

This transcript of the Advisory Board on Radiation and Worker Health, Pinellas Work Group, has been reviewed for concerns under the Privacy Act (5 U.S.C. § 552a) and personally identifiable information has been redacted as necessary. The transcript, however, has not been reviewed and certified by the Chair of the Pinellas Plant Work Group for accuracy at this time. The reader should be cautioned that this transcript is for information only and is subject to change.

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

+ + + + +

ADVISORY BOARD ON RADIATION AND  
WORKER HEALTH

+ + + + +

WORK GROUP ON PINELLAS

+ + + + +

THURSDAY  
OCTOBER 13, 2011

+ + + + +

The Work Group convened in the Toronto Room of the Cincinnati Airport Marriott, 2395 Progress Drive, Hebron, Kentucky, at 9:00 a.m., Phillip Schofield, Chairman, presiding.

PRESENT:

PHILLIP SCHOFIELD, Chairman  
BRADLEY P. CLAWSON, Member  
JOHN W. POSTON, SR, Member\*

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2

ALSO PRESENT:

TED KATZ, Designated Federal Official

PETE DARNELL, DCAS

BRIAN GLECKLER, ORAU Team

DONNA HAND\*

JEFFREY KOTSCH, DOL\*

JENNY LIN, HHS\*

JAMES NETON, DCAS

ARIS PAPADOPOULOS, SC&A

JOHN STIVER, SC&A

ELYSE THOMAS, ORAU\*

\*Participating via telephone

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1 P-R-O-C-E-E-D-I-N-G-S

2 9:02 a.m.

3 MR. KATZ: The agenda for the  
4 meeting is posted on the DCAS website. And let  
5 me just remind everyone who is on the line to  
6 please mute your phone except when you are  
7 speaking to the group. Use \*6 if you don't  
8 have a mute button to put yourself on mute and  
9 then press \*6 again if you want to come off of  
10 mute. And please don't put the phone on hold  
11 at any point, but hang up and dial back in if  
12 you need to leave for a piece of the meeting.  
13 Thank you. Phil, it's your agenda.

14 CHAIRMAN SCHOFIELD: Okay. We  
15 will start off with the Site Description from  
16 the TBD, since it's a total rewrite.

17 There is a number of concerns that  
18 have been raised that we would like to get  
19 addressed today. One, the location of where  
20 the different materials are and types and the  
21 buildings.

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1                   How we are going to address the  
2 issues of tritium exposures, problems.

3                   And then some of the incidents  
4 that have happened at the facility in  
5 particular. There have been concerns raised  
6 about those, too, of potential unmonitored  
7 exposures.

8                   So I guess we will turn it over to  
9 you guys, since you did the total rewrite.

10                  MR. DARNELL: Okay. This is Pete  
11 Darnell. In general, there was a rather large  
12 change that affected all of the TBDs. I'll  
13 cover that one first.

14                  We touched upon it in the last  
15 meeting. Also, there were some General  
16 Electric X-Ray Divisions or GEXM documents  
17 that were interspersed with Pinellas Plant  
18 documents. And the original revisions have  
19 Technical Basis Documents, those documents  
20 made it in to our reference documents and  
21 information was incorporated in the Technical

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1 Basis Document and it has since been removed  
2 and they replaced it and identified it. So  
3 that's a general comment on all of the  
4 Technical Basis Document sections.

5 Site Description TBD. The biggest  
6 addition to the TBD was the D&D information  
7 from '94 to '97 was added to the Technical  
8 Basis Document. We also added a bunch of  
9 information on nickel-63, carbon-14, depleted  
10 uranium, metal tritides and some of these were  
11 issues that were left over from the last  
12 meeting also.

13 A number of changes were done in  
14 the description to organize the information.  
15 And that's pretty much the major changes in  
16 the document.

17 Comments, questions?

18 MR. STIVER: Yes. This is John  
19 Stiver. Getting back to, you know, the  
20 Technical Basis one, we had, I think it was,  
21 Finding 1 Matrix. We were concerned about the

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1 lack of data pre-1980 and this issue about  
2 back extrapolation.

3 And in reading the transcript from  
4 almost two and a half years ago, they said --  
5 and also your update, too, in the national  
6 document here in the first table, you have put  
7 in what about 604 new documents.

8 And in principle, it looks like  
9 you're covering the waterfront on that.  
10 However, before SC&A could feel comfortable  
11 signing off on that, we would like to have the  
12 opportunity to look at those documents and  
13 see, you know, how well or how representative  
14 they are of the various time periods  
15 concerned.

16 And so that's our thing. So we --  
17 this is going to be kind of a continuing theme  
18 throughout this discussion. We agree in  
19 principle with a lot of things that you guys  
20 have done. However, we would like to have the  
21 opportunity to review some of the source

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1 documentation and data sets that underlie the  
2 new assumptions and methods and so forth.

3 MR. KATZ: Okay. And I think we  
4 can take care of that in tasking this meeting.

5 MR. STIVER: Okay.

6 MR. KATZ: So SC&A can go forward  
7 with that.

8 MR. STIVER: Yes.

9 MR. GLECKLER: Something that --  
10 this is Brian Gleckler. Something in general  
11 that we may want -- I just want to bring to  
12 everyone's attention, with the revisions of  
13 these TBDs, it's like what you just touched on  
14 -- we have acquired or captured, I guess, I  
15 know it was over 400 and it gets to counts  
16 over 600 new documents since these TBDs -  
17 since some of these TBDs were last revised.

18 So we have added a whole lot of  
19 new information on that and it's like another  
20 thing was reorganize virtually every one of  
21 the TBDs and hopefully they will flow a little

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1 better and be a little more readable with the  
2 new formatting and stuff that was done with  
3 them. So that has been done with every one of  
4 them.

5 MR. STIVER: This is John Stiver  
6 again. We also had an issue about -- related  
7 to Issue No. 6, which was the decommissioning,  
8 D&D period from '94 to '97. And I believe at  
9 the last meeting you guys, NIOSH, indicated  
10 that, you know, if you had the time and the  
11 resources, you would look into this.

12 And we saw that there is a brief  
13 description in Section 2.3.4. However, we are  
14 still a little concerned in that there is  
15 really no discussion of source-terms,  
16 exposures, differences because of the tearing  
17 down of some of these engineered barriers and  
18 things, glove boxes and ductwork and that sort  
19 of thing.

20 And what the -- so what may have  
21 been a contained source in the past, may not

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1 be during the D&D period. And so we have some  
2 reservations and would like to see some more  
3 granularity regarding potential D&D exposures.

4 MR. DARNELL: We would need your  
5 comments.

6 MR. STIVER: Yes, that's just it.  
7 I mean, we would have to, you know, review and  
8 provide some, you know, White Paper or a memo.

9 MR. GLECKLER: I'm not really sure  
10 what else we can go into. I mean, the  
11 analyses on tritium was basically the only  
12 contamination source or dispersible source of  
13 contamination at the site. So during the D&D  
14 activities, it would just be tritium  
15 contamination that they would encounter and  
16 get tritium bioassay like they --

17 MR. STIVER: Yes.

18 MR. GLECKLER: -- with their past  
19 practices. There wasn't any indication that  
20 they changed their practices. The contractors  
21 stayed the same when they transitioned to the

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1 decommissioning era. There is no indication  
2 that they modified it or changed how they did  
3 business in the radiologic control program.

4 So it should be pretty  
5 straightforward.

6 MR. STIVER: I realized that, you  
7 know, the RadCon Program really didn't change.

8 What I'm really more concerned about, you  
9 know, is the potential for larger exposures or  
10 exposures to the groups of personnel that may  
11 not have been adequately monitored.

12 It kind of gets back to another  
13 issue that is going to be coming up is the --

14 MR. DARNELL: Before you move on  
15 from that --

16 MR. STIVER: Okay.

17 MR. DARNELL: If you don't mind,  
18 the personnel that were unmonitored is covered  
19 in that --

20 MR. STIVER: Oh, I understand,  
21 right, yes.

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1                   MR. DARNELL:     -- the Tech Basis  
2 Document and it's covered at the 95<sup>th</sup>  
3 percentile. This is an issue that we have  
4 gone over a couple of times in previous  
5 meetings.

6                   And while I understand that you  
7 may be looking for something specific to D&D,  
8 when you have got a site that has a large  
9 population of monitored workers and -- or  
10 excuse me, a small population of monitored  
11 workers at the highest dose and then everybody  
12 else that was monitored at or near zero, the  
13 only recourse you really have is to find a  
14 single dose that represents the 95<sup>th</sup>  
15 percentile and that's what we did.

16                   So from operations through D&D, if  
17 it's the unmonitored worker, they are getting  
18 a combination of internal and external dose  
19 and a couple hundred millirem and I don't know  
20 what else we could give you looking for other  
21 unmonitored exposures.

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1                   MR. STIVER: Well, I guess that's  
2 the kind of thing that we really haven't  
3 flushed out the exact details on this, other  
4 than that there is some concern that because  
5 of the different types of activities there may  
6 have been the potential for releases of some  
7 of these, well, we have, you know, your  
8 carbon-14 and your nickel-63, some DU,  
9 plutonium, which

10                   MR. DARNELL: It's not an issue at  
11 all.

12                   MR. STIVER: I know. You may have  
13 a weight of evidence in this argument that  
14 those really aren't sources of the exposure,  
15 but say, for example, that there could have  
16 been some breaching of one of these previously  
17 contained sources or you might have had some  
18 contaminants inside and, to not work in that  
19 kind of thing, that could have become airborne  
20 and been a course of exposure, too.

21                   MR. DARNELL: Are you familiar

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1 with the RTGs how they were filled?

2 MR. STIVER: Oh, yes. The RTGs -

3 MR. DARNELL: And controlled?

4 MR. STIVER: -- we aren't too  
5 concerned about the RTGs. But we will get  
6 into that as we go. There are some other  
7 issues that we need to bring in and they are  
8 all kind of interrelated, I know, at this  
9 point right now, but I just want to put that  
10 out there that that is a concern of ours  
11 regarding the D&D period. So we could write a  
12 memo about it and see what's the best way to  
13 address this.

14 MEMBER POSTON: Hello?

15 MR. KATZ: Hello?

16 MEMBER POSTON: This is John  
17 Poston. I'm sorry to be late. I have been on  
18 travel and we also had a power outage here.

19 MR. KATZ: We're glad to have you,  
20 John. Thank you.

21 CHAIRMAN SCHOFIELD: The other

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1 concern there, just let me address one thing  
2 that John said, was in D&D you always have to  
3 look all the way back to the history of that  
4 building. Whether the materials may have been  
5 at that building or may or may not have been.

6 You almost have to go through and  
7 exclude certain materials and say well, during  
8 the D&D we know these weren't ever in that  
9 building. Otherwise, and I would say this for  
10 any facility that has ever existed, do the  
11 spills, accidents, whatever it was, unplanned  
12 releases, a lot of that stuff gets up in the  
13 nook and crannies that, when you do a decon of  
14 a room or something, doesn't get cleaned up.

15 So there at D&D, that is potential  
16 for some of those residual contamination for  
17 exposures always exist during D&D. And that's  
18 something that it's hard to say well, you  
19 know, they only said tritium here.

20 We do know they had stuff in glass  
21 tubes that were broke, dropped for various

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1 reasons that allowed rooms to get  
2 contaminated.

3 MR. DARNELL: And that, in the  
4 end, was tritium.

5 CHAIRMAN SCHOFIELD: Yes, but what  
6 -- some of the bad news, some of those tubes  
7 were coated.

8 MR. DARNELL: Right.

9 CHAIRMAN SCHOFIELD: And then you  
10 have that potential to spread to other parts  
11 of that building behind --

12 MR. DARNELL: You're talking about  
13 the tritide issue.

14 CHAIRMAN SCHOFIELD: Right. And  
15 this is something that people need to -- I  
16 mean, the fact that, like I said, it's during  
17 the D&D this -- it may not have been so much  
18 an issue for the last 5, 10 years of the  
19 facility operating as it also comes back in  
20 play during the D&D just because -- I don't  
21 care how careful you are, decon and stuff,

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1       there's always the little nooks and crannies  
2       in there that you don't get clean.

3                       MR. DARNELL:     One thing you have  
4       to remember about the tritide issue is that  
5       this -- the Pinellas Plant tritide issue,  
6       basically, was the surface barrier, that's  
7       where the tritides would have formed.

8                       Okay.     To get an exposure, you  
9       would have to be at the point that the surface  
10      barrier was breached and somehow have  
11      volatized that surface barrier.   Okay.   And I  
12      cannot foresee any way at all, and there is no  
13      record of it at all, of one of those two  
14      somehow getting volatized, so that there could  
15      be an exposure to the tritide.

