

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

convenes

MEETING 47

ADVISORY BOARD ON  
RADIATION AND WORKER HEALTH

DAY ONE

VOL. I

The verbatim transcript of the 47th  
Meeting of the Advisory Board on Radiation and  
Worker Health held at The Sheraton Denver West,  
Lakewood, Colorado on June 11, 2007.

*STEVEN RAY GREEN AND ASSOCIATES  
NATIONALLY CERTIFIED COURT REPORTING  
404/733-6070*

C O N T E N T S

June 11, 2007

WELCOME AND INTRODUCTIONS	10
DR. PAUL ZIEMER, CHAIR	
DR. LEWIS WADE, DFO	
USE OF DATA FROM OTHER SITES	14
DR. LEWIS WADE, EXECUTIVE SECRETARY	
SELECTION OF 8 <sup>TH</sup> ROUND OF DR REVIEWS	20
DR. PAUL ZIEMER, CHAIR	
SC&A TASKS	70
DR. LEWIS WADE, DFO	
SANDIA LIVERMORE SEC	89
NIOSH	
PETITIONER COMMENTS	
ROCKY FLATS SEC	109
DR. BRANT ULSH, NIOSH	
WORKING GROUP PRESENTATIONS	
PUBLIC COMMENT	230
COURT REPORTER'S CERTIFICATE	357

### TRANSCRIPT LEGEND

The following transcript contains quoted material. Such material is reproduced as read or spoken.

In the following transcript: a dash (--) indicates an unintentional or purposeful interruption of a sentence. An ellipsis (. . .) indicates halting speech or an unfinished sentence in dialogue or omission(s) of word(s) when reading written material.

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

-- (phonetically) indicates a phonetic spelling of the word if no confirmation of the correct spelling is available.

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

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

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

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

(By Group, in Alphabetical Order)

BOARD MEMBERSCHAIR

ZIEMER, Paul L., Ph.D.  
Professor Emeritus  
School of Health Sciences  
Purdue University  
Lafayette, Indiana

EXECUTIVE SECRETARY

WADE, Lewis, Ph.D.  
Senior Science Advisor  
National Institute for Occupational Safety and Health  
Centers for Disease Control and Prevention  
Washington, DC

MEMBERSHIP

BEACH, Josie  
Nuclear Chemical Operator  
Hanford Reservation  
Richland, Washington

1 CLAWSON, Bradley  
2 Senior Operator, Nuclear Fuel Handling  
3 Idaho National Engineering & Environmental Laboratory

GIBSON, Michael H.  
President  
Paper, Allied-Industrial, Chemical, and Energy Union  
Local 5-4200  
Miamisburg, Ohio

GRIFFON, Mark A.  
President  
Creative Pollution Solutions, Inc.  
Salem, New Hampshire

1  
2  
3  
4  
5  
6  
7  
8

LOCKEY, James, M.D.  
Professor, Department of Environmental Health  
College of Medicine, University of Cincinnati

MELIUS, James Malcom, M.D., Ph.D.  
Director  
New York State Laborers' Health and Safety Trust Fund  
Albany, New York

MUNN, Wanda I.  
Senior Nuclear Engineer (Retired)  
Richland, Washington

POSTON, John W., Sr., B.S., M.S., Ph.D.  
Professor, Texas A&M University  
College Station, Texas

PRESLEY, Robert W.  
Special Projects Engineer  
BWXT Y12 National Security Complex  
Clinton, Tennessee

ROESSLER, Genevieve S., Ph.D.  
Professor Emeritus  
University of Florida  
Elysian, Minnesota

SCHOFIELD, Phillip  
Los Alamos Project on Worker Safety  
Los Alamos, New Mexico

SIGNED-IN AUDIENCE PARTICIPANTS

ADAMS, DAVID, RF WORKER  
ADKINS, LEONILA, SPOUSE  
ALBERG, JEANETTE, SEN. ALLARD  
ALCORN, JIM, ROCKY FLATS  
AMADON, ALBERT, WORKER  
ANDERSON, ADRIENNE, RMPJC  
ASTIN, GARY, PROFESSIONAL CASE MANAGEMENT  
BAHER, LYNNE, USW  
BARKER, KAY, ANWAG  
BARRIE, GEORGE, ANWAG  
BARRIE, TERRIE, ANWAG  
BARTHEL, HEIDE, FORMER ROCKY  
BLACKMON, CARMEN  
BOLLER, CAROLYN, CONG. MARK UDALL  
BRADSHAW, CHARLENE A., RADIATION ORG.  
BREYER, LAURIE, NIOSH  
BUCHANAN, DENNIS, RCT  
BUIE, MARIE R., ROCKY FLATS  
BURKE, MARY, LOCAL 8031  
BUTZ, JR., REINHOLT, S.O.E.  
BYRD, GARY, EX ROCKY FLATS EMP.  
CAPPS, WALT, RF  
CARLSON, AUDREY, SPOUSE  
CARLSON, ROBERT I., RADIATION  
CASTILLO, CHRIS  
CHANG, CHIA-CHIA, HHS  
CHERATES, MATT, SEN. SALAZAR  
CLARK, DEBBY, RFETS  
CLAUSEN, DAVE, ROCKY FLATS  
CLOUD, TOM  
CUTSHALL, VIRGINIA, COALITION AGAINST SWEATSHOP ABUSES  
DALY, SEAN  
DANIELSON, JUDY  
DECASTRO, RANDY, IBEW 68  
DEHAAS, JUDY, ROCKY MT. NEWS  
DELFORGE, CLIFF, RF RETIRED  
DELOCKNOY, HARVEY, ROCKY FLATS  
DEMAIORI, ANTHONY, RETIREE USW  
DENNISON, ELIZABETH  
DESMOND, JEANETTE

DESMOND, JUSTIN  
DICKERSON, GLORIA  
DIGIACONO, RON, SELF  
DOBROVOLNY, MICHELLE, ROCKY FLATS  
DOWNES, AMIA, NIOSH  
ELMORE, RORY, RF  
ESCABOA, BARB, PROFESSIONAL CASE MANAGEMENT  
ESPINOZA, JOE, ROCKY FLATS  
ESPINOZA, REUBEN, ROCKY FLATS  
EVANS, JOHN  
FITZ-GERALD, SEN. JOAN  
FITZGERALD, JOE, SC&A  
FRANK, LAURA, ROCKY MOUNTAIN NEWS  
FREIBERG, KEN  
FREIBERG, MARY, WIFE RF  
GARCIA, SHIRLEY, BROOMFIELD CO/WORKER  
GONZALEZ, NORMA, ROCKY FLATS  
GROVES, DARCINIA, RF  
GUTIELLEZ, BARRY, ROCKY MNT NEWS  
HAINS, JOE, RF WORKER  
HARDEN, J.M., USWA 8031  
HARRIS, JOHN M., USW  
HAYNES, GENIE, RF  
HEELY, RITA, TIME MAGAZINE  
HEISZ, SHIRLEY, ROCKY FLATS  
HERHAGER, STEVE, ROCKY FLATS  
HILLER, DAVID, SEN. KEN SALAZAR  
HOFFMAN, GAYLE, RF WORKER  
HOLEN, BILL, CONG. PERLMUTTER  
HOLGERSON, ERIC, ROCKY FLATS  
HORAN, JAMES, ROCKY FLATS EMP.  
HOWELL, EMILY, HHS  
HOMOKI-TITUS, LIZ, HHS  
HOWARD, JOHN, NIOSH  
IMSE, ANN, ROCKY MOUNTAIN NEWS  
JOCHEM, JIM  
JONES, SYLVIA, LOCAL 8031  
JURJOVEE, NICK  
[Name Redacted], ROCKY FLATS  
KESSLER, MIKE, 5280  
KIMBROUGH, MICHAEL, ROCKY FLATS  
KOHLER, ROMAN, R.F. HOMESTEADERS  
KRULL, WARREN S., SAIC

LAHTI, ROSE, ROCKY FLATS  
LAY, FRANK  
LIPSZTEIN, JOYCE, SC&A  
LUCERO, GENNY, RADIATION ORG.  
MAKHIJANI, ARJUN, SC&A  
MALITO, RAY, PCM  
MARTINEZ, MICKEY, RF  
MAURO, JOHN, SC&A  
MCCABE, JIM, ROCKY FLATS  
MCCARTHY, BILLY, RETIRED  
MCCARTHY, DIANN, SPOUSE  
MEANEY, CHERYL & PHIL, RFW & SPOUSE  
MEDINA, CARLOS, ROCKY FLATS  
MENDRICK, PAUL  
MILLER, CHUCK, ROCKY FLATS  
MOBLEY, JERRY, ROCKY FLATS  
MORRIS, ROBERT, CHEW & ASSOC.  
MOSELEY, HENRY, RF  
NEWBY, KEVIN, RF EMPLOYEE  
NORWOOD, BILLY, RF  
OLSON, JOHN, USW  
OPPERMAN, STEVE  
OSTROM, RICHARD, ROCKY FLATS  
PADILLA, CHARLES, RFP RETIRED  
PADILLA, JUDY, FORMER RFP WORKER  
PALIZZI, TOM, ROCKY FLATS  
PALMER, RANDALL, 8031  
PODRACKY, GREG, ENG  
POSEY, ROBERT V., ROCKY FLATS  
QUINLIN, DONNA, ROCKY FLATS  
RAMAGE, KATHRYN, 8031  
RAMAGE, WYNN, 8031  
RAMER, ELENA  
RICHTER, TONY, RET. STEEL WORKER  
ROBERTS, KIMBERLY, SAIC  
ROBERTSON-DEMERS, KATHY, SC&A  
RODRIGUEZ, WALT, ROCKY FLATS  
ROMERO, DENNIS R., RF WORKER  
ROMERO, SILVERIO, ROCKY FLATS  
ROSE, RUSS  
RUPP, MARYANN, SPOUSE OF DECEASED WORKER  
SABEC, CAROLE, STEEL WORKER  
SABEC, DON, 8031



SALAZAR, RAYMOND A., ROCKY FLATS  
SAUNDERS, DANIEL  
SCHULTZ, JEFFREY W., ENGINEERING  
SCHULTZ, LAURA, RF CLAIMANTS  
SKINNER, CHARLES  
SMALL, BERNARD, ROCKY FLATS  
SNODGRASS, LARRY, LOCAL 8031  
SOUTHALL, JOANN, ROCKY FLATS  
SOUTIERE, GALE, RFP RETIREE  
SOUTIERE, GERALD, RF WORKER 8031  
STEINBACH, ROCKY FLATS  
STOKES, ELLIOTT, RF WORKER  
STOLTZ, DENNIS, IBEW LOCAL 68  
SULLIVAN, JOHN, LOCAL 8031  
THIELEN, VALERIE, ROCKY FLATS  
TRESQUEZ, MICHAEL R., ROCKY FLATS  
TRUJILLO, GERARD A., 8031  
TUCK, KIM, LOCAL 8031  
TURCIC, PETE, DOL  
TURNER, JAMES H., ROCKY FLATS  
ULLMAN, JOSEPH, LOCAL 720  
ULSH, BRANT, NIOSH  
VIGIL, DENNIS E., ROCKY FLATS  
VIGIL, JULIE TORRES, ROCKY FLATS  
WEAVER, JACK, RETIRED RF WORKER  
WEBBER, DONNA, ROCKY FLATS  
WHITE, CHARLES, RF WORKER  
WOLF, CHARLIE  
WOLF, KATHLEEN D.  
WOLFE, MAUREEN, USW  
ZIEGLER, DWAYNE T., USW  
ZIEGLER, TED, USW



1 available on the tables in the back.

