --

11 **DR. MAKHIJANI:** Are we talking physical --
12 present -- meeting like this?

13 **MS. MUNN:** I'm assuming, yeah. We have one
14 meeting here on the 22nd. Right? And we have
15 a --

16 **DR. MAKHIJANI:** In August?

17 **DR. WADE:** Savannah River Site is in --

18 **MS. MUNN:** Savannah River Site.

19 **DR. MAKHIJANI:** 27th is a Sunday.

20 **MS. MUNN:** 22nd.

21 **DR. MAKHIJANI:** Oh, 22nd. I'm sorry.

22 **MS. MUNN:** And then we've got a phone call on
23 the 23rd, which could be overridden, I suppose,
24 move it.

25 **DR. WADE:** Nevada Test Site is 1:00 p.m. on

1 the...

2 **MR. PRESLEY:** That's going to be kind of hard
3 to get -- have to meet here and then get home
4 for this. You know, it may be that we have the
5 Nevada Test Site meeting here.

6 **UNIDENTIFIED:** Three-day meeting.

7 **MS. MUNN:** Might be simpler, if we're going to
8 do this on the 24th.

9 **MR. PRESLEY:** I can't be here on the 24th.

10 **MS. MUNN:** Oh, you can't.

11 **DR. WADE:** What about -- I mean I also assume
12 another week for you to get things together
13 will make it a more productive meeting.

14 **MR. GRIFFON:** I think so, too. I was looking
15 at the very end --

16 **DR. WADE:** 29th, 30th?

17 **MR. PRESLEY:** Yeah.

18 **DR. WADE:** Pick one, Mark. What day of the
19 week -- what day of the week is easiest for
20 you?

21 **MR. GRIFFON:** How about the 31st?

22 **DR. WADE:** Okay, August the 31st, tentatively a
23 meeting here in Cincinnati -- the 31st, anybody
24 have any issue with that? So tentatively
25 August the 31st here in Cincinnati, working

1 group meeting on Rocky Flats. That squeezes
2 every bloody day out of August.

3 **DR. ULSH:** I have one final note. I handed out
4 a lot of material here that contains Privacy
5 Act information. You're welcome to take that
6 home, but if you don't, please return it to me
7 and I'll make sure it's shredded.

8 **MS. MUNN:** I'd rather (unintelligible).

9 **DR. ULSH:** I won't take it personally, Wanda.

10 **MR. GRIFFON:** The meeting is official
11 adjourned.

12 **DR. WADE:** What about -- what time tomorrow
13 morning?

14 **MR. GRIFFON:** The time for tomorrow morning --
15 is anybody tra-- I mean does anybody need --
16 traveling in to the meeting, Lew, do you know?
17 'Cause we said 9:30, but if everyone's here
18 already --

19 **DR. WADE:** I told Stu just a moment ago to come
20 at 8:00, and you know -- but that doesn't mean
21 we have to start at 8:00, but -- so Stu'll be
22 here at 8:00 representing NIOSH. I think the
23 rest of the principals are here.

24 **MR. GRIFFON:** Well, let's start at 8:00, is
25 that --

1 **MR. PRESLEY:** 8:00?

2 **DR. MAKHIJANI:** I'll be a little late. I have

3 --

4 **DR. BEHLING:** You're supposed to be on first to
5 discuss the...

6 **MR. GRIFFON:** Let's say 8:30 then.

7 **MS. MUNN:** 8:30.

8 **DR. WADE:** 8:30.

9 **MS. BRACKETT:** The web site says 8:30. That's
10 what it said on the OCAS web site.

11 **DR. WADE:** 8:30 tomorrow morning.

12 (Whereupon, the working group concluded its
13 business at 6:10 p.m.)

14

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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 July 26, 2006; 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 9th day of August, 2006.

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