16                      We are giving credit for exposure  
17      to the tritide through those personnel that  
18      are monitored for tritium exposure, because  
19      there is no way to separate out that  
20      population, but this wasn't a general exposure  
21      hazard.   It wasn't a hazard that would get

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1 spread.

2           There is no nook and cranny that  
3 would have gotten glass, when they had the  
4 glass tubes, and then later went to stainless  
5 steel tubes, in it that had a tritide on it  
6 that you would then get an exposure from.

7           You have to remember what Pinellas  
8 actually was. It's not your regular DOE site.

9       It's not a huge facility where tritium was  
10 spread everywhere. It localized operations  
11 within the site, RTGs, triple encapsulated,  
12 it's just not a high-exposure potential site,  
13 especially for external/internal. You had to  
14 be in the right place at the right time.

15           Unfortunately, Pinellas did muddy  
16 the waters a bit with their visitor and  
17 unmonitored worker practices, because they  
18 walked through areas while they were being --  
19 while operations were going on.

20           Other than that, while I  
21 understand your concern about spread for D&D,

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1 I just don't see it in this site, because of  
2 the way the operations were done and because  
3 of what -- the site mission was.

4 So there is a D&D section that I  
5 think we are just going to have to find a way  
6 to come to terms with the actual operations at  
7 the site, so we can see what the ramifications  
8 are.

9 DR. NETON: Yes, I think we need  
10 to wait until we hear the comments from the  
11 senior on this. And take a quick course in  
12 credible arguments that makes sense, we need  
13 to look at them.

14 MR. STIVER: Yes, this is John  
15 Stiver again. You know, there's some good  
16 arguments here. You know, you have process  
17 knowledge, but what we would like to see, I  
18 mean, is some confirmatory measurements during  
19 the D&D period, where there are swipe samples  
20 taken or there are any type of after-action  
21 reports that would show that, indeed, these

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1 assumptions or not really assumptions, I  
2 guess, but the lack of the concern for  
3 exposure potential or the lack thereof could  
4 definitely be verified at some sort of setdown  
5 monitoring measurements.

6 MEMBER CLAWSON: Pete, this is  
7 Brad Clawson speaking. We have heard numerous  
8 times that the plausibility of this happening  
9 was little to none and then we come to find  
10 out that a lot of things have played into it.

11 All these sites we have come to find out  
12 intertwined with one another and a product  
13 goes back and forth that little tasks or want  
14 to see this and let's see what this works like  
15 and like we have said earlier, we will have  
16 SC&A go through this and look through this.

17 This is kind of some of our  
18 concerns, because --

19 MR. DARNELL: Sure.

20 MEMBER CLAWSON: -- we know there  
21 is no way that could happen. Then a little

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1 bit later, well, it actually did happen. And  
2 these sites were unique. You know, you look  
3 at over the years of what we have learned, you  
4 know, coming through and how the processes  
5 have evolved and there has usually been a real  
6 good reason for why they have evolved, glove  
7 boxes and so forth like that.

8 So it's not that we are  
9 questioning it, it's just from our past  
10 knowledge of sites whenever something -- there  
11 is no way we -- it's usually a question  
12 because something has happened.

13 MR. DARNELL: I understand your  
14 point of view and actually very much agree  
15 with you, but I just want to make sure that we  
16 keep into account that Pinellas is not like  
17 the other DOE sites. You know, it is one of  
18 the three that I know of that actually were in  
19 a very clean place to work as far as exposure  
20 to radioactive materials.

21 Kansas City and Iowa being the

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1 other two.

2 CHAIRMAN SCHOFIELD: Did they have  
3 -- I mean, this is a question I haven't found  
4 in any of the documents. Did they have  
5 anything like floor traps, anything like that  
6 to cut -- floor traps that you know of through  
7 the facility?

8 MR. GLECKLER: Specifically that,  
9 I'm not sure, but they did have clean room  
10 setups, you know, not for the radioactivity,  
11 but to keep, you know, the product clean.

12 CHAIRMAN SCHOFIELD: Yes.

13 MR. GLECKLER: You know, for those  
14 types of reasons, not for the production  
15 process and so on. I'm assuming that they  
16 probably had things like that to help.

17 CHAIRMAN SCHOFIELD: And my thing  
18 is if you broke a tube, you know, you might  
19 get the bigger piece, but some of the fall --  
20 pieces might fall in that penetration floor  
21 trap or something like this. Those are always

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1 some places where you start looking or like  
2 the framework for holding the glove boxes down  
3 around the footing of them.

4 These little tiny nook and  
5 crannies where material can get into that when  
6 you are doing a decon you don't necessarily  
7 get.

8 DR. NETON: But remember, we do  
9 have bioassay data for these people. You  
10 know, that will -- can be used to bound their  
11 exposure.

12 CHAIRMAN SCHOFIELD: And you feel  
13 comfortable with that for any of these  
14 incidents that occurred?

15 DR. NETON: I think the bioassay--  
16 we have gone through this many, many times and  
17 the bioassay data would assign the chronic  
18 exposure scenario bounds of any incidents that  
19 occurred. Eventually, if you get enough  
20 incidents, it becomes a chronic exposure. I  
21 mean, we have been through this many times.

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1                   MR. DARNELL:   And the other thing  
2   you have to remember is what is the exposure  
3   pathway.   Okay.   If you break a tube, some  
4   how, you have got to get that, because we are  
5   talking about tritium, off the surface of the  
6   tube or the material either on your skin or in  
7   your body.

8                   Okay.   You have to ingest it  
9   somehow and I don't particularly see these  
10  guys eating glass.   And that's what we would  
11  really be talking about or breathing glass,  
12  that's what you would really be talking about  
13  for the tritide exposure.

14                  For the tritium exposure, we,  
15  again, fall back on the monitoring.   And the  
16  workers that were assigned to tritium duties  
17  were pretty much invariably, correct me if I'm  
18  wrong, Brian, assigned to the bioassay  
19  program, which is where we get our population  
20  for exposure to tritides also.

21                  DR. NETON:   You know, we could

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1 talk all day about this, but I think it would  
2 be good if SC&A goes back and tries to, at  
3 least, provide some concrete examples. I  
4 mean, if it's one thing, you know, if it's  
5 hard for us to deal with, prove that this  
6 didn't happen. This happens often in these  
7 issues where how do you know with 100 percent  
8 certainty that something didn't happen. And  
9 that's just not a possible -- you know, that's  
10 just not doable for us.

11 MEMBER CLAWSON: Well, this is  
12 Brad. On the other hand, you can't prove that  
13 it didn't, you know.

14 DR. NETON: I know, but there has  
15 to be some credible scenario. I mean, if we  
16 have evidence that they monitored the people,  
17 there is no record of anything, some incident,  
18 someone would have to demonstrate, at least to  
19 me, that there were incidents that were  
20 unrecorded through either worker testimony,  
21 interview, that sort of thing.

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1                   MEMBER CLAWSON: Right.

2                   DR. NETON: And even the  
3 incidents, I maintain, that we have -- if we  
4 can verify that the highest exposed workers  
5 were monitored. We use that as a coworker  
6 model. We bound -- we can bound the exposures  
7 for tritium at least. There are tritides  
8 entry using the coworker model.

9                   MR. GLECKLER: This is Brian  
10 Gleckler again. I would like to offer --  
11 present one more clarification on this. What  
12 Pete was discussing was specific to the  
13 neutron tubes to where there is very little  
14 potential for exposure with those, given the  
15 design of the tube and the fact that it's a  
16 plated metal on that.

17                   However, tritide exposures were a  
18 little more possible and probably did occur  
19 during the earlier era when they used the --  
20 for the storage beds on that. They were glass  
21 storage beds.

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1 DR. NETON: Right, right.

2 MR. GLECKLER: And they contained  
3 a titanium tritide on that and so that was  
4 like the, I guess, equivalent of a talc-like  
5 powder, the titanium in there. And those did  
6 break periodically, that's why they replaced  
7 them with the stainless steel beds that  
8 contained uranium powder.

9 And we know that the stainless --  
10 there is nothing that indicates that the  
11 stainless steel beds ever were jeopardized or  
12 broken it looks like. And being that uranium  
13 is part of the fire, it's like that would be a  
14 major incident. And you would have a big  
15 uranium fire incident on that, so there is --  
16 I think we are pretty safe in saying that no  
17 one was ever exposed to uranium tritide.

18 But there are -- there was a  
19 potential and I believe some occurrences where  
20 people were exposed to the titanium tritide,  
21 which is one of the more soluble tritide

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1 compounds.

2 MR. STIVER: It's titanium  
3 tritide. Yes, we don't have any problem with  
4 your methods for determining tritium and  
5 tritide doses, other than characterizing the  
6 source-term, which we alluded to. But, yes,  
7 my main concern was that, you know, the  
8 process knowledge arguments are very good.

9 We would sort of like to see, if  
10 possible, some confirmatory measurements on  
11 D&D close out reports. Anything like that  
12 that might indicate that there could possibly  
13 have been undocumented incidents. You just  
14 never know things that occurred or may not be  
15 reported.

16 You see it at a lot of the other  
17 sites. You know, I ran this as a clean site  
18 for the most part. It's probably very  
19 unlikely, but some confirmatory measures, I'm  
20 sure, will go a long way.

21 MR. GLECKLER: The only thing that

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1 I recall in the captured data that we have is  
2 pretty much every room has like a final  
3 analysis or a final report for the  
4 decommissioning efforts and, basically, just  
5 documenting that it is below levels of  
6 concern. It doesn't discuss anything that it  
7 encountered -- that they encountered when they  
8 first started deconing the room.

9 And so I'm not sure if we have any  
10 real information that shows what the  
11 contamination levels were specifically.

12 DR. NETON: What was the time  
13 frame of this decon?

14 MR. STIVER: '94 to '97.

15 DR. NETON: '94 to '97.

16 MR. STIVER: Yes.

17 DR. NETON: So this is the 835  
18 era. So they should have had a fairly  
19 well --

20 MR. STIVER: I would think it  
21 would have had a good program.

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1 DR. NETON: A well-described  
2 program at some point.

3 MEMBER CLAWSON: This is Brad  
4 Clawson again. Pete, you started out in your  
5 conversation you were talking about GEXM. And  
6 you called it out pretty good in here. GEXM  
7 was the pilot plant to Pinellas?

8 MR. DARNELL: You know, I'm not  
9 really familiar with it, because I never went  
10 there.

11 MR. GLECKLER: It's basically --  
12 yes, it was the -- it's better described in  
13 the Site Description. Or more thoroughly  
14 described. But it -- basically, they are the  
15 ones that developed the neutron generators and  
16 they pretty much ran out of the space that  
17 they needed to expand. They needed to expand  
18 to meet DOE or AEC's needs and that's for  
19 production.

20 And so they were looking at other  
21 sites and it involved to where they picked the

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1 Pinellas Plant. So, basically, it was a pilot  
2 plant. And it has been referred to as a pilot  
3 plant. And it's like, initially, it's like  
4 GEXM had, you know, dictated most of the rad  
5 control stuff.

6 But as -- once Pinellas started up  
7 and everything, they kind of took over the rad  
8 control functions for both of them. It's like  
9 you can see they are analyzing the bioassay  
10 data on the dosimeters on that for the GEXM  
11 site.

12 And the only reason -- one of the  
13 main reasons that I have added it to the Site  
14 Description TBD and that part of the history  
15 and the relationship is we get a lot of -- it  
16 is a separately covered site.

17 MEMBER CLAWSON: Okay.

18 MR. GLECKLER: And that --  
19 however, in the record for employment for a  
20 our NOCTS system, it's like a lot of times we  
21 will have Pinellas Plant employment that

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1 predates the Pinellas Plant startup. And when  
2 you go look at the dosimetry records, these  
3 are GEXM records. They are GEXM. And we  
4 can't assess those records. We don't have --  
5 there is no TBD for the GEXM site. And  
6 sometimes -- but because the Pinellas Plant,  
7 you know, the similarities between the  
8 programs, we can use the Pinellas Plant TBD to  
9 assess the GEXM doses.

10 MEMBER CLAWSON: Yes, I was just  
11 trying to clarify how it started up into that  
12 and if it did actually itself have --  
13 classified as a different site.

14 MR. GLECKLER: Correct.

15 MEMBER CLAWSON: But as we have  
16 seen at a lot of these sites, Pantex is a  
17 prime example, Burlington and so forth. And  
18 went to Pantex and the records actually  
19 predate Pantex.

20 MR. GLECKLER: Yes.

21 MEMBER CLAWSON: So I just wanted

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1 to clarify.