2 I'll now call on Dr. Lew Wade, our Designated  
3 Federal Official, to make opening comments.

4 **DR. WADE:** Thank you, Paul, very much. Again,  
5 welcome, all -- and particularly Board members.  
6 I thank you for your service. I appreciate  
7 your making the time available for this meeting  
8 particularly.

9 For the record, I'd like to remind all that the  
10 Board was scheduled to have a telephone meeting  
11 tomorrow on June 12th. As the deliberations on  
12 Rocky Flats unfolded when last we were in  
13 Denver, the Board decided that it wanted to do  
14 the right thing and come and have a face-to-  
15 face meeting here in Denver on the 11th and  
16 12th. There are four Board members who will be  
17 joining us by telephone. In part that's  
18 because of the fact that their schedules were  
19 already set and they were unable to -- to be  
20 here face-to-face, but they will be here for  
21 all of the Rocky Flats discussion and vote, or  
22 so they tell me.

23 I guess that's really all that I would have to  
24 say other than since there are members on the  
25 phone and it's terribly important they hear us,

1           the AV people say to all Board members, keep  
2           the microphone three or four inches from your  
3           mouth when you talk. This way the people out  
4           there can hear the -- the sage comments of all  
5           Board members.

6           Maybe I'll spend just a minute for interested  
7           parties sort of laying out how the Rocky Flats  
8           time will be spent. As Paul mentioned, the  
9           Board, up through lunch this morning, will be  
10          dealing with issues other than Rocky Flats.  
11          They'll break for lunch and reconvene at 2:00  
12          o'clock.

13          And from 2:00 to 4:30 will be time spent  
14          discussing the Rocky Flats SEC petition. It'll  
15          begin with a presentation by NIOSH. The Board  
16          asked NIOSH to look into three very specific  
17          technical issues. We'll hear answers from  
18          NIOSH on those three technical issues. And  
19          then Mark, as the chair of the workgroup, will  
20          begin a detailed report of the workgroup's  
21          deliberations, presenting issues that were  
22          debated by the workgroup and closed, and some  
23          issues that are still being debated by the  
24          workgroup, and Mark will present perspective on  
25          those.

1 We'll break at 4:30. There'll be a public  
2 comment period at 5:30 that, through Paul's  
3 good offices, will go as long as there are  
4 people with important things to tell us this  
5 evening.

6 We'll reconvene tomorrow morning at 8:00  
7 o'clock and again begin the Rocky Flats  
8 deliberations and discussions. At 9:00 o'clock  
9 tomorrow morning, from 9:00 to 10:00, we'll  
10 hear from the petitioners and their  
11 presentations. And then from 10:00 until the  
12 Board concludes, it will continue with its  
13 discussion and I think it's everyone's  
14 intention we'll vote on the Rocky Flats  
15 petition tomorrow, likely before lunch, but if  
16 need to -- if we need to come back and  
17 deliberate further, that will be the case.  
18 Once we finish with that, then there's some  
19 administrative dealings that the Board has to  
20 do as -- as Paul mentioned.

21 So that gives you a sense of what likely will  
22 happen with Rocky Flats. Thank you, Paul.

23 **DR. ZIEMER:** And for the record, the Board  
24 members who are not here physically are Dr.  
25 Poston; let's see, Phillip is --

1           **DR. WADE:** Phillip Schofield.

2           **DR. ZIEMER:** -- Schofield is not here, Mike  
3 Gibson, and -- help me out here -- oh, Dr.  
4 Locky. I -- I think Phillip is on the phone  
5 this morning. Phillip, are you on the phone?

6           **MR. SCHOFIELD:** Yes, I am.

7           **DR. ZIEMER:** Thank you. Dr. Locky, Dr. Poston  
8 or Mike Gibson, are either -- any of you also  
9 on the phone this morning?

10          **MR. GIBSON:** Paul, this is Mike. I'm here.

11          **DR. ZIEMER:** Mike's here, very good. Thank  
12 you. So we have two Board members this morning  
13 on the phone. I believe the other two intend  
14 to join us during the Rocky Flats discussions  
15 later today.

16          So actually we have eight members physically  
17 here and two more on the phone, so we have a  
18 total of four -- ten Board members  
19 participating this morning.

**USE OF DATA FROM OTHER SITES**

**DR. LEWIS WADE, EXECUTIVE SECRETARY**

20          The first item on our agenda is -- is rather  
21 brief, and Dr. Wade will give us a kind of a  
22 capsule summary of the issue, but it's -- it's  
23 the use of data from other sites. It focuses  
24 on Bethlehem Steel, but it's a broader issue,

1 as well. So Dr. Wade, just fill us in on the  
2 status of that issue.

3 **DR. WADE:** All right. As you remember, at your  
4 last meeting you had asked me to put on the  
5 agenda not only this topic, the use of data  
6 from other sites, but after a meaningful  
7 discussion of this topic, then you wanted also  
8 the Bethlehem SEC petition to be on the agenda.  
9 Let me explain to you why it's not and what a  
10 path forward might be for us to -- to follow.  
11 As you know, the Board has been working for  
12 several years now on first the Rocky Fla--  
13 excuse me, the Bethlehem Steel site profile and  
14 then more recently the Bethlehem Steel SEC  
15 petition. Those discussions have hinged upon  
16 the fact that the use of data for -- from other  
17 sites is a key part of NIOSH's site profile,  
18 and also the SEC petition evaluation report.  
19 The Board said to NIOSH and the Department of  
20 Health and Human Services, we would like to  
21 understand the basis upon which you use data  
22 from other sites in your program. You asked  
23 that a presentation be made at the last  
24 meeting.

25 At the last meeting, Liz Homoki-Titus,

1           representing the Office of General Counsel,  
2           came with a draft presentation. That  
3           presentation, though, looked at the law as it -  
4           - as it existed and then looked at the rules,  
5           and left opened the deliberative process that  
6           moved from the original Congressional action to  
7           NIOSH's rules. The reason why that portion was  
8           left out is that the general law division of  
9           the Office of General Counsel determined that  
10          that deliberative process could not be shared  
11          in a public meeting 'cause it -- if it was, it  
12          was -- it would violate attorney/client  
13          privilege. This is attorneys advising the  
14          Secretary and his staff on deliberative  
15          matters.

16          Dr. Melius, representing -- as the chair of the  
17          working group, in discussions between the last  
18          meeting and this, reinforced the fact that it  
19          was terribly important that the Board  
20          understood that deliberative process. The  
21          proposal that we have in front of us is that at  
22          an administrative meeting of the Board -- read  
23          a closed session; it would not be public  
24          participation in that, but at an administrative  
25          session of the Board, Office of General Counsel



1 would stand up and present the Board with the  
2 deliberative process and the logic that is the  
3 foundation for NIOSH and the program using data  
4 from other sites.

5 Once the Board has heard that and had a chance  
6 to engage in discussion with the Office of  
7 General Counsel, then the Board would be free  
8 in public session to debate and make its  
9 recommendations on the Bethlehem SEC petition.  
10 So if that is agreeable to everyone -- and we  
11 can have some discussion of that -- if that's  
12 agreeable to everyone, then we would schedule  
13 when next we meet, in July, that at the  
14 beginning of our deliberations we would have an  
15 administrative meeting of the Board where  
16 Office of General Counsel would share that  
17 deliberative process. Then we would move into  
18 an open session where, among other things, the  
19 Board could take up the Bethlehem SEC petition.  
20 Liz, could I ask you to come up and clarify  
21 anything that I -- I said, either  
22 inappropriately or in a fuzzy way, and be there  
23 for discussion, if need be?

24 **MS. HOMOKI-TITUS:** Actually I think you were  
25 very clear. That's the advice that we've

1 received from the (unintelligible) -- (on  
2 microphone) sorry -- general law division, and  
3 I'd be happy to address any questions that the  
4 Board may have regarding...

5 **DR. WADE:** And so Paul, discussion and then we  
6 -- at your pleasure.

7 **DR. ZIEMER:** So basically the proposal is to  
8 have such a closed session at the beginning of  
9 our next meeting in July. Board members, any  
10 comments, reactions --

11 **MS. HOMOKI-TITUS:** Can I just -- I'm sorry, can  
12 I just clarify -- it's not actually a closed  
13 session because we have to close sessions of  
14 the Advisory Board under the Government in the  
15 Sunshine Act, and there is no -- the Act never  
16 contemplated an Advisory Board receiving legal  
17 advice that has been provided to the Secretary,  
18 so there's no actual basis in the Government in  
19 the Sunshine Act. Also, since the Advisory  
20 Board's authorizing legislation and charter  
21 does not speak to you all providing legal  
22 advice to the Secretary or commenting on legal  
23 advice, we would need to have an administrative  
24 session of the Board for you all to receive  
25 that type of advice. It would be considered --



1 meeting.