2 MR. GLECKLER: Yes. I found one  
3 of the newly captured documents that was  
4 fairly -- that was captured about a year ago  
5 was the previous plant operator. He was  
6 responsible for the selection process for the  
7 Pinellas Plant and initially worked for the  
8 GEXM site and everything to where it is -- I  
9 use that -- there is a great deal of  
10 information that I didn't use, because it goes  
11 -- it's just kind of interesting how the site  
12 selection process works and how they  
13 ultimately selected the site.

14 But that reference in that is in  
15 the Site Description where if anyone is  
16 interested, it's actually a really interesting  
17 read and I wrote it back in 1977, but it gives  
18 you a pretty detailed history of what took  
19 place and how that relationship was. And we  
20 see that relationship continue in the records  
21 and stuff.

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1                   MEMBER   CLAWSON:           Okay.        I  
2            appreciate that.

3                   CHAIRMAN SCHOFIELD:   Who controls  
4            them and actually has physical control of the  
5            exposure records?

6                   MR. GLECKLER:   As far as where --

7                   MR. DARNELL:     We've got copies  
8            that we have received from different parts of  
9            DOE.

10                  CHAIRMAN SCHOFIELD:   Okay.    So we  
11            know one repository that has all records.  All  
12            the records are say after 1975, '77 or some  
13            reside at a certain facility.

14                  MR. DARNELL:   A lot of the sites  
15            have off-site repositories where they keep  
16            things now.    Dose records from projects  
17            without site maybe might wind up at another  
18            site.    So pretty much when you start looking  
19            for records, you ask the site that you are  
20            concerned with, in this case Pinellas, which  
21            is defunct, we had to go to Los Alamos and we

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1 got indicators there might be stuff in Oak  
2 Ridge, so we go to Oak Ridge.

3 Any place we had an indicator, we  
4 went looking for the records. And it just  
5 kind of balloons out from there. We know  
6 there was a relationship between Pinellas and  
7 Mound, so we look at Mound. You know, there  
8 is no real single place DOE holds any records.

9 CHAIRMAN SCHOFIELD: Pinellas  
10 scavenger hunt.

11 MR. DARNELL: Yes, it's a  
12 scavenger hunt, which is why our friends at  
13 SC&A can always say well, are you sure you've  
14 got all the records?

15 DR. NETON: The bioassay records  
16 must have come from a central location.

17 MR. GLECKLER: No. There is like  
18 four or five locations that they checked.  
19 It's like it's in each of the DOE response  
20 files. It's like they will say exactly where.

21 I forget all the different places that they

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1 check, but it -- but they do check like four  
2 or five locations.

3 MR. DARNELL: You would think the  
4 bioassay would be in one place.

5 MR. STIVER: Yes, you would think.  
6 So with that, I guess, we will put together a  
7 memo to that effect articulating what we would  
8 like to see and follow that up.

9 MR. DARNELL: As far as plants to  
10 that, if you don't mind me asking a question?  
11 We have got this 50 page matrix. Are we  
12 going to move away from that and go to a new  
13 document completely or are we going to update  
14 the matrix and go from there?

15 MR. STIVER: The latest version of  
16 the matrix, I think, is the one you guys  
17 updated back in February. You provided a lot  
18 of the -- neither one went into the new TBDs  
19 in there.

20 You know, given that it has been  
21 about two and a half years and, you know, we

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1 try to change our approach, we don't usually  
2 look at the secondary issues so much that are  
3 typically wrapped up in the larger issues.

4 In this particular case, yes, we--  
5 I would say let's just go ahead and update the  
6 matrix. And, you know, I think this was --

7 MR. DARNELL: The last edition  
8 matrix was in June of 2009.

9 MR. STIVER: Right. But we have--  
10 we found a version that you guys had prepared.

11 It was updated as of, I believe it was,  
12 February 2011. And that's what we kind of  
13 worked off the last couple of days.

14 MR. DARNELL: Are you sure? I  
15 don't really remember --

16 MR. STIVER: It was on the O:  
17 drive and it had a lot of additional text  
18 where you guys put in there about what you  
19 were going to do and, basically, verbatim as  
20 to what went into the -- any TBD. A lot of  
21 time in the last few days going to review

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1 that.

2 MR. GLECKLER: Yes, because the  
3 copy that I got is the '09 version.

4 MR. STIVER: The last was to draft  
5 Pinellas issues matrix, PA reviewed, uploaded.

6 MR. DARNELL: That came in  
7 February 2011. I was in Europe.

8 MR. STIVER: Okay.

9 MR. DARNELL: Brian would have  
10 been the author.

11 MR. STIVER: Hang on. It may very  
12 well be an older one that was just updated.  
13 It might have a different date stamp.

14 MR. DARNELL: Yes, that has  
15 happened before.

16 MR. STIVER: Yes, that's exactly  
17 what it was, because it would have been in  
18 December of '09.

19 MR. GLECKLER: Actually --

20 DR. NETON: Yes, this was written  
21 May 5, 2008. Well, but that's a draft

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1 preliminary assessment.

2 MR. STIVER: Yes, the draft -- our  
3 assessment was in the -- we have this --

4 DR. NETON: But there is no  
5 indication --

6 MR. GLECKLER: There should be a  
7 date in the footnote on that for the document.

8 Check the footnote, because that wouldn't get  
9 updated, unless someone updated it.

10 MR. STIVER: Yes, this is just the  
11 -- this footnote isn't -- this is the SC&A  
12 version and then we have, I'll show you the  
13 title of the document here.

14 DR. NETON: The document that's on  
15 the O: drive.

16 MR. STIVER: Yes, it's the one on  
17 the O: drive. It's NIOSH Response to Draft  
18 Analysis and Matrix Review.

19 DR. NETON: This is draft analysis  
20 and preliminary SC&A assessment.

21 MR. STIVER: Let me see if I can

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1 get on to the O: drive here.

2 DR. NETON: See this has not been  
3 updated. It's listed as NIOSH Response, but  
4 if you look at that document, it really is the  
5 2008 matrix.

6 MR. STIVER: Ours is --

7 DR. NETON: Well, I know there is  
8 no number. That was the update. This one is  
9 just the draft preliminary SC&A assessment.

10 MR. STIVER: We have the update  
11 right here.

12 DR. NETON: Let's see, NIOSH  
13 Response.

14 MR. GLECKLER: I know a lot of the  
15 text that we put in there, as far as what we  
16 are proposing, as far as our proposed changes  
17 to the TBD, some of that has changed on how we  
18 are going to deal with that. And so we will  
19 need to change those.

20 MR. STIVER: Yes, it's very  
21 similar to what actually went in.

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1 DR. NETON: Was this ever formally  
2 transmitted?

3 MR. STIVER: What's the latest  
4 one?

5 MR. DARNELL: As far as I know,  
6 June 2009, the one that Chick put together.

7 DR. NETON: Well, there is  
8 additional information talking about draft  
9 changes in there, but none of the dates were  
10 changed on the document in any location that I  
11 can locate or identify. It's listed as May  
12 2008, but I think it has been updated. I just  
13 wonder if this wasn't something that --

14 MR. DARNELL: And one we passed  
15 back and forth in process information.

16 DR. NETON: Yes. See this might  
17 have been formally transmitted or discussed,  
18 that's what I'm thinking.

19 MR. STIVER: Okay. Are you guys  
20 looking at the OAD document review Pinellas?

21 MR. DARNELL: Yes.

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1 MR. STIVER: NIOSH Response --

2 MR. DARNELL: Yes.

3 MR. STIVER: -- dated 9/12/08?

4 That date modified 2/10/2011.

5 DR. NETON: Wait a minute. Well,  
6 yes, it says modified, but that just means it  
7 has probably been accessed.

8 MR. STIVER: No, if says, you  
9 know, it was uploaded on 9/12, okay. I don't  
10 know how you do this. It would be December  
11 2009.

12 DR. NETON: 2010, 2011 date  
13 modified.

14 MR. STIVER: Yes. But if you open  
15 that, you will see that there are a lot of --

16 DR. NETON: Yes, there is a lot of  
17 them -- changes in there.

18 DR. NETON: Changes.

19 MR. STIVER: Okay.

20 DR. NETON: Site changes.

21 MR. KATZ: As long as you guys

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1 have the same version.

2 MR. STIVER: As long as we are  
3 working from the same version.

4 MR. GLECKLER: Because there is a  
5 June '09 version.

6 DR. NETON: There is a June '09  
7 version that we have been working from.

8 MR. GLECKLER: Right.

9 DR. NETON: Because this one is--

10 MR. STIVER: Okay. Well, we will  
11 need to get your -- the '09 version and see  
12 what the differences are.

13 DR. NETON: Well, it's your  
14 version, not ours.

15 MR. STIVER: Okay. Well, this  
16 looks to be the most recently updated though.

17 DR. NETON: Well, the latest  
18 response we have from SC&A is June 2009 sent  
19 through formal channels. If you search the  
20 documents you sent to us, the last one we  
21 received from you is June 2009. It's like

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1 June 5<sup>th</sup>, I think.

2 MR. DARNELL: June 2<sup>nd</sup>.

3 DR. NETON: June 2<sup>nd</sup> of 2009.

4 MR. DARNELL: I have a copy of it  
5 here.

6 DR. NETON: Okay. It came through  
7 the normal channel.

8 MR. STIVER: Through Nancy.

9 DR. NETON: Nancy.

10 MR. KATZ: Nancy Johnson.

11 DR. NETON: Yes.

12 MR. DARNELL: But it has been  
13 through review, so that document and  
14 everything --

15 DR. NETON: Oh, yes.

16 MR. STIVER: This version has like  
17 your update here on page 4, which is on 1.3.  
18 This is the new table that went into TBD-1.  
19 It's slightly different than what's actually  
20 in there in terms of the number of files that  
21 were uploaded.

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1                   MR. GLECKLER:    And you are going  
2                   to encounter that for most of those changes,  
3                   because what we have actually gone ahead and -  
4                   - you know, we have captured a lot more  
5                   information since we drafted up those.

6                   MR. STIVER:    Sure.

7                   MR. GLECKLER:    In some cases, we  
8                   have taken a very different direction.    The  
9                   fact that a lot of these blue changes, these  
10                  blue font changes were very similar to what  
11                  was in the TBD, would mean this was your  
12                  latest response.

13                  MR. DARNELL:    Somebody may have  
14                  got in the document in February of 2011 that I  
15                  don't personally recall and I don't think  
16                  Brian sent anything through that channel to  
17                  you guys.

18                  MR. KATZ:    So it was posted, but  
19                  it wasn't actually issued.

20                  MR. DARNELL:    Well, it probably  
21                  had something to do with, you know, Chick

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1 being ill. We were working together and then  
2 things kind of stopped.

3 MR. STIVER: Yes, that's kind of  
4 where the disconnect happened. Chick handed  
5 this off to John and then a two and a half  
6 year gap. The version that -- the June 2<sup>nd</sup>  
7 version, you guys have not updated?

8 MR. GLECKLER: Correct.

9 MR. STIVER: At this point. Okay.  
10 Well, that's interesting.

11 DR. NETON: Actually, since the  
12 last meeting, all the issues in that matrix  
13 have been resolved except for three.

14 MR. STIVER: Yes.

15 DR. NETON: I mean, there is a  
16 long discussion that there is three issues  
17 and, in principle, at least John Mauro, at  
18 that time, indicated that you were in  
19 agreement with our proposed additions and that  
20 you can go back and look at the Site Profile  
21 when they are issued and verify that they were

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1 --

2 MR. STIVER: Yes, that's really  
3 where we are on this.

4 DR. NETON: Right.

5 MR. STIVER: So we need to review  
6 these things. You know, we're kind of getting  
7 into the discussion. Mainly, it has been, you  
8 know, two and a half years and --

9 DR. NETON: Yes, that's fine.

10 MR. STIVER: -- the disconnect  
11 there with Chick passing and so forth.

12 DR. NETON: Sure. But I read all  
13 the transcripts from the last meeting, and  
14 it's pretty clear that there were three issues  
15 and, in principle, they seemed to be well on  
16 their way to being resolved.

17 MR. STIVER: Yes. We went through  
18 the same thing and we talked to John about his  
19 recollection of it. And we really are. I  
20 guess everybody else -- we are, you know, in  
21 principle, very close, I think, to where we

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1 need to be. It's a matter of reviewing some  
2 of the source documentation.

3 So I guess we can move on. I'll  
4 check with Nancy on this and I guess we can go  
5 ahead and --

6 DR. NETON: I can send you a copy  
7 if you want.

8 MR. STIVER: Well, that's fine.  
9 I've got it right here. In any case, we will  
10 have to start from that point and move forward  
11 on that particular matrix.

12 MR. DARNELL: Okay. Next on the  
13 agenda is the external dose. Anybody else  
14 have any questions or comments before we -

15 MR. STIVER: Do you want to do  
16 occupational medical or we want to cite TBD?

17 MR. KATZ: Well, we just started  
18 with Site Description.

19 MR. DARNELL: And we did a lot of  
20 extraneous stuff to the Site Description  
21 that --

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1 MR. KATZ: Yes.

2 MR. DARNELL: -- the next thing on  
3 the agenda is the external.

4 MR. STIVER: Okay.

5 MR. DARNELL: Okay. If you look  
6 in the summary, it's like the second to the  
7 last page, I believe. The occupational  
8 journal does TBD with the summary changes  
9 would have been in relation to the different  
10 issues. So this picks up at Issue 4 where we  
11 added information to Section 6 of the TBD to  
12 address that issue.

13 Issue 5, the dosimetry technology  
14 and missed dose sections were added -- were  
15 updated and information added to address the  
16 issues.

17 The secondary Issue 7, we actually  
18 put in the monitored dose section and  
19 Attachment B were added to address this, the  
20 basis for the unmonitored dose assignment,  
21 which is a runoff of the White Paper that was

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1 done in the past on this is -- was put into  
2 Attachment B.

3 The secondary issue No. 8, which  
4 is also a missed dose was revised. The  
5 approach to how Pinellas calculated neutron  
6 doses was replaced with an approach that is  
7 more consistent and used for other sites.

8 So what is going to happen now is  
9 dose reconstructions where you have higher  
10 neutron doses for the years '57 to '69 and  
11 lower neutron doses for '69 to '97. The  
12 methodology changed.

13 For the RTG areas, measured photon  
14 doses for the years '79 to '81 are higher,  
15 because of change in correction factor. This  
16 is applied for signal bating. And the missed  
17 photon for '79 to '87 would be higher because  
18 of that correction factor and a higher limit  
19 of detection.

20 There is also a more claimant  
21 favorable neutron energy distribution for the

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1 RTG work areas. Distribution is 50 percent,  
2 .1 to 2 MeV and 50 percent 2 to 20 MeV  
3 neutrons. The LD values were also modified in  
4 that section.

5 External electron doses from the  
6 krypton-85 exposures were increased by a  
7 factor of 3.5 per year, '63 to '85. And then  
8 a number of other changes from a, basically,  
9 reorganize present the information better and  
10 get the flow a lot smoother.

11 One of the things we just were  
12 very happy about in receiving, the plug for  
13 ORAU there, but these were some of the best  
14 reading TBDs we have seen in a while.

15 So questions, comments?

16 MR. STIVER: I can say that in  
17 looking through the revisions, they look very  
18 good. A lot of things that we asked for have  
19 been put in there.

20 The only kind of outstanding  
21 concern we have really is that, again, we want

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1 to -- the Issue 4 was really about whether you  
2 are capturing the most highly exposed group of  
3 workers or whether it was cohort badging.

4 And based on the transcript, I was  
5 talking to John about this, I remembered, you  
6 know, signing off on that, but he couldn't  
7 remember why. We'll make mistakes. But there  
8 is such a disconnect as far as getting back to  
9 what analysis was done with this.

10 MR. DARNELL: I actually remember  
11 that conversation. There were previous  
12 conversations to the -- than what is called  
13 the transcripts, that the basis of that coming  
14 to grips with the dosimetry issues and how the  
15 work force was monitored had more to do with  
16 the site operations and taking that into  
17 account.

18 MR. STIVER: Yes.

19 MR. DARNELL: You have to remember  
20 the radiation at the site was on or it was  
21 off. Okay. It was only on very briefly. And

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1 you can see in the dosimetry records you will  
2 have 9.9 millirem, which was a test shot, a  
3 test. And then months later, another 9.9  
4 millirem.

5 And in Unit 2, there is radiation  
6 exposure.

7 MR. STIVER: It's an all or  
8 nothing.

9 MR. DARNELL: Right. And it's  
10 just the way you --

11 MR. STIVER: Yes.

12 MR. DARNELL: Yes, the RTG it was  
13 different, obviously, and so were the tritium  
14 workers that have had exposures between then.

15 But for the radiation exposure, you had  
16 clumps.

17 And then within the clumps you had  
18 people that were monitored, so what I'm  
19 assuming were ancillary personnel to the test  
20 personnel. They were monitored in at or near  
21 zero. Okay. And then you have this group

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1 which is like a huge exposure change that were  
2 85, 95 percent of them were at right around  
3 100 millirem.

4 And then you had a few outliers.  
5 And I think the highest personnel exposure,  
6 lifetime exposure, at Pinellas is 3 rem. The  
7 highest single year, I think, was somewhere  
8 around the order of 1.71 millirem. So you are  
9 -- the dose distribution is pretty wiped out.

10 And you kind of have to look at -- look past  
11 this huge group at zero to the next group  
12 where everybody's percentile is right around  
13 100.

14 And in taking that into account is  
15 how we got to the idea that Issue 4 was  
16 resolved.

17 MR. STIVER: Yes, it certainly  
18 sounds like that. You know, you have a pretty  
19 clear cut understanding of who had the  
20 potential for exposure. It is not like you  
21 have cohorts where you just pick different

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1 types of individuals and have them represent  
2 whatever group. And in case you might have a  
3 high likelihood of missing some of the higher  
4 doses.

5 I would say the only thing that  
6 SC&A would like to do would be to go back and  
7 look at the dosimetry data and also the Issue  
8 5 regarding the performance characteristics of  
9 the dosimeters throughout time. We would like  
10 to take a look at that data.

11 MR. DARNELL: Sure.

12 MR. STIVER: And review that.  
13 This would be our only concern.

14 MR. KATZ: Just consider yourself  
15 tasked.

16 MR. STIVER: Consider ourselves  
17 tasked. You got something to say?

18 MR. PAPADOPOULOS: Do we need a  
19 White Paper on this or a couple of --

20 MR. STIVER: Yes, this may rise to  
21 the level of a White Paper. At least a memo

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1 from around there.

2 MR. GLECKLER: Is it worth noting  
3 regarding the unmonitored dose assignment for  
4 the Pinellas Plant? Is that 95<sup>th</sup> percentile  
5 dose, that was calculated, based on whole body  
6 doses?

7 MR. STIVER: Yes.

8 MR. GLECKLER: Which includes  
9 tritium? And excludes external photon,  
10 external neutron and internal tritium dose?  
11 And for some years, we were able to have -- we  
12 had them broken down, but for a significant  
13 number of years, we couldn't break out, you  
14 know, the various dose types. And so we just  
15 used -- since the doses were relatively low  
16 anyhow, so if we use this stuff -- by  
17 assigning that, we are actually accounting for  
18 internal as well for unmonitored, even though  
19 we are only taking personnel --

20 (Simultaneous speaking.)

21 And some of the highest doses that

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1 Pete was talking about are actually tritium  
2 doses. I have not been able to verify those  
3 things.

4 CHAIRMAN SCHOFIELD: Those RTGs,  
5 did you ever find anything that they used to  
6 verify these or were they basically the one  
7 size?

8 MR. GLECKLER: As far as the Pu  
9 sources, there were two different sizes. And  
10 I forget how many, but I think 8 and 10 grams.

11 I'm not positive on that, but it does -- that  
12 information is not on the Site Description.

13 MR. STIVER: It was 8 to 10 grams.

14 MR. GLECKLER: Yes. Does that  
15 sound right?

16 MR. DARNELL: Yes, all the sources  
17 they used were relatively small hand. You  
18 could carry them in your hands.

19 CHAIRMAN SCHOFIELD: I know they  
20 had much bigger ones.

21 MR. GLECKLER: But Pu-Be source,

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1 they had a couple, one or two Pu-Be sources  
2 and those might have been bigger. I'm not --  
3 those were for calibration purposes.

4 MR. STIVER: That was back in the  
5 early '56/57 time frame.

6 MR. GLECKLER: That's when they  
7 got them and I'm not sure when those left the  
8 site. I don't recall it.

9 DR. NETON: I'm just going through  
10 just to go back to this confusion on what  
11 document is which. It appears to me that the  
12 document that was issued by SC&A on June 2,  
13 2009 contains your responses to the NIOSH  
14 responses that are in that document that says  
15 2011.

16 So somehow that document got  
17 uploaded. That's the modified date, but you  
18 know how they -- so I looked through at least  
19 the first 20 pages, it's identical. The only  
20 exception, the only difference is that you  
21 have comments in red responding to our

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1 comments.

2 It's identical, except you have  
3 already responded to all of those comments.

4 MR. DARNELL: NIOSH would be happy  
5 to provide to SC&A their own documents.

6 DR. NETON: For some reason that  
7 modified date, sometimes if you just open the  
8 file and you close it, it will list it as  
9 modified.

10 MR. KATZ: But that's it, it's  
11 nice to get that cleared up.

12 MR. STIVER: We were having  
13 scrambling over the weekend to get things  
14 together for this, so --

15 DR. NETON: Yes. No, and you --  
16 there is clearly items listed in red here that  
17 are responses to those comments from that  
18 file.

19 MR. DARNELL: Okay.

20 DR. NETON: All right. I'll get  
21 you a copy of that.

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1                   MEMBER CLAWSON:       While we are  
2                   taking jabs at each other, I would like --  
3                   well, it's kind of a little bit of a jab, but  
4                   I would like to compliment you on the new TBD,  
5                   because I thought it was a great change from  
6                   what it was previously and the level of detail  
7                   that you have gone in, I would just like to  
8                   compliment you on it. It was a fine job. It  
9                   really was.

10                  CHAIRMAN SCHOFIELD:       That's a  
11                  level of detail, that's got to raise some  
12                  flags.

13                  MEMBER CLAWSON:       Maybe a little  
14                  nervous.

15                  MR. DARNELL:       Well, I hope nervous  
16                  in a good way. It's like they got it right.

17                  MEMBER CLAWSON:       No, it wasn't  
18                  that.

19                  CHAIRMAN SCHOFIELD:       We're not  
20                  talking firing squad level. It's a little  
21                  below that.

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1                   MEMBER CLAWSON:    But I really do  
2                   want to commend you, because the level of  
3                   detail that you went into and stuff, picking  
4                   out the differences in the sites and how they  
5                   went in, I really wanted to compliment you,  
6                   because it makes it a lot easier, especially  
7                   somebody that isn't familiar with the facility  
8                   and seeing these different terms, you really  
9                   did a good job.    I would just like to  
10                  compliment you.

11                  MR. DARNELL:        That was mainly  
12                  Brian. Thank you.

13                  CHAIRMAN SCHOFIELD:   Kudos to both  
14                  of you.

15                  MR. DARNELL:        Any more on the  
16                  external?

17                  MR. STIVER:        Nothing for us.

18                  MR. DARNELL:        Let's see, I think  
19                  the internal section is on the previous page  
20                  of the summary that we handed out.

21                  And this again begins with the

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1 issues. Issue 2 Resolution, potential high  
2 exposures to insoluble tritium. Do we want to  
3 talk about tritium now or are we going to wait  
4 until --

5 MR. STIVER: We can talk about  
6 that.

7 MR. DARNELL: I think we actually  
8 have gone a step further than what we agreed  
9 to. In the previous transcripts, we were  
10 talking about a Class M exposure. And we --  
11 between the last meeting and now, we have  
12 found out that there was a Class S. So the  
13 tritides were going to be applied to the  
14 monitored work force, the tritium monitored  
15 work force. Everybody in it gets tritide  
16 exposure.

17 MR. STIVER: At the Class S level?

18 MR. DARNELL: At the Class S  
19 level. As long as that provides a hair  
20 exposure.

21 MR. GLECKLER: Well, we assess it

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1 at both.

2 MR. STIVER: Assess at both.

3 MR. GLECKLER: Yes. Whichever is  
4 more claimant favorable, because some are  
5 more.

6 MR. STIVER: Yes, the lung does,  
7 obviously, would be.

8 MR. DARNELL: It makes the tritium  
9 issue very simple. Everybody that was exposed  
10 to tritium and monitored for tritium gets the  
11 tritide exposure.

12 MR. GLECKLER: Yes. And we have  
13 also taken a whole different direction on it.  
14 Because if I remember right, I think at that  
15 meeting, we were geared towards going the  
16 OTIB-66 route. And I did some missed dose  
17 calcs not using the OTIB-66 approach, the  
18 missed dose is for like the long one. We are  
19 going to be like over 300 rem per one year of  
20 exposure.