2 **DR. WADE:** And I will schedule that early in  
3 the agenda for the next meeting.

**SELECTION OF 8<sup>TH</sup> ROUND OF DR REVIEWS**

**DR. PAUL ZIEMER, CHAIR**

4 **DR. ZIEMER:** Thank you very much. The next  
5 item is the selection of the eighth round of  
6 dose reconstruction reviews. You may recall  
7 that at the last meeting we had a list of 43  
8 potential cases to audit, and Stu Hinnefeld has  
9 helped in selecting -- helping the Board to  
10 identify the cases that might be eligible for  
11 audit. Subsequent to that meeting we had asked  
12 Stu -- the subcommittee had asked Stu to get  
13 some additional information, and I'm going to  
14 call on Mark, if you would, just review for the  
15 Board what additional information the  
16 subcommittee asked for. And then I'll point  
17 out that, Board members, you should have a  
18 spread sheet, and this spread sheet includes  
19 some information that is -- what's -- what's  
20 the proper legal terminology here?

21 **DR. WADE:** Privacy Act?

22 **DR. ZIEMER:** Privacy Act information, and we'll  
23 call on Emily or -- yes -- to describe what we  
24 have, versus the public document.

1           **MS. HOWELL:** Right. If I could just real quick  
2           -- what you have in front of you, and I'm not  
3           sure how well it photocopied, but what you have  
4           in front of you does include Privacy Act-  
5           protected information. What the -- what is  
6           available for the public on the back table has  
7           two categories that have been removed, the  
8           categories of job title and work area. And  
9           when you are discussing these dose  
10          reconstructions and making your choices, if you  
11          could just please refrain from speaking about  
12          the information contained in those two  
13          categories on the record. And the copy is --  
14          it's supposed to be shaded, but I'm not sure  
15          you can see the shading.

16          **DR. ZIEMER:** It isn't very well-shaded. It is  
17          somewhat shaded in -- in our copies, but not  
18          very.

19          **MS. HOWELL:** So if you could just refrain from  
20          --

21          **DR. ZIEMER:** Right.

22          **MS. HOWELL:** -- from speaking --

23          **DR. ZIEMER:** Simply don't --

24          **MS. HOWELL:** -- about those.

25          **DR. ZIEMER:** -- identify -- because that

1 information is such that individuals could be  
2 identified --

3 **MS. HOWELL:** Right.

4 **DR. ZIEMER:** -- from that.

5 **MS. HOWELL:** But anything else is fine. And  
6 once the meeting is over, just either keep this  
7 in your personal possession or shred it; you  
8 can return it to me or Liz. It has the  
9 informa-- the Privacy Act-protected information  
10 in it.

11 **DR. ZIEMER:** Thank you. Mark?

12 **MR. GRIFFON:** I mean the -- this is a -- just  
13 like we did before -- is it coming through the  
14 mike? Yeah. In our previous -- the seventh  
15 round, we did this same sort of process where  
16 we asked for this additional information, and  
17 the -- I think in our first matrix we had  
18 everything up to the date approved. That's the  
19 date when the case was approved. And then  
20 beyond that is the new information we asked  
21 for, the job title, the work area -- as Emily  
22 just said. External dose and internal dose, we  
23 asked them -- because there's a category in the  
24 database which Stu draws these cases from which  
25 basically says the dose estimation type. But

1 he said he'll be the first to admit that  
2 sometimes something may be categorized as best  
3 estimate, but it -- it doesn't really meet our  
4 criteria of what we think of as a best  
5 estimate. It might be a site-wide TBD that  
6 they're using to do estimates for all the cases  
7 on that site. So these two fields, external  
8 dose and internal dose, give us a little more  
9 specific information on exactly what tools were  
10 used -- what approach was used for  
11 reconstructing external and internal dose for  
12 that case.

13 The last column is neutrons, and that's  
14 basically just pre- or post-1972. And -- and  
15 part of the reason there is wanted to look at  
16 the -- 'cause prior to '72 you have the NTA  
17 film questions that evolve, so just another  
18 field of interest. And that's about it.

19 **DR. ZIEMER:** Okay. Now on this particular  
20 candidate list there are 43 potential cases to  
21 audit. The subcommittee had asked that this be  
22 dwindled -- or narrowed down to 32 cases for  
23 our next audit, so the -- the need here is to  
24 identify basically 11 cases that could be  
25 eliminated or, looking at it the other way, the

1           32 cases you would want to carry along.  
2           Now it seems to me it's possible that, after  
3           getting all of this information, the Board  
4           might determine that there are not 32 cases  
5           here that -- that meet all of your criteria.  
6           That -- that is, we've had a lot of cases where  
7           we're seeing the same things over and maybe  
8           don't need to do those audits again. So one  
9           possibility is that we end up at the end of the  
10          day here in a sense with less -- less than 32  
11          cases, and that would be fine. We can take  
12          what we get, if it's 30 or 28 or 24 or  
13          whatever. But at least the objective was to  
14          try to find 32 cases for the next audit.  
15          Now with that as background, there's a couple  
16          ways we can do this. One would be individual  
17          Board members, if there are particular cases  
18          here that you think we should just throw out  
19          right at the -- at the top, you can try to  
20          identify those. If there's particular cases  
21          that you think should definitely be left in, we  
22          can identify those. And one way to do this is  
23          to go through them individually right down the  
24          list and see if -- if people have comments on  
25          individual ones. But let me first ask if



1           there's particular ones right off the top that  
2           people think should be eliminated.

3           Okay, Dr. Melius, then Wanda Munn.

4           **DR. MELIUS:** I have a more general question.  
5           This is I guess officially a subcommittee or  
6           still a workgroup that -- that's been dealing  
7           with this. To what degree or what criteria are  
8           there for -- in terms of cases, the  
9           overestimate cases where they are -- I mean  
10          essentially it's still worthwhile to include  
11          them as part of our -- our reviews? It seems  
12          to me that, you know, we've been trying to do  
13          more of the best estimate ca-- and -- cases,  
14          and I don't know if there are particular  
15          subcategories of the overestimates that -- that  
16          were --

17          **MR. GRIFFON:** I gue-- I guess my feeling, for  
18          so-- some of them are still valuable, if we  
19          haven't had any cases from those sites or those  
20          kind of sites. They also may be valuable if --  
21          if there's certain procedures that we haven't  
22          seen applied in cases, they've modi-- you know.  
23          There are so-- on the flip side of that, we've  
24          had a large number of cases that -- that  
25          applied certain TIBs and we -- we're saying --

1 we kind of restricted -- you know, we don't  
2 need to see the application of that TIB  
3 anymore. We've seen several cases using that  
4 TIB, so -- but I think there are still some  
5 where we -- we -- you know, you could say  
6 haven't seen any cases on this site, it's a  
7 unique kind of site and -- you know, that might  
8 justify looking at some of those, yeah.

9 **DR. ZIEMER:** Wanda? Then Josie and then  
10 Robert.

11 **MS. MUNN:** It might be beneficial for us to  
12 take just a few minutes to look at these and  
13 see some of the obvious -- almost duplications  
14 with respect to the models. For example, just  
15 -- just running my eye down these, I see  
16 probably ten where the primary cancer was male  
17 genitalia. And --

18 **DR. ZIEMER:** Was what?

19 **MS. MUNN:** Male genitalia. And in some cases  
20 the secondary cancers were the same, as well.  
21 It -- unless we really want to focus on -- on  
22 facilities rather than the cancer models  
23 themselves, if we had a few minutes just to  
24 look at them, we may want to just strike some  
25 of those right off the top of the bat as being

1 duplicative.

2 **MR. GRIFFON:** Si-- I -- sometimes -- I mean,  
3 tha-- you know, if you're going to re-- review  
4 a -- a method for internal dose reconstruction  
5 or external dose reconstruction, really the --  
6 the organ of interest doesn't factor in so  
7 much, so it -- it may be kind of a moot point  
8 on a lot of it that -- you know --

9 **MS. MUNN:** It just depends on what we want to -  
10 -

11 **MR. GRIFFON:** Yeah.

12 **MS. MUNN:** -- do --

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

14 **MS. MUNN:** -- (unintelligible).

15 **MR. GRIFFON:** But we're not reviewing the --  
16 you know, the IREP side of it, so...

17 **MS. MUNN:** But if our -- if our purpose is to  
18 narrow this down --

19 **MR. GRIFFON:** Yep.

20 **MS. MUNN:** -- winnow down, then...

21 **MS. BEACH:** Well, and if I could add, if you  
22 look at the -- there's four cases at Savannah  
23 River Site that are best estimates and they're  
24 all lung, so I don't know if we need to look at  
25 all four of those.

1           **DR. ZIEMER:** Good point. Okay. Robert?

2           **MR. PRESLEY:** One of the things that I'm  
3 wondering about is going ahead and -- and  
4 looking at striking some of these lower POC  
5 where we have an overestimate already. There's  
6 a -- quite a few that have low POC and then  
7 when you look at it, the external dose or the  
8 internal dose is way overestimate now. I don't  
9 know whether we need to look at that or not.

10          **DR. ZIEMER:** Well, that's a good point. Let me  
11 ask -- Mark, when the workgroup made this  
12 initial selection, what -- what was the  
13 thinking on those low POCs where they were  
14 already overestimates? Or was that -- did that  
15 come into play at all?

16          **MR. GRIFFON:** Yeah, I don't -- I mean if you  
17 point out a specific one, maybe I can tell you,  
18 but I -- I -- part of it was if we hadn't done  
19 a facility, that might have factored in, but --

20          **MR. PRESLEY:** Yeah, I think that's what it was  
21 --

22          **MR. GRIFFON:** Yeah.

23          **MR. PRESLEY:** -- the last one on the first page  
24 was Nevada Test Site and we hadn't done that  
25 many.

1           **MS. MUNN:** Uh-huh.

2           **MR. PRESLEY:** And I think we'd asked to do  
3 that, and I mean the POC is so low there that I  
4 don't know what else you could do to it a whole  
5 lot -- you know, to get it up any higher.

6           **MS. MUNN:** We were looking at facility and  
7 decade --

8           **MR. PRESLEY:** Right.

9           **MS. MUNN:** -- (unintelligible).