21 MR. DARNELL: Right.

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1                   MR. GLECKLER:   And it's like this  
2                   can't be.   This isn't realistic at all.   And  
3                   so we have gone to using contaminant -- the  
4                   highest contamination levels in the plant,  
5                   which include soluble tritium and insoluble.  
6                   And the biggest thing, too, is rather than  
7                   address just metal tritides, we have changed  
8                   the terminology in the TBD to insoluble forms  
9                   of tritium, because that same approach will  
10                  deal with the organically bound tritium  
11                  compounds as well.

12                  MR. STIVER:    I guess we kind of,  
13                  at this point, are withholding judgment on the  
14                  tritides issue.   I know there is -- this is  
15                  kind of common with Mound and I believe, Jim,  
16                  you are preparing a paper on that methodology.

17                  DR. NETON:    Yes.

18                  MR. STIVER:    Swipe samples.

19                  DR. NETON:    It's exactly the same  
20                  methodology.

21                  MR. STIVER:    Exactly the same

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1 methodology.

2 DR. NETON: We have gone through  
3 and characterized the swipe contamination  
4 levels and then applied a fairly conservative  
5 resuspension factor and demonstrated that  
6 those would get bounded very nicely in a  
7 reasonable manner.

8 MR. STIVER: Yes. Our only  
9 concern there is the swipe samples provided a  
10 representative and complete set of data. And  
11 so that's -- really, we have no problem with  
12 the -- you know, your approach for assessing  
13 the doses once that source-term -

14 MR. GLECKLER: For the Pinellas  
15 Plant we didn't use a representative swipe  
16 sample. We used the highest reported one we  
17 found.

18 MR. STIVER: The highest reported?

19 MR. DARNELL: It's conservative on  
20 top of conservatism.

21 MR. STIVER: Right.

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1                   CHAIRMAN SCHOFIELD:    In Pinellas,  
2    did they swipe samples?    Did they actually  
3    break it down as to what it was or just  
4    basically the --

5                   MR. GLECKLER:    Just tritium.    Yes,  
6    the swipes would have been just for gross  
7    tritium.    They wouldn't have been able to tell  
8    whether it was metal tritide or more soluble  
9    forms of tritium.    And so it's like the  
10   majority of the contamination incidents and  
11   the bulk of the material that was causing the  
12   contamination was soluble tritium in the form  
13   of HTO and HT, so it's like that's a huge  
14   level of conservatism in the approach that we  
15   are taking.

16                  MR. STIVER:    Yes, my point is that  
17    99% of it was the HTO.

18                  MR. GLECKLER:    Yes, because we are  
19    assuming    that    100    percent    of    that  
20    contamination    was    insoluble    tritium.  
21    Actually, the vast majority of it was more

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1 likely soluble forms.

2 MR. STIVER: You know, we would  
3 like to -- Jim, do you have any idea about  
4 when that paper might be available?

5 DR. NETON: The Mound paper?

6 MR. STIVER: Yes.

7 DR. NETON: I think it's  
8 undergoing ADC review right now.

9 MR. STIVER: ADC review.

10 DR. NETON: So it will be as soon  
11 as it gets out of that. I reviewed it and  
12 it's at DOE right now.

13 MR. STIVER: Okay.

14 DR. NETON: But I was surprised it  
15 didn't come out yesterday when the radon paper  
16 came out on Mound. I thought they would come  
17 out simultaneously. We sent them for ADC  
18 review at the same time.

19 MR. STIVER: Cause we have -- it  
20 would have been an anticipated effort. So  
21 that just came out. We had a similar response

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1 and it's kind of overarching.

2 MR. KATZ: Right. So you will  
3 apply whatever you considered for Mound -

4 (Simultaneous speaking.)

5 DR. NETON: I agree. I think  
6 that's reasonable. It's a matter of  
7 demonstrating that the sample, the swipe  
8 samples that you have --

9 MR. STIVER: Yes.

10 DR. NETON: -- adequately  
11 characterize the contamination levels. I  
12 totally agree.

13 MR. STIVER: Yes, that's really  
14 our main concern -

15 CHAIRMAN SCHOFIELD: That's part  
16 of the reason we have had such a lot of delay  
17 at this facility, because if you have answered  
18 the problem at Mound, you answered the problem  
19 with Pinellas on the tritium issue, so you  
20 only have to tackle one line at a time.

21 MR. STIVER: Sounds good.

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1 MR. DARNELL: Okay. Issue 3  
2 Resolution. Well, was there something else?

3 MR. STIVER: No. Let's go ahead  
4 with Issue 3. It's -

5 MR. DARNELL: Issue 3 Resolution,  
6 that's certainly information that was added,  
7 updated in the instructions and justifications  
8 and how to use it were placed into the TBD.  
9 We also kept some information on plutonium  
10 uncertainties, even though that's no longer a  
11 real part of the TBDs.

12 Issue 7, Section 5.7.2 was added  
13 to TBD. There are the unmonitored exposures  
14 and it now addresses nickel-63 and carbon-14.

15 The secondary issue 5 resolution, the  
16 Pinellas basis for rejecting positive  
17 plutonium bioassay results, again, replaced  
18 with a new approach. This was discussed in  
19 the last meeting.

20 Secondary issue 6, plutonium  
21 solubility statements. You know, this

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1 information is, basically, modified heavily  
2 from the last revision. And I don't know if  
3 you guys have looked at that yet, have you?

4 MR. STIVER: We have done a  
5 cursory review.

6 MR. DARNELL: So we will just  
7 leave it at plutonium sections that changed.

8 MR. STIVER: Okay.

9 MR. DARNELL: Cables for MDCs  
10 reporting levels for tritium were revised. In  
11 general, the MDCs prior to 1975 increased, a  
12 bit more dose there.

13 And again, organization, how it is  
14 being presented was all updated in the  
15 internal decision.

16 DR. NETON: It's in that document?

17 MR. STIVER: Okay.

18 DR. NETON: So it's in your CDC  
19 address. I didn't have your --

20 MR. STIVER: Okay.

21 MR. DARNELL: Questions, comments?

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1                   MR. STIVER:    It was actually more  
2                   of a philosophical issue with No. 3. For the  
3                   plutonium, which, you know, the RTGs are  
4                   always triple encapsulated, according to TBD,  
5                   you know, there is some contamination found on  
6                   some of the batteries that were decontaminated  
7                   in hoods and that sort of thing.

8                   MR. DARNELL:    Okay.

9                   MR. STIVER:    So you have -- when  
10                  you look at these weight of evidence  
11                  arguments, you really have got to have three  
12                  criteria, if you will. You have the process  
13                  knowledge, which you clearly have here. You  
14                  have the confirmatory measurements. You have  
15                  your bioassay data and in most cases it was  
16                  pre-employment, but I guess there is some data  
17                  as well for --

18                  MR. DARNELL:        Yes, there is  
19                  something like 20 samples.

20                  MR. STIVER:        About 20 samples.  
21                  Are you talking total or --

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1 MR. DARNELL: Yes.

2 MR. STIVER: That would be --

3 MR. DARNELL: There is more than  
4 20 total for this. Probably about 20 or more  
5 per year.

6 MR. STIVER: Pre-employment?

7 MR. GLECKLER: The bulk of the  
8 pre-employment for like in '75 -- it's like  
9 mostly operational with as new people come on  
10 to that particular activity, at the site there  
11 is -- they get like a pre-employment or  
12 baseline -- so some of them -- some of that  
13 data will contain a baseline here and there.  
14 And then it will be operational after that  
15 typically.

16 MR. STIVER: All right. So you do  
17 have -- certainly, not enlarge the data, so if  
18 you have occupational data, confirmatory data  
19 as well, you also have, you know, just the  
20 modeling calculations that demonstrate the  
21 level of exposure potential. So you have

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1 those three items here that form a pretty good  
2 basis for this weight of evidence argument.

3 But then you go on to say if we do  
4 find a positive bioassay result, we are going  
5 to go ahead and evaluate it this way and then  
6 we are going to do a dose reconstruction using  
7 Liz Brackett's - TIB-60, I believe.

8 And so you can't really have it  
9 both ways in our minds. I mean, either you  
10 have no exposure potential and if you find  
11 that you do have some positive exposure,  
12 you've got a problem. You've got -- there has  
13 been an intake, there has been a leak of some  
14 kind and so this whole weight of evidence  
15 argument goes out the window.

16 MR. DARNELL: Well, I understand  
17 your point, but the entire idea of having it,  
18 in case we find it, was to satisfy SC&A's  
19 comments from last time, you know. Because we  
20 wanted it taken out, but if there is no need  
21 for it, it would only be addressed in there

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1       except in the external standpoint and the  
2       surveys to be complete. So the idea that we  
3       will do something and base it on the best  
4       available information that we have through 60  
5       was from you guys.

6                   MR. STIVER:       Well, I would say  
7       that the best way to deal with that would be  
8       to not say that you would look at them on an  
9       individual basis, because it really changes  
10      the whole paradigm. You now have --

11                   DR. NETON:       Yes, I can understand  
12      your point. If evidence does arise that  
13      plutonium had been breached, we would --

14                   (Simultaneous speaking.)

15                   DR. NETON:       Okay. All right. I  
16      understand what you are saying.

17                   MR. GLECKLER:     So does that mean  
18      we can take out the plutonium?

19                   MR.       DARNELL:           And       the  
20      uncertainties?

21                   MR. STIVER:       Well, yes. That's

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1       some kind of -- you know, that would be  
2       triggered by the situation we actually have.

3                   MR. DARNELL:   That's it.

4                   MR. STIVER:     If you don't have  
5       plutonium, you don't have to worry about any  
6       of that other stuff.   And I think the same  
7       thing holds for the DU tritium beds, too.  You  
8       know, I believe in the last meeting there was  
9       some discussion that there may have actually  
10      been some cutting, but it turns out that was  
11      GEXM data that wasn't really related to  
12      Pinellas.

13                   But again, if -- you know, you  
14      have got a good argument there, except you  
15      don't have a lot of confirmatory monitoring  
16      data.  We would like to see if there is any  
17      available that would show that, indeed,  
18      there --

19                   MR. DARNELL:   I think what we have  
20      was presented pretty much.

21                   MR. STIVER:     Everything that you

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1 have is out there.

2 MR. DARNELL: Yes. There is a  
3 White Paper on it, too, I believe. The data  
4 that we have is presented in it and it's just  
5 not much.

6 MR. STIVER: Yes, it looks like  
7 there is no exposure potential, as far as we  
8 can tell.

9 MR. DARNELL: Yes.

10 MR. STIVER: But to really, you  
11 know, tie up the loose ends on that, you know,  
12 if there is monitoring data out there that  
13 would confirm that we would like to see it.

14 CHAIRMAN SCHOFIELD: I don't see  
15 it anywhere, but did they ever do any  
16 destructive testing? The RTGs that you know  
17 of, like QA sampling?

18 MR. DARNELL: I don't know of any.

19 MEMBER CLAWSON: Yes, they did.  
20 They had to. We saw that coming out in  
21 Pantex.

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1 DR. NETON: Well, right, but I  
2 don't know if they did.

3 I think there was destructive  
4 testing done at places like Los Alamos.

5 CHAIRMAN SCHOFIELD: I didn't see  
6 anything, but I could have overlooked it,  
7 where they did this at Pinellas, too, because  
8 that would increase the odds of someone being  
9 able to pick up a --

10 MR. GLECKLER: I'm pretty sure  
11 they have done destructive testing on the  
12 RTGs, but whether or not the plutonium sources  
13 were present in those units when they did the  
14 destructive testing, you know.

15 CHAIRMAN SCHOFIELD: If they were  
16 not, then it's really kind of a moot point.

17 MR. GLECKLER: They could have put  
18 in a, you know, surrogate for -- in the same  
19 encapsulation, not just for the destructive  
20 testing purposes. They don't need that  
21 plutonium present.

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1                   CHAIRMAN SCHOFIELD:     Well, I was  
2 referred to ones that actually had plutonium  
3 present.

4                   DR. NETON:     I know they did that  
5 at Los Alamos for sure.

6                   CHAIRMAN SCHOFIELD:     Yes, cause  
7 just to do it on a mock-up on this, I mean,  
8 you are not going to get anything there.

9                   MR. GLECKLER:     Yes, I haven't  
10 encountered any information in the case that  
11 they did any destructive testings with the Pu  
12 sources present.

13                  CHAIRMAN SCHOFIELD:     Okay.     I  
14 didn't, but I just wanted to make sure I  
15 hadn't missed something.

16                  MR. GLECKLER:     And oh, one of the  
17 things that I just recall with the Pu, one of  
18 the other reasons we left it in there was the  
19 one and only potential exposure scenario for  
20 plutonium is the receipt surveys. It's a very  
21 small potential site, because, you know, the

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1 sources, the receipts -- upon receipt, they  
2 would inspect the sources and that's before  
3 they would release them into the plant. That  
4 was all done in a the hood.

5 So a really small group of  
6 individuals involved with that had that  
7 potential, because they did find somewhat  
8 contamination. They didn't find any -- they  
9 have never -- there is no indication that they  
10 ever had to ship any back to the manufacturer,  
11 which would mean that they would have exceeded  
12 200 dpm per source.

13 And we have done -- I have done  
14 some calculations a while back, prior to the  
15 previous Working Group meeting, to where they  
16 would have had -- it was -- they processed a  
17 ridiculous number of Pu sources to get a lung  
18 dose, so --

19 MR. DARNELL: 11,000 in one day.

20 MR. GLECKLER: Yes.

21 (Simultaneous speaking.)

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1                   MR. GLECKLER: Well, that was part  
2 of the reason, I think that, why SC&A wanted  
3 us to keep that in there on that, in the event  
4 that --

5                   MR. DARNELL: It does bolster the  
6 argument that it is not really --

7                   DR. NETON: Well, I think the same  
8 logic applies. I mean, if we do find that  
9 there was evidence of extensive or episodic  
10 exposure to plutonium. You know, we could  
11 certainly revise the higher approach.

12                  MR. STIVER: Some of the incidents  
13 that were not documented.

14                  DR. NETON: I mean, that's sort of  
15 almost --

16                  MR. DARNELL: That's pretty much a  
17 given.

18                  MR. STIVER: That's almost a given  
19 in anything we do.

20                  CHAIRMAN SCHOFIELD: If they did a  
21 document during the D&D. They had to be

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1 taking swipes of stuff, that's where it would  
2 jump.

3 MEMBER CLAWSON: This is Brad  
4 again. Where do these sources come from, the  
5 Pu sources? Who is the manufacturer for them?

6 MR. GLECKLER: I believe Mound.  
7 It was kind of -- there is some information in  
8 the initial version of the TBD that indicated  
9 that they come from LANL and there is some  
10 disagreeing documents.

11 I'm pretty sure it was Mound, but  
12 it's like I couldn't prove that. And it's  
13 like so I don't -- I think I took that out  
14 altogether where -- because it really wasn't  
15 needed for the TBD, but that's either Mound or  
16 LANL.

17 MEMBER CLAWSON: Okay.

18 MR. GLECKLER: One of those two.

19 MEMBER CLAWSON: I was just  
20 wondering in researching some Pantex documents  
21 just watching the history of where a lot of

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1 this came from. And now we have -- that's  
2 where all these sites interact with one  
3 another, a little bit interesting. I was just  
4 wondering if they had one strict facility that  
5 these were produced from.

6 MR. GLECKLER: And part of that  
7 confusion could be because they might have  
8 received them from both, that either one of  
9 those documents would indicate, but that's one  
10 of the reasons why they wanted to use it in  
11 the Mound dosimeters is because Mound was  
12 working with the same material.

13 Mound did produce RTG sources and  
14 I believe LANL did, too.

15 CHAIRMAN SCHOFIELD: Yes, LANL  
16 did, I can vouch for that.

17 MEMBER CLAWSON: I think that's  
18 what we get down to now is my point that I was  
19 getting at. I have seen this source  
20 production at Mound and I haven't been  
21 involved that much with the LANL, but I've

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1 just seen different documentation, especially  
2 through Pantex and so forth. I was just  
3 curious.

4 MR. GLECKLER: Cause it seems like  
5 I recall there might be one other thing out  
6 there that indicated that they were produced  
7 at Mound and might have went to LANL for some  
8 reason before they went to Pinellas. But it's  
9 just interesting information as far as how the  
10 -- all the sites were interrelated. But it  
11 didn't really serve much purpose for the site,  
12 so I took, I believe, that information out of  
13 the TBD, since I couldn't determine exactly  
14 where. I didn't have any conclusive  
15 information.

16 MR. KATZ: So, John, is there any  
17 follow-up on this?

18 MR. STIVER: Yes, I think the  
19 follow-up for us would be to look at the  
20 plutonium bioassay data and the swipe data  
21 just to kind of confirm that we agree or that

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1 we're on the same page as NIOSH.

2 MR. KATZ: Okay.

3 MR. STIVER: And then you guys are  
4 going to revise the wording with respect to  
5 the plutonium?

6 MR. GLECKLER: So you want to go  
7 ahead and take those, basically, just take out  
8 the plutonium?

9 MR. STIVER: Yes, take out the  
10 discussion.

11 MR. GLECKLER: Okay.

12 MR. STIVER: A short paragraph  
13 that indicates that it's positive. Bring it  
14 down and then we will pursue it.

15 MR. DARNELL: What I would like to  
16 do is probably do some in-process work with  
17 you.

18 MR. STIVER: Okay.

19 MR. DARNELL: Just do the changes,  
20 send them over to you.

21 MR. STIVER: Sure.

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1                   MR. DARNELL:    Make sure we are on  
2                   the same page.    Phil, we will let you guys  
3                   know the results after the decision?

4                   CHAIRMAN   SCHOFIELD:        I   don't  
5                   really have a problem with that.   Do you have  
6                   a problem with that?

7                   MR. STIVER:    That's fine.

8                   MR. DARNELL:    Okay.        Now, the  
9                   actual change in the TBD may take a while.

10                  MR. STIVER:    Sure, yes.    As long  
11                  as there is a commitment to make the change,  
12                  that's fine.

13                  CHAIRMAN   SCHOFIELD:        Now, didn't  
14                  they have a few for calibration purposes, 239  
15                  sources, also?

16                  MR. GLECKLER:    Oh, it was part --  
17                  yes, they had some other Pu sources.   Like I  
18                  know they had at least one Pu-Be source  
19                  possibly, maybe two Pu-Be sources arrived  
20                  there in like 1957 time frame.   And I'm not  
21                  sure when it left the site.   I think I had

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1       come across something on that with the GE  
2       Ewendale site, because that's where it ended  
3       up.

4                   CHAIRMAN SCHOFIELD:   Correct me if  
5       I'm wrong, but my understanding was those  
6       sources they had for calibration purposes were  
7       also encapsulated?

8                   MR. GLECKLER:   Correct.  They were  
9       either the smaller plated sources for, you  
10      know, calibrating the alpha contamination  
11      survey instruments, those would have been, you  
12      know, plated and considered a sealed source  
13      for all intents and purposes.

14                   And then the Pu-Be sources were  
15      encapsulated.

16                   CHAIRMAN SCHOFIELD:   That's only  
17      the encapsulated ones.

18                   MR. GLECKLER:   Yes.  They didn't  
19      have any unencapsulated Pu at the site.

20                   CHAIRMAN SCHOFIELD:   They didn't  
21      have any unencapsulated Pu.

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1 DR. NETON: I mean, an  
2 electroplated source, electro-deposit source  
3 is for all intents and purposes is bound to  
4 the metal. I mean, it couldn't be  
5 encapsulated and be effective to calibrate  
6 source contamination monitors.

7 CHAIRMAN SCHOFIELD: Well, that's  
8 what I mean, electroplated is another --

9 DR. NETON: Yes. But that's  
10 common at almost every site you have these  
11 manufacturer sources that have plutonium on  
12 the surface.

13 MR. GLECKLER: I guess the better  
14 way to say it, there wasn't any dispersible  
15 forms of Pu at the site.

16 CHAIRMAN SCHOFIELD: That's really  
17 it.

18 MR. GLECKLER: That's more --

19 CHAIRMAN SCHOFIELD: That is a  
20 little better stated than I was --

21 MEMBER CLAWSON: Starting with the

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1 AEC, they had to be swiped, you know, to make  
2 sure that they weren't leaking.

3 MR. STIVER: Find your TBD - I  
4 received a 7 gram 239 Pu source in January '57  
5 for calibrating health physics  
6 instrumentation, based on information that was  
7 sourced in the issues. It was most like  
8 encapsulated Pu-Be source.

9 DR. NETON: 7 grams?

10 MR. STIVER: Yes. Okay. Well, I  
11 guess we can move on.

12 MR. DARNELL: That closes out  
13 internal. Environmental TBD. Okay.  
14 Secondary issue was taken care of for bad  
15 tritium air monitoring results, provided in  
16 Section 4 of the TBD.

17 Brian, if you don't mind, would  
18 you give the discussion on No. 2 there? You  
19 are more familiar with all the ins and outs of  
20 that.

21 MR. GLECKLER: Yes. The problem

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1 we ran into is, unfortunately, that we didn't  
2 have the documentation and the calculations  
3 that were originally done for the  
4 environmental TBD. And we needed to, you  
5 know, adjust and -- well, we needed those  
6 dispersion calculations as our starting point  
7 to figure out, you know, what the predicted  
8 air concentrations were at the air monitoring  
9 location, so we could do what SC&A had  
10 requested.

11 We found well, we can't do that.  
12 We have got to reconstruct those calculations.

13 And so we just completely redid them. They  
14 are pretty comparable as far as the average  
15 air concentrations that we were calculating  
16 for each calendar year prior to the intakes  
17 and so it's like there are just some, you  
18 know, differences.

19 Let me see, because I think there  
20 are --

21 MR. STIVER: We have induction of

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1 the stack in '81 because of higher doses.

2 MR. GLECKLER: That was factored  
3 in, but it's something -- but they did  
4 different with their calcs than what we did.  
5 But we didn't -- couldn't figure out what they  
6 did, the original authors did with their  
7 calcs. So it's kind of hard to explain why  
8 that change occurred at that point.

9 MR. STIVER: Yes, we were running  
10 across that -

11 MR. GLECKLER: So hopefully it is  
12 a lot -- it's better documented now, is the  
13 intent, and as far as, you know, what went  
14 into those calculations and all the details of  
15 those calculations, so if we need to revisit  
16 anything in the future, that will be much more  
17 easier. We won't have to reconstruct  
18 anything.

19 MR. STIVER: So Attachment A  
20 provides the complete discussion of the  
21 calculations and assumptions.

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1                   MR. GLECKLER:       Yes.       And in  
2       general, the -- when we predicted use for  
3       dispersion calculations to predict what the  
4       average air concentrations were at the air  
5       monitoring locations and compared to the  
6       actual measured data, that was -- we were  
7       underestimating within about -- it's a factor  
8       of 2 point something was the highest on  
9       average that we were underestimating, but we  
10      deemed that reasonable, because we weren't  
11      factoring in that the -- a lot of their air  
12      concentration results were less than detect on  
13      that. And so if we factored those in, it's  
14      like -- and dealt with that in a more  
15      reasonable manner, it's like that ratio would  
16      be closer to a 1:1 ratio. So we were pretty  
17      confident that what -- that the dispersion  
18      calculations that we are doing will generate  
19      a realistic estimate of the air concentrations  
20      for those intakes.

21                   And then also, it's like with the

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1 -- I did a bounding environmental internal  
2 dose estimate as part of the TBD, because --  
3 and we used -- you know, what we estimated  
4 based on stack emissions and also the areas of  
5 the -- I forget what pond, one of the pond  
6 area sources. And our calc, you know, we have  
7 intake rates for the stack, due to the stack  
8 emissions intake rates attributed to the pond  
9 releases, you know, from resuspension and  
10 such. And then also, the air concentrations.

11 And when you -- so we are factoring using the  
12 air concentrations on top of that, even though  
13 a good chunk of that is due to the stack  
14 emissions and already -

15 MR. STIVER: And double count  
16 that.

17 MR. GLECKLER: And even when we  
18 double count that, it's like those -- the  
19 worst case dose, you know, for a worker that  
20 was there from the entire history of the  
21 plant, 1957 through 1997, the worst case dose

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1 is less than 1 millirem total. And so it's  
2 considered a negligible dose from our  
3 perspective.

4 MR. STIVER: I thought that you  
5 guys did a good job on it. I have no issues.

6 Is there anything you wanted to bring up  
7 about this?

8 MR. PAPADOPOULOS: No, no. There  
9 is no issues left.

10 CHAIRMAN SCHOFIELD: The point  
11 where the state comes and required monitoring  
12 for the staff, is there any data from that?

13 MR. GLECKLER: From when the state  
14 came in?

15 CHAIRMAN SCHOFIELD: Yes. My  
16 understanding is, at least on some of these,  
17 that they had to also give some of this data  
18 to the State of Florida, at one point, while  
19 there were still operations. I might have  
20 misread that information.

21 MR. DARNELL: Florida, the State

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1 of Florida itself has a rather robust program.

2 They may have asked for or done their own  
3 monitoring.

4 MR. GLECKLER: Usually a state  
5 won't do their own monitoring on a stack.  
6 They might do environmental monitoring.

7 (Simultaneous speaking.)