10          **DR. WADE:** Possibly just for the record, it is  
11 the subcommittee that looks at dose  
12 reconstruction, chaired by Mark; Gibson,  
13 Poston, Munn members; alternates Clawson and  
14 Presley. The reason that Mark and I decided to  
15 come to this Board meeting is that there was  
16 not a subcommittee meeting scheduled --

17          **MR. GRIFFON:** Right.

18          **DR. WADE:** -- and we felt it would be fine to  
19 do it as a full Board. When the subcommittee  
20 last met and did its deliberations, it then  
21 brought its recommendations to the entire Board  
22 and the entire Board had a hand in selecting  
23 these 43. So the Board and the subcommittee  
24 sort of share work and I think that's mo--  
25 that's quite reasonable. But the reason the

1 subcommittee isn't doing it is 'cause the Board  
2 was scheduled to meet and not the subcommittee.

3 **DR. ZIEMER:** Okay. In order to kind of get our  
4 arms around this, let me start with Wanda's  
5 suggestion. Let's take a look at the all male  
6 genitalia cases and just first identify those.  
7 On the first page it's -- it's really the  
8 second one from the top, which is 551, and then  
9 down a little ways, number 120. And if I miss  
10 one, let me know. Number 260's the third one.

11 **MS. BEACH:** Number 249, it's right below the  
12 first one you mentioned.

13 **DR. ZIEMER:** Oh, yes, I missed that myself.  
14 Okay, yeah, be -- which has some other  
15 secondaries in there, looks like, but -- but  
16 certainly is in that category. So there's four  
17 on the first page.

18 On the second page, the third one down is in  
19 that category, which is number 623. And then  
20 I'm seeing, two-thirds of the way down, number  
21 157. I -- I don't see any others on that page.  
22 Top of the next page, the first one, then the  
23 fourth -- which is number 295. Then the fourth  
24 one down, number 514 is in that category. And  
25 then a couple more down, number 209. And then

1 second from the bottom, 661, so there's four  
2 more on that page.

3 And then the second one on the last page,  
4 number 239. So there you have 11 cases.

5 (Pause)

6 Now --

7 **MS. MUNN:** The work decade of the '50s. I  
8 think that's why they -- we probably selected  
9 them at the time. Seven out of that 11 are --

10 **DR. ZIEMER:** Are early ones.

11 **MS. MUNN:** -- 1950s, and we were -- if I  
12 remember correctly -- looking at the -- the  
13 list of -- of what our original goals had been  
14 for choosing a broad category of types and  
15 (unintelligible) --

16 **MR. GRIFFON:** Our original goals, yeah.

17 **MS. MUNN:** Yeah. And we were really short on  
18 the '50s and '60s, as I recall. I think that's  
19 why those may have wound up in --

20 **MR. GRIFFON:** I actually thought we were  
21 shorter in the later years, but anyway, yeah, I  
22 don't -- I don't know why we -- we got here.  
23 There are some of these that you men-- that you  
24 listed, Paul, that are best estimates, so I  
25 think --

1           **DR. ZIEMER:** That was the --

2           **MR. GRIFFON:** -- I think the more important  
3           criteria here is the -- is the best estimate  
4           and the -- there -- there's -- you know, at  
5           least 260 is a best estimate, 48 percent, you  
6           know. I think that's probably wor-- you know,  
7           those close -- those ones that are close and  
8           are best estimate -- that's best estimate for  
9           internal. It is an overestimate for external,  
10          it says, so some of them at least have some  
11          component that was a best estimate. I think  
12          those are probably worthwhile, even though they  
13          are -- there are a lot of this type of cancer,  
14          yeah.

15          **MS. BEACH:** It looks -- oh.

16          **MR. PRESLEY:** Go ahead, Josie.

17          **MS. BEACH:** It looks like on the thir-- second  
18          to the last page, 515 and 661, they're both  
19          overestimates and they're both low POCs.

20          **MR. PRESLEY:** Right.

21          **MS. BEACH:** We might be able to take those two  
22          off.

23          **MS. MUNN:** Uh-huh, yeah.

24          **DR. ZIEMER:** Now let me ask you this question  
25          while -- while you're looking at that and --



1 for example, you may want to look at job titles  
2 and work areas. We're not going to mention  
3 them, but does that make any difference, number  
4 one? And then number two, the -- the work  
5 decade, look at those also.

6 **MS. MUNN:** I think 661 we chose because of the  
7 facility.

8 **MR. GRIFFON:** Yes.

9 **MR. PRESLEY:** Yes.

10 **MS. MUNN:** Uh-huh, yeah.

11 **MR. PRESLEY:** I was -- I was just setting in  
12 that meeting when we did that.

13 **DR. ZIEMER:** Okay. Josie, you're proposing  
14 possibly eliminating 514 and 209?

15 **MS. BEACH:** 514 and 661, unless there's a  
16 reason because of the --

17 **DR. ZIEMER:** Oh, 514 and 661.

18 **MS. BEACH:** -- because of the facility.  
19 They're both overestimates and they're both  
20 very low POCs.

21 **MR. PRESLEY:** I have -- I have no problem with  
22 that.

23 **DR. WADE:** Well, but I think 661 was Simonds  
24 Saw and Steel.

25 **MS. MUNN:** Right.

1           **MS. BEACH:** Right.

2           **MS. MUNN:** Yeah, we want to keep that.

3           **MS. BEACH:** Okay.

4           **DR. WADE:** And Brad, you had talked about -- as  
5 I recall -- INEL on the other? Do -- your  
6 sense?

7           **MR. PRESLEY:** The reason we picked that on the  
8 other one was because it was a 1980 date. It  
9 was a --

10          **MR. GRIFFON:** Yeah, later decade --

11          **MR. PRESLEY:** -- later date.

12          **MR. GRIFFON:** -- yeah.

13          **MR. PRESLEY:** 'Cause that's what we were trying  
14 to do.

15          **MS. MUNN:** Uh-huh.

16          **MR. GRIFFON:** But it is --

17          **MR. PRESLEY:** But it is low POC.

18          **MR. GRIFFON:** -- overestimates, yeah.

19          **MS. MUNN:** Yeah. I propose we take 514 off.  
20 That's one.

21          **MR. GRIFFON:** That's one.

22          **DR. WADE:** That's good.

23          **DR. ZIEMER:** That's progress, let --

24          **MS. BEACH:** Progress.

25          **DR. ZIEMER:** -- let me ask, what's -- I want to

1 get consensus on this now.

2 **MR. PRESLEY:** I have no problem.

3 **DR. ZIEMER:** Any objection to taking off 514?

4 This is Idaho National Lab. It's an

5 overestimate, both external and internal. The

6 TIB-2 process shows up a number of times, Mark.

7 Right? On other cases. Right?

8 **MS. BEACH:** Yes.

9 **MR. GRIFFON:** Yeah.

10 **DR. ZIEMER:** Any objection to removal of that

11 one?

12 **MR. CLAWSON:** No, we'd just --

13 **UNIDENTIFIED:** Talk into the microphone.

14 **MR. CLAWSON:** -- just let you know we've got

15 another Idaho one that basically covers the

16 same things, too --

17 **DR. ZIEMER:** Okay.

18 **MR. CLAWSON:** -- so...

19 **DR. WADE:** Now Phillip and Mike, are you able

20 to follow this discussion?

21 **MR. GIBSON:** Yes.

22 **DR. WADE:** The mat-- the materials were sent to  
23 you.

24 **MR. GIBSON:** Yes.

25 **MR. SCHOFIELD:** Yes.



1           **DR. ZIEMER:** Is that the Hanford one?

2           **MR. GRIFFON:** -- not as necessary 'cause it is  
3 a TIB-2 approach and it's overestimates for  
4 both external and internal. But then number --  
5 that's the 551, I'm sorry.

6           **DR. ZIEMER:** Yeah.

7           **MR. GRIFFON:** Yeah.

8           **DR. ZIEMER:** Right.

9           **MR. GRIFFON:** Then the next one, 249, I thought  
10 was useful, and 120 and 260, going down that  
11 page -- 249, 120 and 260 --

12          **DR. ZIEMER:** 'Cause you got some best  
13 estimates.

14          **MR. GRIFFON:** -- and the reason for those  
15 mainly is that they're full internal or  
16 external or both.

17          **DR. ZIEMER:** Uh-huh.

18          **MR. GRIFFON:** But they're at least full  
19 internal --

20          **DR. ZIEMER:** Well, let's go back --

21          **MR. GRIFFON:** -- I think for all three of them.

22          **DR. ZIEMER:** -- to your first one there.  
23 You're -- you -- you're proposing perhaps the  
24 Hanford one, which is 551 --

25          **MR. GRIFFON:** I was dropping off.

1 DR. ZIEMER: -- could be dropped.

2 MR. GRIFFON: Yeah.

3 DR. ZIEMER: Can we get other comments on that  
4 one? Any objection to dropping that one?

5 MR. CLAWSON: No.

6 DR. ZIEMER: Appears to be no objections.  
7 Phil?

8 MR. SCHOFIELD: No objections.

9 DR. ZIEMER: Mike?

10 MR. GIBSON: No objection.

11 DR. ZIEMER: Okay, 551 is off the list.

12 MR. PRESLEY: Before we leave that first page,  
13 can we talk about the last one at that first  
14 page?

15 DR. ZIEMER: That's number 260?

16 MR. PRESLEY: 267.

17 DR. ZIEMER: Oh, 2--

18 MR. PRESLEY: I'm sorry, 627.

19 DR. ZIEMER: Oh, okay. Well, wait a minute,  
20 we're still in this --

21 MR. PRESLEY: You want to still go with that --

22 DR. ZIEMER: Yeah, I just --

23 MR. PRESLEY: Okay.

24 DR. ZIEMER: -- I want to finish up --

25 MR. PRESLEY: All right.



1 similar.

2 **MR. GRIFFON:** Yeah, I was just looking at that.

3 **DR. ZIEMER:** They're both at Paducah. They're  
4 both best estimates.

5 **MR. PRESLEY:** Yep.

6 **DR. ZIEMER:** They both have the same cancers.

7 **MS. MUNN:** (Off microphone) (Unintelligible)  
8 decade (unintelligible).