8 MR. GLECKLER: The site would be  
9 the one to take the stack samples and report  
10 those results to the state in most situations.

11 Well, at least the states that I have been  
12 involved with. But I haven't encountered  
13 anything where the state was involved with  
14 some monitoring.

15 MR. DARNELL: Yes. The thing is  
16 the way this stuff works in the environment  
17 how the site really operated had there been  
18 something released, it would have stuck out  
19 like a sore thumb in the data records.  
20 Something that would have been caught.  
21 Unfortunately, this is just one of those sites

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1 that you don't see it. You don't find it.  
2 There is no record of it. So you may want to  
3 think could it have happened, it seems  
4 unlikely, the best way to explain it.

5 MR. GLECKLER: They did put out a  
6 decent amount of tritium, but it doesn't  
7 amount to much dose.

8 MR. DARNELL: Right.

9 MR. GLECKLER: That's the nice  
10 thing about tritium.

11 CHAIRMAN SCHOFIELD: Okay.

12 MR. DARNELL: Any more questions,  
13 comments on environmental?

14 MR. STIVER: No, not really.

15 MR. DARNELL: All right. That  
16 moves us on to the medical TBD. And, Elyse,  
17 are you still on the line?

18 MS. THOMAS: Yes, I am.

19 MR. DARNELL: I hate to impose,  
20 but would you mind going over the changes of  
21 the medical dose TBD, please?

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1 MS. THOMAS: No, that would be  
2 fine.

3 MR. DARNELL: Okay.

4 MR. GLECKLER: And hopefully I  
5 captured the reasoning correctly, Elyse. I  
6 just had to put this summary together pretty  
7 quickly. I didn't have a chance to run it  
8 past you, so I hope it's accurate.

9 MS. THOMAS: Yes.

10 MR. GLECKLER: If not --

11 MS. THOMAS: Yes, it's fine.

12 MR. GLECKLER: -- you can correct  
13 me.

14 MS. THOMAS: Yes, SC&A had made a  
15 comment about, you know, the equipment and the  
16 techniques not being, you know, maybe fully-  
17 documented in the TBD or fully-documented as  
18 they could be. And so we tried to improve  
19 that, you know, with a little bit better  
20 description of the equipment, the dates that  
21 we know certain equipment was used.

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1 All of the pre-1972 X-ray doses  
2 are still based on information from ORAU OTIB-  
3 6, because we don't have any information  
4 about, site-specific information, the X-ray  
5 equipment at Pinellas before 1972.

6 The changes to the PFG doses were  
7 simply a result of a slight change in the  
8 doses from PFG in ORAU OTIB-6. So I think  
9 that's it on the equipment.

10 The next issue, I think, SC&A had  
11 had to do with the frequencies of the  
12 screening examination. And, of course, now,  
13 we have a lot more information in the claim  
14 file records and it's very clear that Pinellas  
15 did use, they called it, a KUB, a Kidney  
16 Ureter Bladder, which is an AP projection of,  
17 essentially, the abdomen.

18 They are similar to an AP lumbar  
19 spine. They used that in conjunction with a  
20 chest X-ray as a screening examination,  
21 because it appears that almost -- or in very

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1 many of the claim records. And so we included  
2 the doses and just strengthened that section  
3 of the TBD to make it clear to the dose  
4 reconstructors that they should include the  
5 dose from those procedures, because they were,  
6 you know, clearly performed for screening on  
7 the Pinellas workers.

8 So I think that's pretty much the  
9 frequency section.

10 The uncertainty section it's,  
11 essentially, the same as the one that we have  
12 in ORAU OTIB-6 where we list the various  
13 sources of uncertainty that we have considered  
14 and then come up with a, you know, total  
15 standard propagated uncertainty.

16 Let's see, a couple of other  
17 things on the summary there. The time period  
18 for PFG just changed slightly just to reduce  
19 confusion on the part of dose reconstructors.

20 In other words, PFG is to be assigned through  
21 1959, as opposed to up to 1960. I know that

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1 sounds like a very small change, but it helped  
2 to reduce the confusion on the part of the  
3 dose reconstructors.

4 We took out the lateral abdomen  
5 exposures or KUB exposures, that's not  
6 typically done for that exam. As a matter of  
7 fact, I should say it is rarely done for that  
8 exam.

9 We added skin doses for all of the  
10 various skin locations as calculated or  
11 described in ORAU OTIB-6. And then did some  
12 organizational changes to make it a little bit  
13 more readable and more clear.

14 So I think that kind of summarizes  
15 the changes that were made to the medical  
16 section. It just was -- it just is about to  
17 be published, so I realize SC&A hasn't had a  
18 chance to look at it yet.

19 MR. STIVER: Yes, from what I have  
20 read of your descriptions here, it sounds like  
21 you have answered most of our concerns. I

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1 would reserve judgment until we actually have  
2 a chance to review the TBD and also we would  
3 like to look at the site-specific data to  
4 verify in our minds that it, indeed, covers a  
5 lot of ground for dose reconstruction as  
6 opposed to any need to invoke TIB-6 during  
7 that period.

8 MS. THOMAS: Yes, sure.

9 MR. STIVER: And so other than  
10 that, that's really all we have to say, at  
11 this point.

12 MS. THOMAS: Okay.

13 MR. GLECKLER: Something worth  
14 noting regarding the Pinellas Plant medical  
15 records is, that's probably a little bit  
16 different than other sites, that what becomes  
17 clear after looking at a lot of these records  
18 is it looks like one of the benefits that the  
19 plant offered their employees is the use of  
20 the site doctors as their personal doctors.  
21 So there are a lot of diagnostic medical

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1 records, not just X-ray records, but other  
2 diagnostic, you know, things regarding, you  
3 know, cancer diagnoses and other ailments and  
4 stuff.

5 And so plus that there is a lot of  
6 diagnostic X-ray records, and that's just  
7 something that's worth being aware of --

8 MR. STIVER: That is an  
9 interesting difference.

10 MR. DARNELL: One advantage the  
11 site has is the plant nurse who was still  
12 around and we did interview her. She went way  
13 back in the program, so was able to tell us  
14 what was going on very early in the medical  
15 program.

16 MR. STIVER: Wow. You rarely have  
17 that kind of -

18 MR. DARNELL: Yes.

19 MR. STIVER: -- access.

20 MR. DARNELL: Okay.

21 CHAIRMAN SCHOFIELD: Do we want to

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1 take a break here temporarily?

2 MR. STIVER: Yes, it looks like a  
3 good time to take a coffee break.

4 CHAIRMAN SCHOFIELD: Okay. Coffee  
5 break.

6 MR. KATZ: Ten minutes. Do you  
7 want 10 minutes?

8 CHAIRMAN SCHOFIELD: Yes, 10  
9 minutes is fine.

10 MR. KATZ: Okay. So about 20 till  
11 we will start back up for folks on the phone.  
12 I'm just putting the phone on mute. Thanks.

13 (Whereupon, the above-entitled  
14 matter went off the record at 10:30 a.m. and  
15 resumed at 10:42 a.m.)

16 MR. KATZ: Okay. We're back after  
17 a short break. Pinellas Work Group. Where  
18 are we? We have gone through the agenda.

19 MR. DARNELL: We've finished the  
20 agenda.

21 MR. KATZ: We are down to action

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1 items and plans.

2 CHAIRMAN SCHOFIELD: Yes, unless  
3 we have more technical discussion.

4 MR. STIVER: I think we have  
5 pretty well covered it on this side of what we  
6 can do at this point.

7 MR. KATZ: Same for Work Group  
8 Members? Any other questions before we move  
9 on to plans?

10 MEMBER CLAWSON: I did have one  
11 question. In the beginning of this, and I  
12 want to make sure I understood, on the beds or  
13 in the glass state, was that depleted uranium  
14 in those?

15 MR. DARNELL: Titanium.

16 MR. STIVER: You're talking about  
17 the hydrides?

18 MEMBER CLAWSON: Right, those.

19 MR. STIVER: Yes.

20 MEMBER CLAWSON: Well, I just saw  
21 the depleted uranium and then I saw uranium

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1 and I wanted to make -- because my  
2 understanding was they actually had some of  
3 the uranium beds.

4 MR. GLECKLER: The initial beds,  
5 storage beds that they used at the Pinellas  
6 Plant were the glass beds that contained  
7 titanium hydride. And because of the breakage  
8 problems with the glass beds, they replaced  
9 them with the stainless steel beds with  
10 uranium tritide. And so there is -- in the  
11 1960s time frame, around '66 or '62 or '66  
12 time frame, was when that transition occurred.

13 MEMBER CLAWSON: So was it  
14 actually uranium? When I saw uranium, it  
15 wasn't depleted uranium in the uranium beds?

16 MR. GLECKLER: I believe I have  
17 got it -- the way I wrote it in there is we  
18 believe it is either -- from depleted uranium.

19 MEMBER CLAWSON: Well, I --

20 MR. GLECKLER: It's not --

21 MEMBER CLAWSON: -- just wondered,

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1 because when I read in it, it talked earlier  
2 about depleted uranium beds. And then later  
3 on it says uranium beds and I wanted to make  
4 sure they were the depleted.

5 MR. DARNELL: It's supposed to be  
6 DU.

7 MR. STIVER: Yes.

8 MEMBER CLAWSON: Okay. So I just  
9 wanted to clarify that and make sure that I  
10 understood that maybe some had changed in that  
11 time frame.

12 MR. GLECKLER: Yes, the only  
13 instances of non-depleted or of other types of  
14 uranium that was natural uranium and that was  
15 in the borosilicate glass. But any other  
16 reference to uranium in that TBD should be  
17 referring to the depleted in the uranium  
18 storage beds.

19 MEMBER CLAWSON: Okay. Because  
20 the other side we dealt with is that they were  
21 actually uranium beds. And I just wanted to

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1 make sure that something hadn't changed that I  
2 hadn't been following through the TBD. Thank  
3 you.

4 MR. KATZ: Any other questions?  
5 How about Dr. Poston, John?

6 MEMBER POSTON: No.

7 MR. KATZ: No questions?

8 MEMBER POSTON: Nope.

9 MR. KATZ: Okay.

10 CHAIRMAN SCHOFIELD: Anybody on  
11 the phone have any questions?

12 MR. KATZ: Anyone else on the  
13 phone with questions?

14 MS. HAND: Yes. Can you hear me?

15 This is Donna.

16 MR. KATZ: Yes, we hear you,  
17 Donna.

18 MS. HAND: Okay. The -- how come  
19 they did not use the baseline 1997 report from  
20 Lockheed Martin and also of DOE as a reference  
21 material in the new Technical Basis Document?

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1       Because it's not mentioned anywhere.

2                   MR. DARNELL:       This is Pete  
3 Darnell. Donna, what report are you referring  
4 to? Can we have the full title, please?

5                   MS. HAND:       Yes.     The Pinellas  
6 Plant Technical Basis Document, the  
7 Environmental Baseline, the report from  
8 Lockheed Martin and DOE 1997. You used the  
9 1995 as a reference, but you have completely  
10 ignored the 1997.

11                   And back in the June meeting, I  
12 even brought that up.

13                   MR. GLECKLER:     There isn't any  
14 significant information that is different, I  
15 think that's probably why we didn't bother  
16 using that one.

17                   MS. HAND:     But in that report, in  
18 that baseline report, it mentions the uranium.  
19 It mentions all four of them. In fact, the  
20 EPA says there was krypton, uranium and  
21 tritium, enough for residual contamination

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1 concerns.

2 So why is it not important? And  
3 that was your decontamination/decommissioning  
4 period.

5 MR. DARNELL: We will take a look  
6 at the report. We'll have to get back to you.

7 MS. HAND: And then how come you  
8 did not include the destructive testing of  
9 both the neutron generator in building 200 and  
10 as well as the plutonium, the RTGs? They did  
11 do destructive testing of those.

12 In fact, I have a client that  
13 specifically said that on the RTGs they would  
14 -- if something went wrong, they had to  
15 physically open it up and they had used  
16 asbestos gloves to open it up, because it was  
17 so warm, to find out they would probably fill  
18 it back in.

19 MR. DARNELL: As far as the RTG  
20 goes, we have no documentation that shows that  
21 destructive testing was done.

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1                   The battery itself is triple  
2 encapsulated source, as we have discussed  
3 earlier, so there is no contamination exposure  
4 potential there.

5                   The asbestos gloves, it's not  
6 really germane to whether there was a  
7 radiation exposure or not.