9 **DR. ZIEMER:** So one or the other --

10 **MR. PRESLEY:** Both of -- both of the operations  
11 are both in maintenance.

12 **MS. HOMOKI-TITUS:** I just want to remind you  
13 that those two columns can't be discussed,  
14 please.

15 **DR. ZIEMER:** Yeah, don't mention -- don't  
16 mention anything about work.

17 **DR. WADE:** Job title or work area. I do recall  
18 --

19 **DR. ZIEMER:** That wasn't a job title, by the  
20 way.

21 **MR. PRESLEY:** No.

22 **DR. ZIEMER:** He was very generic, but  
23 nonetheless, don't mention --

24 **DR. WADE:** I do remember some discussion of  
25 value of looking at two and seeing if they --



1 if they tracked. Is there a benefit from your  
2 audit function of looking at two and seeing if  
3 they're done the same?

4 **MR. CLAWSON:** I -- I think that's kind of what  
5 we did in this because one of them I think was  
6 5.6 years and the other one was 18 years.

7 **DR. WADE:** As I recall the discussion, that's  
8 what you did.

9 **MR. CLAWSON:** They were fairly close.

10 **DR. WADE:** But it's your pleasure.

11 **DR. ZIEMER:** Well, why don't we do this. Let's  
12 -- let's -- let's --

13 **MR. GRIFFON:** They're similar. They even  
14 worked in the same areas. I -- you know, not  
15 to -- yeah, they even worked in the same areas,  
16 but one has a lot more years worked. Right?

17 **MR. PRESLEY:** Uh-huh.

18 **MR. GRIFFON:** That's the only difference. I  
19 would say if we were going to drop one,  
20 probably the shorter...

21 **MR. CLAWSON:** The 260?

22 **MR. PRESLEY:** Uh-huh.

23 **MR. CLAWSON:** I'd say we --

24 **MR. GRIFFON:** Right, yeah.

25 **MR. CLAWSON:** -- drop the 260.

1           **MR. PRESLEY:** I would agree to that.

2           **DR. WADE:** Okay.

3           **DR. ZIEMER:** 260, dropping?

4           **MS. MUNN:** Right.

5           **DR. ZIEMER:** Agreed? Phil and Mike?

6           **MR. SCHOFIELD:** Agreed.

7           **MR. GIBSON:** Yes.

8           **DR. ZIEMER:** Okay. Well, there -- that's four  
9 out of that group, so that's pretty good  
10 progress, if you want to look at it that way.  
11 Let's -- let's see, what was the other  
12 category? Josie, you -- you -- what was the  
13 issue you were raising, was the --

14           **MS. BEACH:** It was the Savannah River Site.  
15 There's four listed. They're all lung. And so  
16 I just wanted to look at that.

17           **MR. GRIFFON:** All -- all best estimates,  
18 though, also --

19           **MS. BEACH:** All best estimates.

20           **MR. GRIFFON:** -- yeah. Yeah.

21           **MS. BEACH:** Yeah.

22           **MR. GRIFFON:** See, here, when you're getting  
23 into the best estimates, you know, the -- the  
24 fact that they're all lung is kind of a moot  
25 point 'cause IMBA --

1           **DR. ZIEMER:** Yeah, we're really just looking at  
2           --

3           **MR. GRIFFON:** -- when you're looking at the  
4           data and how they're handling the data --

5           **DR. ZIEMER:** -- the best estimate process.

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

7           **DR. ZIEMER:** Probably -- and I might suggest  
8           that if we have best estimate ones, we probably  
9           don't want to throw them out in general.

10          **MR. GRIFFON:** Right.

11          **MS. BEACH:** Okay.

12          **MR. CLAWSON:** But -- but what we may be able to  
13          do on the Savannah River one, there's two or --  
14          there's a couple of them there that cover lung  
15          and the male genitalia that we may be able to  
16          take one of those and drop a couple of the  
17          others.

18          **DR. ZIEMER:** Well, let's see what else we have  
19          that looks obvious. Mark --

20          **MR. GRIFFON:** Yeah.

21          **DR. ZIEMER:** -- again I'm going to -- as chair  
22          of the subcommittee, you -- you and the other  
23          subcommittee members have studied these in much  
24          more detail than the full Board, but can you  
25          recommend the other ones that you thought ought

1 to be dropped and let us look at those?

2 **MR. GRIFFON:** Are you still in the all male  
3 genitalia --

4 **DR. ZIEMER:** No, I just --

5 **MR. GRIFFON:** Oh, okay.

6 **DR. ZIEMER:** I'm opening it up now.

7 **MR. GRIFFON:** I was recommending dropping  
8 number one.

9 **DR. ZIEMER:** Number --

10 **MR. CLAWSON:** No.

11 **MR. GRIFFON:** I'm sorry, number 562. I  
12 numbered them one (unintelligible) --

13 **DR. ZIEMER:** First one --

14 **MR. GRIFFON:** -- 562.

15 **DR. ZIEMER:** First one on page one.

16 **MR. GRIFFON:** Yeah.

17 **DR. ZIEMER:** And the reason being?

18 **MR. GRIFFON:** Overestimate. It -- it was --  
19 it's overestimating for both external and  
20 internal, no neutron questions. You know, it  
21 wasn't monitored for neutron, and it's TIB-2  
22 overestimating for the internal. It's not even  
23 using site data, you know, so --

24 **DR. ZIEMER:** Okay. So let me ask the group,  
25 any objection to eliminating that one?

1           **MS. MUNN:** No, I --

2           **DR. ZIEMER:** It's the first one on the list.

3           **MR. CLAWSON:** Well, actually I do because if  
4 you look at this, this -- this is Fernald and  
5 we have very little --

6           **MR. GRIFFON:** Yeah, that's (unintelligible).

7           **MR. CLAWSON:** -- very little that we've gone  
8 over this. The only other one that we have on  
9 Fernald is for bone, which was a totally  
10 different one.

11          **MR. GRIFFON:** Well, again, the cancer doesn't  
12 really --

13          **MR. CLAWSON:** Right.

14          **MR. GRIFFON:** -- play into the dose  
15 reconstruction techniques, so --

16          **DR. ZIEMER:** We do have a Fernald on the list  
17 that's a best estimate, also.

18          **MR. GRIFFON:** Yeah, that's the one I was  
19 proposing to keep.

20          **DR. ZIEMER:** Which is on the final page.

21          **MR. CLAWSON:** Okay.

22          **DR. ZIEMER:** Are -- are you okay with that,  
23 Brad, or do --

24          **MR. CLAWSON:** Yeah, that -- that's fine.

25          **DR. ZIEMER:** Others?



1           **MS. MUNN:** Agreed.

2           **MR. PRESLEY:** Yeah.

3           **DR. ZIEMER:** Others agree? Mike?

4           **MR. GIBSON:** Yeah, I agree.

5           **DR. ZIEMER:** Phil?

6           **MR. SCHOFIELD:** I agree with that one, too.

7           **DR. ZIEMER:** Okay. Thank you. Go ahead.

8           **MR. GRIFFON:** On down, 187 -- although I think  
9 we picked this 'cause it was Bridgeport Brass.  
10 I couldn't remember that so I had a question  
11 mark on that one.

12           **DR. ZIEMER:** Okay, 187 is the top of the second  
13 page.

14           **MR. GRIFFON:** But the jo-- the job title here  
15 was part of my decision. It's interesting, 52  
16 percentile, too, for that job title.

17           **MS. BEACH:** It is the only one for Bridgeport.

18           **MR. GRIFFON:** And the other interesting thing,  
19 you know, now that I -- now that I reconsider  
20 this, this is a very interesting case 'cause  
21 it's 52 percentile and it's overestimate, so I  
22 -- I don't know that I've ever seen that, so --

23           **MS. BEACH:** Well -- no, no, you're --

24           **MR. GRIFFON:** -- it might be interesting from  
25 that standpoint.

1 DR. ZIEMER: No, no, it's best estimate.  
2 MS. BEACH: It's best estimate.  
3 MR. PRESLEY: It's best estimate.  
4 MR. GRIFFON: Oh, is it?  
5 DR. ZIEMER: It's best estimate.  
6 MR. GRIFFON: Am I reading the wrong one?  
7 DR. ZIEMER: You may want to leave that one on.  
8 It's --  
9 MR. GRIFFON: Okay.  
10 DR. ZIEMER: -- top of the second page. Look  
11 at your -- your big spreadsheet, Mark, the --  
12 the top of the second page, the one -- the --  
13 MR. GRIFFON: Yeah.  
14 MS. MUNN: It has --  
15 MS. BEACH: We should keep that one.  
16 MS. MUNN: Yeah, it has a lot to commend it.  
17 MR. GRIFFON: Huh, okay.  
18 DR. ZIEMER: Okay?  
19 MR. GRIFFON: Yeah.  
20 DR. ZIEMER: I think there's a sentiment that  
21 may be to keep that one.  
22 MR. CLAWSON: I agree.  
23 MR. PRESLEY: Yeah.  
24 DR. ZIEMER: Okay. For now we'll keep that.  
25 MR. GRIFFON: Yeah.



1           **DR. ZIEMER:** Continue.

2           **MR. GRIFFON:** Yeah, I'm just looking at my  
3 other printed out spreadsheet and wondering why  
4 my columns don't match up that way. Anyway,  
5 632 I had to drop.

6           **DR. ZIEMER:** 632 is the second one on the  
7 second page. It's a Los Alamos case, acute  
8 lymphocytic leukemia.

9           **MS. MUNN:** Okay, I marked the wrong one.

10          **DR. ZIEMER:** It's an overestimate on TIB-1B  
11 (sic) for the --

12          **MR. GRIFFON:** Right.

13          **DR. ZIEMER:** -- internal.

14          **MR. GRIFFON:** They're both overestimate,  
15 external and internal. That -- that was mainly  
16 my reasoning for that, but it is in the '70s so  
17 --

18          **MR. PRESLEY:** It's in the '70s and it's a real  
19 close POC.

20          **MR. GRIFFON:** But again, both overestimates.

21          **MR. PRESLEY:** Right.

22          **MR. GRIFFON:** Yeah.