8                   MS. HAND: Well --

9                   MR. DARNELL: So do you have any  
10 documentation that there was destructive  
11 testing that included --

12                   MS. HAND: Yes, I can get an --

13                   MR. DARNELL: -- the plutonium  
14 battery?

15                   MS. HAND: -- affidavit from the  
16 worker himself, yes.

17                   MR. DARNELL: And it included the  
18 plutonium battery?

19                   MS. HAND: Yes.

20                   MR. GLECKLER: Some of those  
21 destructive tests involved actually using an

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1 explosive to blow up the device. And that  
2 would explain the use of asbestos gloves,  
3 because the device would possibly still be hot  
4 from the explosion.

5 MR. DARNELL: But we have -- see  
6 it doesn't matter if you blow up an RTG that  
7 doesn't contain the plutonium battery. Okay.  
8 That's like blowing up your car. It's not a  
9 radiation exposure issue.

10 And like I said, we have nothing  
11 that shows that the plutonium battery was ever  
12 destroyed on that site in any regard.

13 MS. HAND: I take a different view  
14 because these workers are telling me that  
15 there -- you know, if you are blowing it up,  
16 you have to have some type of radiation that  
17 is coming from there. But that's a different  
18 issue altogether.

19 I will get the affidavit from the  
20 worker for you guys and send it to you.

21 Also, DOL has stipulated that

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1 there was a plutonium fire in 1972/1973. So  
2 you are telling me let's take the plutonium  
3 out completely when there was an actual fire?

4 MR. DARNELL: We have never  
5 encountered any --

6 MS. HAND: It doesn't --

7 MR. DARNELL: -- information on  
8 that.

9 MS. HAND: -- make sense to me  
10 either.

11 MR. DARNELL: We have no record of  
12 a plutonium fire, so --

13 MS. HAND: Well, DOL does. And it  
14 came from DOE, so that doesn't make sense.

15 MR. DARNELL: Supply the document,  
16 please, because we have no record of it, no  
17 documentation of it. As you can see in the  
18 Technical Basis Documents, we have an  
19 extensive list of the incidents that did  
20 occur.

21 MS. HAND: Sure.

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1 MR. DARNELL: We are not seeing --

2 MS. HAND: Yes. And this is an  
3 extensive list. You find that there is a  
4 whole area for contaminated with tritium.  
5 Everything -- but yet, you know, you are  
6 limiting that tritium to, you know, such  
7 certain things.

8 MR. DARNELL: The tritium is not  
9 being limited -

10 MS. HAND: And they did a bioassay  
11 on plutonium.

12 MR. DARNELL: Tritium is not being  
13 limited to anything. There is an exposed  
14 worker population that has been identified by  
15 monitoring. The unexposed or the unmonitored  
16 worker has an exposure potential that is  
17 recognized in the unmonitored worker dose. So  
18 there is nothing that is being left out from  
19 tritium monitoring, tritium exposure and the  
20 dose reconstruction for it.

21 So if you have something that you

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1 think is being left out, please, be specific.

2 MS. HAND: Oh, I will be. I'll go  
3 ahead and let you go on with your meeting.  
4 But there is a lot of information that  
5 happened in the June meeting and that was --  
6 is not addressed and is taken out. And  
7 assuming that you have, you know, now you  
8 have, a new Technical Basis Document, you did  
9 a lot of work, you did a lot of good, as far  
10 as the history goes, but there was still  
11 things that you are ignoring --

12 MR. DARNELL: Could you, please --

13 MS. HAND: -- that were --

14 MR. DARNELL: -- be specific?

15 MS. HAND: -- documented in the  
16 June hearing, as well as the GE/Milwaukee  
17 Group X-Ray Group, they only handled the  
18 paperwork up until 1966.

19 In 1966 and '67, they moved,  
20 physically moved, to the plant. So all the  
21 records from the GE X-Ray Plant either for the

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1 -- for that group was physically in Pinellas  
2 Plant. They have a room there established for  
3 them.

4 MR. DARNELL: We retrieved all the  
5 records that we could from Pinellas. We have  
6 also retrieved the records from the GEXM, GE  
7 X-Ray Division. You know, this is -- this  
8 issue has been vetted several times, as far as  
9 looking for documentation.

10 The process that we have is if  
11 more documentation is discovered, we add that  
12 information. We --

13 MS. HAND: But --

14 MR. DARNELL: -- have proven --

15 MS. HAND: -- my concern is is  
16 that you got through saying that the GEX  
17 Milwaukee stuff is a separate thing.

18 MR. DARNELL: There is --

19 MS. HAND: You know, but they --

20 MR. DARNELL: -- information  
21 from --

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1 MS. HAND: -- actually moved in  
2 there and they took handbooks from day one,  
3 all they handled was the paperwork.  
4 Everything from 1956 when they decided to move  
5 it, to build it at Pinellas Plant, that  
6 division was charged with it, but all they did  
7 was handle the paperwork and then did the  
8 drawings, et cetera, and then physically moved  
9 to Pinellas in '66.

10 So if you are having to get this  
11 from the GEXM and -- but you said you are not  
12 going to use those, you withdrew those records  
13 because it was the GEXM, how can you if the  
14 records -- after 1966 -- they were physically  
15 there.

16 MR. DARNELL: Okay. You  
17 misunderstood what we are saying. There were  
18 GE --

19 MS. HAND: Okay. Then, please,  
20 clarify.

21 MR. DARNELL: There were GEXM

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1 documents that were removed from the Pinellas  
2 TBD that had to do with other operations at  
3 GE. The GE X-Ray site did a lot of other  
4 things that was not part of the Pinellas  
5 operations and not part of the pilot program  
6 that was started at GEXM and then moved to  
7 Pinellas.

8 So there were personnel at GEXM  
9 that are included in the Pinellas TBD. So I  
10 don't understand where you have a problem with  
11 us capturing them and moving them to Pinellas,  
12 but at the same time removing documents that  
13 had nothing to do with Pinellas.

14 MS. HAND: Well, the thing is, you  
15 know, I was going to do a Freedom of  
16 Information Act and look at those documents,  
17 because Pinellas did a lot of things. The  
18 main thing was, as you know, with the neutron  
19 trigger.

20 However, they did a lot of other  
21 stuff and that had radioactive material in it

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1 as well. And then to the internal dose to put  
2 it for the ones that got monitored for tritium  
3 is the only ones you are going to do for metal  
4 tritide, that metal tritide, from my  
5 understanding, went around where anybody met  
6 with the neutron generator, they touched the  
7 metal tritide.

8 MR. DARNELL: No, ma'am, that's  
9 completely inaccurate and incorrect. The  
10 only -

11 MS. HAND: Oh, for someone --

12 MR. DARNELL: -- exposure  
13 potential for that tritide is to the workers  
14 that were handling either the tubes or spilt  
15 materials and the folks that worked with the  
16 tritium day-to-day. Those were the only  
17 exposure potentials.

18 You did not have a volatile  
19 component to the tritides to spread it  
20 throughout the plant. In the early days when  
21 the glass tubes broke, it's a very local

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1 exposure potential. This is not something  
2 that was spread out to where you would have to  
3 include an unmonitored worker who is not  
4 expected to be exposed to tritium, much less  
5 the tritide, so that you can separate them  
6 because of the difference in work  
7 requirements.

8 MS. HAND: Well, that is strange  
9 because the workers themselves say absolutely  
10 opposite and you said absolutely opposite in  
11 the transcript of the -- in 2009.

12 MR. DARNELL: Can you, please,  
13 reference the page? I've got the transcripts  
14 right here in front of me. Where was that  
15 said?

16 MS. HAND: Well, that was said  
17 because you said you cannot use the same --

18 MR. DARNELL: No, you are  
19 misunderstanding me.

20 MS. HAND: -- material because  
21 Pinellas Plant workers were exposed to it

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1 more.

2 MR. DARNELL: Okay. I'm looking  
3 at the tritium section where we discussed  
4 tritides in the transcripts from the last  
5 meeting. Okay. Can you, please, point out  
6 where the opposite was said?

7 MS. HAND: Not at this time,  
8 because my computer just froze.

9 MR. DARNELL: Oh, okay. All  
10 right. As far as what this document says,  
11 okay, and looking through it, the discussion  
12 from two years ago is the same as the  
13 discussion now.

14 The tritides were going to be  
15 applied to the workers that were monitored, an  
16 unmonitored dose of tritium is applied to the  
17 unmonitored workers. There is no change in  
18 what we are doing with the exception that  
19 instead of Class M, we are using Class S,  
20 because there could have been a Class S  
21 tritide present.

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1 MS. HAND: Okay. And then you  
2 also are going by the DOE -- are you also  
3 fulfilling the DOE handbook to where it says--

4 MR. DARNELL: DOE handbook is not  
5 a requirement --

6 MS. HAND: -- you can't say --

7 MR. DARNELL: -- for us.

8 MS. HAND: -- why as far as  
9 dispersement goes, because the tritium will  
10 continue going out.

11 MR. DARNELL: The DOE handbook is  
12 not a requirement for us.

13 CHAIRMAN SCHOFIELD: I have a  
14 question for you. You are saying people  
15 needed to use asbestos gloves. Do you have  
16 the size of the plutonium batteries or the  
17 RTG, the size of that or its power level?  
18 That would have a huge bearing on that.

19 MS. HAND: I do know that they did  
20 have two different sizes. One size that they  
21 could touch with their fingers to make sure it

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1 was heated and another size was the size of an  
2 orange juice can or something that they had to  
3 use the asbestos gloves with.

4 CHAIRMAN SCHOFIELD: A what sized  
5 can?

6 MR. KATZ: Orange juice can.

7 CHAIRMAN SCHOFIELD: Okay.  
8 Thanks.

9 MR. KATZ: Donna, this is Ted  
10 Katz. I think it would be helpful if you  
11 would -- for example, you mentioned the  
12 affidavit.

13 MS. HAND: Yes.

14 MR. KATZ: And you mentioned the  
15 plutonium fire and now you have also discussed  
16 transcript discussion. If you would just go  
17 ahead and actually specify those in writing  
18 and submit them, then everybody can see  
19 exactly what you are addressing. And at the  
20 next Work Group meeting, they can respond to  
21 that, exactly what you are concerned about.

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1 MS. HAND: Yes, I will, because  
2 it's depleted uranium with a depleted uranium  
3 bed and that was from the very beginning. And  
4 they had to replenish that depleted uranium.  
5 Again, a worker informed me of that.

6 So you, for example, have EPA  
7 saying that there was concern of residual  
8 contamination of uranium and that, you know,  
9 it has to be a high concern as well.

10 MR. KATZ: So if you will just --

11 MS. HAND: But I will put this in  
12 points. Thank you very much.

13 MR. KATZ: That's great. That  
14 will be very helpful. Thank you, Donna. And  
15 you can send those to DCAS and those will get  
16 distributed to the Work Group through them, so  
17 we will make sure that everybody, including  
18 SC&A, gets the exact documents or page numbers  
19 of documents that you are referring to with  
20 these comments.

21 MS. HAND: Will do. Thank you.

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1 MR. KATZ: That would be great.  
2 Thanks. Any other comments or questions? In  
3 terms of actions, SC&A has run through a set  
4 of tasks. I've got them. You've got them.  
5 If you want to report on them, you can, but  
6 you don't need to, I think, we are pretty  
7 clear on the taskings.

8 MR. STIVER: Make sure we have  
9 everything captured.

10 MEMBER CLAWSON: You will send a  
11 copy of the -

12 MR. KATZ: Yes, I'll send it out  
13 afterwards. An action plan.

14 MEMBER CLAWSON: Appreciate that  
15 for the Work Group.

16 MR. KATZ: That would be great.  
17 And then I think DCAS only had --

18 MR. DARNELL: I had two things  
19 written down.

20 MR. KATZ: Two items, yes.

21 MR. DARNELL: To find the swipe

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1 data during D&D and remove the plutonium  
2 information.

3 DR. NETON: Yes, the language or  
4 develop language.

5 MR. STIVER: Pete and I will  
6 coordinate on that.

7 MR. KATZ: Exactly.

8 DR. NETON: Works for me.

9 MR. KATZ: Excellent.

10 CHAIRMAN SCHOFIELD: Anybody else  
11 have anything else?

12 MR. KATZ: Well, thank you,  
13 everyone, for a productive meeting. Thank  
14 you --

15 CHAIRMAN SCHOFIELD: Thank you  
16 very much.

17 MR. KATZ: -- John, for hanging in  
18 on the phone and the other staff as well and  
19 Donna, thank you for attending. And we are  
20 adjourned.

21 CHAIRMAN SCHOFIELD: We are

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1 adjourned.

2 MEMBER POSTON: All right. So  
3 long, everybody.

4 MR. KATZ: Take care.

5 CHAIRMAN SCHOFIELD: Bye.

6 (Whereupon, the Work Group meeting  
7 was concluded at 11:00 a.m.)

8

9

10

11

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