23          **DR. ZIEMER:** Sounds like we have kind of a  
24 mixed feeling here. Mark and Wanda are  
25 recommending removal. I think Robert thinks we

1           should keep it.

2           **MR. PRESLEY:** I'd rather -- I'd rather see 528  
3 removed --

4           **MR. GRIFFON:** Yeah, I -- I agree with -- with  
5 Bob, actually.

6           **MR. PRESLEY:** -- than 632.

7           **MR. GRIFFON:** Yeah, I would actually agree with  
8 Bob on that, that -- those two Los Alamos ones  
9 and the other one is --

10          **DR. ZIEMER:** 528's just a couple more down the  
11 page, the Los Alamos. It's a bladder cancer.

12          **MR. GRIFFON:** With the job title and decade for  
13 that second one --

14          **MR. PRESLEY:** Right.

15          **MR. GRIFFON:** -- 528, it looks like we should  
16 drop that one instead.

17          **DR. ZIEMER:** It's another TIB-2 overestimate.

18          **MR. GRIFFON:** Yeah.

19          **DR. ZIEMER:** Okay, 528, everyone agreed on  
20 that?

21          **MR. GRIFFON:** Yeah.

22          **MR. CLAWSON:** Yes.

23          **DR. ZIEMER:** And Phillip and Mike?

24          **MR. GIBSON:** Yes.

25          **MR. SCHOFIELD:** Yes.

1           **DR. ZIEMER:** Okay, 528 is off the list.

2           **MS. MUNN:** 525 may not give us much.

3           **DR. ZIEMER:** Wanda's suggesting 525, which is  
4           just down the page. It's a Y-12 -- actually  
5           two facilities --

6           **MR. PRESLEY:** Yeah --

7           **DR. ZIEMER:** -- Y-12 and --

8           **MR. PRESLEY:** -- the reason that I think we did  
9           that is because of it's --

10          **DR. ZIEMER:** Multiple site?

11          **MR. PRESLEY:** -- two -- multiple sites.

12          **MR. GRIFFON:** Yeah.

13          **MR. CLAWSON:** Yeah, it is.

14          **DR. ZIEMER:** To -- to sort of examine the  
15          multiple site issue?

16          **DR. WADE:** And it was the '80s, you were  
17          looking for '80s.

18          **MS. MUNN:** Yeah, that's...

19          **DR. ZIEMER:** Huh? Decade is -- work decade's  
20          the '80s.

21          **MS. MUNN:** Uh-huh.

22          **DR. ZIEMER:** Leave it?

23          **MR. GRIFFON:** Both overestimates, though, you  
24          know.

25          **DR. ZIEMER:** Both overestimates.

1           **MS. MUNN:** Uh-huh.

2           **DR. ZIEMER:** What's your pleasure?

3           **MS. MUNN:** I'd strike it. But then I said that  
4 before.

5           **DR. ZIEMER:** Others?

6           **MR. CLAWSON:** Drop it.

7           **DR. ROESSLER:** Drop it.

8           **MR. PRESLEY:** I won't make a comment.

9           **MR. GRIFFON:** I think we have better multiple -  
10 - we have better multiple site ones that we --  
11 you know.

12          **DR. ZIEMER:** So the consensus here is to drop  
13 it. Mike, Phil?

14          **MR. GIBSON:** Yeah, I agree.

15          **MR. SCHOFIELD:** Yeah, I agree with that one.

16          **DR. ZIEMER:** Okay, that's number 525. Mark,  
17 you have some additional ones there?

18          **MR. GRIFFON:** Yeah, I -- I have 83. I was  
19 trying to remember why we still have this one  
20 on the list at all.

21          **DR. ZIEMER:** 083?

22          **MR. GRIFFON:** Yeah.

23          **DR. ZIEMER:** Let me -- I'm looking for that on  
24 my list.

25          **DR. WADE:** Just two down from --

1           **DR. ZIEMER:** Oh, two down. That's the Iowa  
2           Ordnance Plant?

3           **MS. MUNN:** Probably facility and decade.

4           **MR. PRESLEY:** I don't have any problem getting  
5           rid of that.

6           **MR. GRIFFON:** Is that -- I -- I'm trying to  
7           remember if bladder is a listed SEC cancer.  
8           That was the question I had.

9           **DR. ZIEMER:** It had to do -- this has some  
10          neutrons involved? Or does it?

11          **MR. HINNEFELD:** Dr. Ziemer?

12          **DR. ZIEMER:** Yeah.

13          **MR. HINNEFELD:** This is Stu Hinnefeld from  
14          NIOSH.

15          **DR. ZIEMER:** Yeah, Stu, go ahead.

16          **MR. HINNEFELD:** This Iowa Ordnance Plant case  
17          was done prior to the recommendation from the  
18          Board to add a class.

19          **DR. ZIEMER:** Oh, okay.

20          **MR. HINNEFELD:** And I believe this person  
21          ultimately ended up in the -- in the SEC class.  
22          Right.

23          **DR. ZIEMER:** So it comes out of here anyway.

24          **MR. GRIFFON:** That was my point, yeah, so that  
25          was my point, why was it even on our list.

1           **DR. ZIEMER:** Yeah, so now -- so let's just take  
2 it off then. It basically --

3           **MR. GRIFFON:** It's covered with the SEC.

4           **DR. ZIEMER:** -- it's covered and it's really  
5 not a dose reconstruction any longer.

6           **MR. GRIFFON:** Right.

7           **DR. ZIEMER:** Okay. Then let's see, my next one  
8 -- 514, I think we already took that one off.  
9 Right? Yeah.

10          **MS. MUNN:** Uh-huh.

11          **MR. GRIFFON:** I had 613. I know it's a  
12 different facility, but --

13          **DR. ZIEMER:** 613's the -- on the third page,  
14 Lawrence Livermore, a colon cancer. Again,  
15 overestimate under TIB-2 for internal.

16          **MR. GRIFFON:** Right. And -- and the job title,  
17 you know --

18          **MR. PRESLEY:** Right.

19          **MR. GRIFFON:** -- and those two factors I  
20 thought, you know, sort of suggest it's not  
21 that useful to look at.

22          **DR. ZIEMER:** Okay. Agreed to remove?

23          **MR. PRESLEY:** Yeah.

24          **MR. CLAWSON:** Yeah.

25          **DR. ZIEMER:** And Mike and Phil?

1           **MR. SCHOFIELD:** Agreed.

2           **MR. CLAWSON:** What was the number on that one?

3           **DR. ZIEMER:** 613, it's about the middle of the  
4           third page, Lawrence Livermore.

5           **MS. BEACH:** Well, you can just about look at  
6           545. It's the same situation --

7           **MR. GRIFFON:** Yeah, I --

8           **MS. BEACH:** -- as the one we just removed.

9           **MR. GRIFFON:** I was just going to say 545 also,  
10           and 690. I know they're all Lawrence  
11           Livermore, but they -- they're all real  
12           overestimating.

13           **DR. ZIEMER:** So 545?

14           **MS. MUNN:** Yeah.

15           **MR. GRIFFON:** Yeah.

16           **DR. ZIEMER:** Eliminate?

17           **MR. CLAWSON:** Yes.

18           **DR. ZIEMER:** Hang on -- Phil, Mike, on --

19           **MR. GIBSON:** Yes.

20           **MR. SCHOFIELD:** Yes.

21           **DR. ZIEMER:** Okay.

22           **MS. MUNN:** One, two --

23           **MR. GRIFFON:** And 690 is a environmental overe-  
24           - you know, it's overestimate based on  
25           environmental, I think, if I got these tabbed

1                   correctly.

2           **DR. ZIEMER:** Number 690, Lawrence Livermore.

3                   This is multiple cancers, overestimate.

4           **MS. MUNN:** Yeah, if --

5           **DR. ROESSLER:** (Off microphone)

6                   (Unintelligible)

7           **DR. ZIEMER:** Huh?

8           **DR. ROESSLER:** We have 11.

9           **MR. GRIFFON:** Oh, I know, but --

10          **DR. ZIEMER:** There's --

11          **MR. GRIFFON:** -- but we don't necessarily have  
12                   to have 32 if --

13          **DR. ZIEMER:** The point is, if there's some that  
14                   --

15          **MR. GRIFFON:** -- if we don't think some are  
16                   good.

17          **DR. ZIEMER:** -- we don't think should be done,  
18                   we don't want them -- we don't want to sort of  
19                   spend the money to do other ones.

20          **MR. PRESLEY:** Right, I want to -- I want to go  
21                   back on that first page and look at one.

22          **DR. ZIEMER:** All right. Hang onto this one a  
23                   minute now, number 5-- or 690?

24          **MR. GRIFFON:** 690.

25          **DR. ZIEMER:** What was the consensus on 690,



1 delete?

2 **DR. ROESSLER:** What's enviro mean?

3 **MR. GRIFFON:** It means based on environmental  
4 levels, not -- doesn't have bioassay data or  
5 anything. It's based on -- modeled from  
6 environmental contamination levels.

7 **DR. ZIEMER:** Have we had any of those, Mark, do  
8 you recall, in previous overestimates?

9 **MR. GRIFFON:** Well, that may be a reason to  
10 keep it in there. I can't remember off-hand,  
11 no.

12 **DR. ZIEMER:** I mean this is different than a --

13 **MR. GRIFFON:** Right --

14 **DR. ZIEMER:** -- TIB-2.

15 **MR. GRIFFON:** -- that's true. Yep.

16 **DR. ZIEMER:** May want to keep it for the time  
17 being.

18 **MR. GRIFFON:** Yeah, okay. Just to finish up,  
19 and I know somebody said go back to the first  
20 page, but I can just finish up --

21 **MR. PRESLEY:** Yeah, no problem.

22 **MR. GRIFFON:** I had 678, overestimate again.

23 **DR. ZIEMER:** This is on the first page?

24 **DR. WADE:** No.

25 **MR. CLAWSON:** Third.

1           **DR. ZIEMER:** Oh, third page -- oh, I see it,  
2           yeah, the Nevada Test Site?

3           **MR. GRIFFON:** Yeah, and it's a short time  
4           period to work.

5           **DR. WADE:** It does say, Mark, best estimate for  
6           missed dose on -- on our matrix.

7           **MS. MUNN:** From that site.

8           **DR. ZIEMER:** Looks like --

9           **MR. GRIFFON:** Yeah.

10          **DR. ZIEMER:** -- a mix of best and...

11          **MR. GRIFFON:** And I'm not even sure what best  
12          estimate for missed dose means. Do you -- Stu,  
13          do you -- can you clarify that? Is that a  
14          coworker model or...

15          **MR. HINNEFELD:** A best estimate for missed  
16          dose?

17          **MR. GRIFFON:** Yeah.

18          **MR. HINNEFELD:** For missed dose? A best  
19          estimate for missed dose would probably mean a  
20          -- an account of the actual number of zero  
21          badges -- are we talking about an external one?

22          **MR. GRIFFON:** Yeah.

23          **DR. ZIEMER:** Yes.

24          **MR. HINNEFELD:** Yeah, it'd probably be a count  
25          of the actual --

1           **MR. GRIFFON:** Right.

2           **MR. HINNEFELD:** -- externals and then none of  
3           the TIB-8 or TIB-10 modifications which were  
4           done early on. You know, you do an  
5           overestimating approach -- it essentially  
6           doubles the number --

7           **MR. GRIFFON:** Oh, so instead of assigning 12  
8           zeroes, even though you only had eight, you  
9           would actually do eight --

10          **MR. HINNEFELD:** Right, you would count the  
11          actual number of zero badge readings --

12          **MR. GRIFFON:** You're still assigning LOD over  
13          two or something like that, it's not --

14          **MR. HINNEFELD:** It would be LOD over two times  
15          (unintelligible) --

16          **MR. GRIFFON:** It's not a coworker model or  
17          anything.

18          **MR. HINNEFELD:** Well, a coworker would be  
19          probably what -- most of our -- I think our  
20          coworker population, our coworker distributions  
21          include a missed dose component, and what could  
22          be missed is included in there. Which number  
23          are we looking at here?

24          **MR. GRIFFON:** Number 678.

25          **DR. ZIEMER:** It sounds like here you have the -

1 - the actual information so you count the  
2 actual number of badge exchanges or something.

3 **MS. MUNN:** Yeah.

4 **MR. HINNEFELD:** Right, a -- a missed best  
5 estimate would be count the actual number of  
6 badge exchange-- actual number of zeroes that  
7 were recorded by the -- by the badge.

8 **MR. GRIFFON:** So we've certainly seen that  
9 technique -- you know, we've --

10 **DR. ZIEMER:** Yeah.

11 **MR. GRIFFON:** -- looked at that quite a bit.

12 **DR. ZIEMER:** So you're -- you're recommending  
13 dropping that one?

14 **MR. GRIFFON:** Yeah, for those other factors I  
15 mentioned.

16 **DR. ZIEMER:** Rest of you?

17 **MS. BEACH:** It's okay.

18 **DR. ZIEMER:** Okay. Phil and Mike?

19 **MR. GIBSON:** Yeah, I agree.

20 **MR. SCHOFIELD:** I agree.

21 **DR. ZIEMER:** Okay. Did you have any others,  
22 Mark?

23 **MR. GRIFFON:** Yeah -- well, 661, but we said  
24 Simonds Saw so I'll -- I'll leave that on there  
25 'cause we -- that is the reason we picked that

1 one.

2 **DR. ZIEMER:** Right.

3 **MR. GRIFFON:** And -- and just -- just a  
4 reminder, I mean those become almost like a  
5 sort of site -- mini-site profile review --

6 **DR. ZIEMER:** Right.

7 **MR. GRIFFON:** -- for those sites that we don't  
8 get to see much -- yeah. Number 40 was the  
9 last one I had.

10 **MS. MUNN:** Which is 684, would that be?

11 **MR. GRIFFON:** Oh, I'm sorry, 40 -- what am I  
12 saying -- 666.

13 **MS. BEACH:** Yeah.

14 **MR. GRIFFON:** I renumbered -- sorry, I put an  
15 extra column on my spread sheet.

16 **DR. ZIEMER:** Right, so that's the Savannah  
17 River Site -- it has a best estimate portion to  
18 it.

19 **MS. MUNN:** Yeah, and we've taken off --

20 **DR. ZIEMER:** I don't know if the X-rays on this  
21 --

22 **MS. MUNN:** -- already.

23 **DR. ZIEMER:** -- case are medical or otherwise,  
24 but there's a best estimate component on this  
25 one.

1           **MR. GRIFFON:** Hang on a second.

2           **DR. ZIEMER:** For the external.

3           **MR. GRIFFON:** Yeah, I --

4           **DR. ZIEMER:** It's probably --

5           **MR. GRIFFON:** -- I don't understand --

6           **DR. ZIEMER:** -- it's probably medical X-ray.

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

8           **DR. ZIEMER:** And that -- that would be taking

9           the actual number of years of work times the

10          annual X-ray reconstructed dose.

11          **MR. GRIFFON:** Yeah, it says X-rays best

12          estimate, site TBD so...

13          **MS. MUNN:** (Unintelligible)

14          **MR. GRIFFON:** That's a -- yeah.

15          **MS. MUNN:** X-ray for that job title --

16          **DR. ZIEMER:** We all have --

17          **MS. MUNN:** -- might mean --

18          **DR. ZIEMER:** -- again --

19          **MS. MUNN:** -- something else.

20          **DR. ZIEMER:** Maybe -- that may be reason to

21          keep it.

22          **MR. GRIFFON:** Yeah.

23          **MS. MUNN:** Yeah.

24          **MR. GRIFFON:** That's kind of questionable, I --

25          **DR. ZIEMER:** Little different twist to it.

1           **MR. GRIFFON:** Yeah, I don't feel strongly about  
2           that one but, you know, we could leave that on.

3           **MS. MUNN:** Yeah, I think I'd keep it just  
4           because (unintelligible) all of those X-rays.

5           **DR. ZIEMER:** You have any others, Mark, at this  
6           point?

7           **MR. GRIFFON:** No, I think that was...

8           **DR. ZIEMER:** Right now we have identified 12 to  
9           eliminate, which means we're at 31 cases. I'd  
10          like to ask if there's others that any of you  
11          feel should not be on the list for one reason  
12          or another.

13          **MR. PRESLEY:** First page --

14          **DR. ZIEMER:** Uh-huh.

15          **MR. PRESLEY:** -- 627.

16          **DR. ZIEMER:** It's the last one on the first  
17          page?

18          **MR. PRESLEY:** Last one on there.

19          **DR. ZIEMER:** Nevada Test Site.

20          **MR. PRESLEY:** Very low POC, both of them are  
21          overestimates, TIB-2. I realize we don't have  
22          a lot of those, but I don't think we're going  
23          to get anywhere by redoing that.

24          **DR. ZIEMER:** And work decade is the '70s.

25          **MR. PRESLEY:** Yes.





1           you've got 644 --

2           **MS. MUNN:** Oh, I don't --

3           **MR. PRESLEY:** -- which is also a low POC and --  
4           and overestimate for both.

5           **MR. GRIFFON:** I don't remember any Brookhavens,  
6           but I may be wrong on that.

7           **DR. WADE:** I don't think we've done many, if  
8           any.

9           **MR. GRIFFON:** That was part of the reason we  
10          picked it, yeah.

11          **MS. MUNN:** Yeah, I don't have the list that we  
12          were working from at the time. I didn't bring  
13          my subcommittee --

14          **MR. GRIFFON:** Just going by memory, I don't  
15          recall looking at a Brookhaven --

16          **MR. PRESLEY:** The problem is is that POC's so  
17          low, you know, are we going to gain anything  
18          by...

19          **MR. GRIFFON:** Well, again, these -- yeah.

20          **DR. WADE:** You have sort of the mini-site  
21          profile.

22          **MR. GRIFFON:** That -- that was the --

23          **MR. PRESLEY:** Right.

24          **MR. GRIFFON:** -- idea, yeah, it might be just a  
25          mini-site profile review.



1 cases that you believe should be eliminated, or  
2 are there any of these that we are proposing to  
3 eliminate that you have second thoughts on?

4 (No responses)

5 Mike or Phil, any others that you think should  
6 be eliminated?

7 **MR. GIBSON:** No.

8 **MR. SCHOFIELD:** None at this time.

9 **DR. WADE:** Now we have two paths forward. We  
10 could just assume that that would represent  
11 SC&A's remaining workload for the year, or we  
12 could try and come up with two more cases,  
13 although I think I would advocate for the  
14 first.

15 **DR. ZIEMER:** I think --

16 **MS. MUNN:** I agree.

17 **DR. ZIEMER:** -- I think the 30 is -- basically  
18 meets what we want to accomplish. Let me call  
19 then for a formal motion to recommend these 30  
20 cases that are -- remain on the list as the  
21 assignment for -- this'll be the eighth round  
22 of dose reconstruction audits.

23 **MS. BEACH:** I'll second it.

24 **DR. ZIEMER:** Who made the motion?

25 **MR. CLAWSON:** I will. Sounds good, I'll make

1 the motion. (Unintelligible) use that.

2 **DR. ZIEMER:** Brad -- Brad made the motion to  
3 recommend these 30 cases for the eighth round  
4 of dose reconstruction audits and Josie --

5 **DR. WADE:** A fine -- a fine motion it was, too.

6 **MS. BEACH:** Yes, it was.

7 **DR. ZIEMER:** And Josie has seconded the motion.  
8 Is there any further discussion?

9 **MR. GRIFFON:** Paul, can you read now the  
10 numbers that were selected, just as a final --

11 **DR. ZIEMER:** Yeah, let --

12 **MR. GRIFFON:** -- for the record?

13 **DR. ZIEMER:** -- let me ask Lew to confirm the  
14 numbers that have been eliminated -- are we --  
15 do it that way or --

16 **DR. WADE:** I'll start --

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

18 **DR. WADE:** The numbers that may be --

19 **DR. ZIEMER:** Or maybe we want to do it by the  
20 numbers that will be on the -- let's do a --

21 **DR. WADE:** I can do it either way.

22 **DR. ZIEMER:** Let's do the numbers that will be  
23 in the audit.

24 **MR. GRIFFON:** Okay.

25 **DR. WADE:** Okay. Starting on the -- using the

1 matrix that was given you, starting on the  
2 first page --

3 **DR. ZIEMER:** And everything starts with 2007-  
4 05- and then it's a number, so it's --

5 **DR. WADE:** First one is 249, 153, 120, 155,  
6 257, 045, 226, 156.

7 Going on to the second page -- 187, 632, 236,  
8 649, 240, 157, 254, 210, 644, 224.

9 On to the third page -- 295, 195, 101, 209,  
10 690, 172, 289, 661, 666.

11 To the last page, 684, 239 and 227.

12 **DR. ZIEMER:** Okay. So the motion is to accept  
13 those 30 cases as the eighth round of dose  
14 reconstruction audits. We'll now vote.

15 All in favor, say aye?

16 (Affirmative responses)

17 And on the phone, Phil and -- and Mike?

18 **MR. GIBSON:** Aye.

19 **DR. ZIEMER:** Both ayes?

20 **MR. SCHOFIELD:** Aye.

21 **DR. ZIEMER:** Any -- any noes?

22 (No responses)

23 Any abstentions?

24 (No responses)

25 The ayes have it. Motion carries and this will

1 be the assignment.

2 **DR. WADE:** And for the record, the vote was  
3 ten-zero.

4 **DR. ZIEMER:** We will need to have review teams  
5 -- can we do that at the next meeting?

6 **DR. WADE:** We could do --

7 **DR. ZIEMER:** I think SC&A probably won't be  
8 ready for a meeting with review teams before  
9 July, in any event, I don't believe. John  
10 Mauro.

11 And -- and the Chair and the Federal Official  
12 could come with a proposed list of teams for --

13 **DR. MAURO:** I would -- yes, we will not be  
14 ready by July for the review team for this set.

15 **DR. ZIEMER:** So we can come with a proposed  
16 list of teams for this and --

17 **DR. MAURO:** At -- in July, and then --

18 **DR. ZIEMER:** -- in July.

19 **DR. MAURO:** -- (off microphone) we  
20 (unintelligible) do that. Yes.

21 **DR. ZIEMER:** Thank you.

22 **DR. WADE:** Okay, good. Good work.

23 (Pause)

**SC&A TASKS**

**DR. LEWIS WADE, DFO**

24 **DR. ZIEMER:** We have about 20 minutes before

1 the break, and we can begin some of our  
2 administrative work. Perhaps the -- perhaps  
3 the plans for the SC&A contract for next year  
4 would be a -- a point where we --

5 **DR. WADE:** Yeah.

6 **DR. ZIEMER:** -- could begin. Let's start that.  
7 Okay, Lew has some information that -- and I  
8 think some of this -- this was I believe shared  
9 with the Board.

10 **DR. WADE:** Right, it's also in the back of your  
11 binders, the materials that I'm going to refer  
12 to, just in case you didn't bring materials  
13 with you. And as I said in an e-mail to you,  
14 it's time again to look at the tasking of your  
15 contractor for next year, and -- next fiscal  
16 year, and I thought we could have a discussion  
17 here. I would like to have your deliberations  
18 at this meeting and with sufficient specificity  
19 that we could then ask SC&A to develop specific  
20 proposals. They don't have to be precise  
21 proposals, but ranges of -- of -- of materials  
22 you might like to see included for next year,  
23 and then we could bring those proposals back to  
24 the July meeting and the Board could move  
25 towards making a decision on work for its

1 contractor next fiscal year at the July  
2 meeting, which would put us in sync with the --  
3 the government's funding timelines and plans.  
4 So I thought we could have a discussion today.  
5 If need be, we can have another discussion  
6 tomorrow and try to move towards finalizing  
7 this, at least asking for proposals.  
8 As you remember, the SC&A contract has a number  
9 of tasks. The first task is really the review  
10 of site profiles. And I asked John Mauro and  
11 he shared with you a fairly detailed status  
12 report on the work that SC&A has done to date.  
13 And John, how many site profiles now are  
14 reviewed or under review by SC&A?  
15 **DR. MAURO:** There are a total of 21 site  
16 profile reviews that we have been authorized to  
17 review from the very beginning of this project.  
18 Right -- as it stands now, we probably deli--  
19 you know, I don't have the -- probably  
20 delivered all but three or four. It's on  
21 there. I -- I'd have to take a look which ones  
22 we still owe you. I -- I -- Sandia, couple of  
23 others, but there are a couple that we still  
24 owe you and our plans are to get them to you by  
25 early summer -- July. It should be on there,



1 the ones that we still owe you.

2 **DR. WADE:** Right. And then I also provided, on  
3 one of my e-mails to you, printed from the  
4 NIOSH web site, a list of work sites for which  
5 NIOSH has developed technical documents. You  
6 could assume that's the universe of sites for  
7 which there are site profiles, and that  
8 represents 44, the list, that I counted. Now  
9 again, with -- given some lack of precision,  
10 you -- you tried to do the large sites for  
11 sites of particular interest. There is a  
12 population left of sites that you have not  
13 asked your contractor to evaluate. In a  
14 typical year up to this point, we were looking  
15 at tasking SC&A with looking at six site  
16 profile reviews. So the question before you is  
17 do you want to continue at that pace, do you  
18 want to deviate from that pace for some reason.  
19 So that sort of defines Task I as it's in front  
20 of you. We could have some discussion of that.  
21 If there was other things you wanted prepared  
22 for your discussions tomorrow, we could do  
23 that. You don't have to select the six now,  
24 but if you would like them to prepare a  
25 proposal for an additional six, then we could

1 do that.

2 **MS. BEACH:** I do have a question.

3 **DR. ZIEMER:** A question, Josie.

4 **MS. BEACH:** Being new to this, are we keeping  
5 up with having them do six sites, or -- or do  
6 we need to go forward with more sites?

7 **DR. WADE:** That's a valid question. I mean it  
8 -- my answer simply as the technical project  
9 officer is I think we're keeping up with the  
10 site profile work in terms of the number of  
11 sites we review. I worry about keeping up with  
12 closing on the site profile reviews that we've  
13 already started. And then I also worry about  
14 our ability to be auditing individual dose  
15 reconstructions more than I worry about site  
16 profiles.

17 **DR. MAURO:** To help out a bit, there are -- out  
18 of the 21, we have either closed out or are in  
19 the process of closing out about 11 of those.  
20 Ten of those we really have not even begun the  
21 process of closing out. So that -- yes, you're  
22 absolutely right, Dr. Wade. It's the closeout  
23 process that has been lagging behind a bit.

24 **DR. ZIEMER:** Well, in fact, if you look under  
25 fiscal year 2006 and look at that list of site

1 profile reviews, notice Los Alamos, the  
2 closeout process has not been initiated; Linde,  
3 closeout process not initiated; Pinellas,  
4 closeout process not initiated; Mound, closeout  
5 process not initiated. Fernald, it has been  
6 initiated; ORNL X-10 and Paducah, not  
7 initiated. Now initiated means that's -- the  
8 ball's in the Board's court. That's not SC&A's  
9 issue, and it really is not -- not NIOSH's  
10 issue at that point. It's a Board issue. So  
11 one way of looking at this is to say they're a  
12 year ahead of us in terms of producing site  
13 profile reviews. We need to have issue  
14 resolution on all of those. The only one that  
15 -- from last year that's underway is the  
16 Fernald site, as far as having the -- the  
17 closeout process underway.

18 And then we have this year's work where they  
19 have various stages of completion of an  
20 additional one, two, three, four, five, six  
21 site profile reviews underway. So -- Jim.

22 **DR. MELIUS:** Well -- well, I mean I actually  
23 think the situation's a little bit more  
24 complicated than that, because what we're  
25 finding, when you go to actually try to close

1 out a site profile review, you find that that  
2 site profile is un-- is undergoing or has  
3 undergone major revisions. So for example, on  
4 the Hanford site profile, major dose -- major  
5 concern about the neutron dose estimates and so  
6 for-- dose reconstruction, we find that NIOSH  
7 is now back to the drawing board with a whole -  
8 - and obtaining a whole new set of documents on  
9 which to base that on and we -- we're now  
10 waiting, you know, some months and we'll  
11 probably wait some months more before we can  
12 even start to address some of those -- those --  
13 those issues. So I -- I think, in order to  
14 sort of schedule this right, and I don't think  
15 it affects necessarily how we do our --  
16 additional part of our contract, but in terms  
17 of assigning site profile work and so forth, I  
18 think we need to take a really more -- little  
19 bit more detailed look at where are we with the  
20 various site profile reviews and closeouts and  
21 see what's really underway and what's, you  
22 know, an estimated time for us to do our work,  
23 for NIOSH to do the work that they're  
24 responsible for on some of these and -- and,  
25 you know, where is it an issue with SC&A and --

1 and so forth to do that.

2 **DR. ZIEMER:** Okay. Excellent point, and  
3 Hanford is a good example where it says here  
4 the closeout's underway, but in the meantime  
5 the -- the profile's been revised considerably.  
6 So some of the matrix items are not -- not  
7 really up to date.

8 **DR. WADE:** And if you remember for Savannah  
9 River, SC&A had reviewed Savannah River and  
10 then the site profile changed sufficiently that  
11 you tasked them with a new review of Savannah  
12 River and counted it as one of the six for one  
13 of the year's, so that precedent exists.

14 **DR. ZIEMER:** John?

15 **DR. MAURO:** I do have one more nuance, to make  
16 it even more complex. For example, Hanford, as  
17 it -- another layer, as it is now, and SC&A has  
18 been asked to look at the SEC aspect to it now,  
19 so -- so we have this third tier, so as -- now  
20 we're looking at Hanford not only from the  
21 point of view of a site profile review, it is  
22 now moving into the realm of an SEC review, all  
23 of which makes it a more confounding problem.

24 **DR. ZIEMER:** Right. Thank you. And Wanda, and  
25 then Jim again.

1           **MS. MUNN:** Just to repeat the obvious again,  
2           we're still both time- and personnel-  
3           constrained, and I -- I don't know how the  
4           Board can accomplish much more than it is now,  
5           given the time constraints of our members and  
6           the amount of time that can be dedicated to  
7           this. Add to that the current concerns with  
8           respect to budget that are looming heavily in  
9           my mind -- I don't know about the other members  
10          of this Board, but I'm very concerned about how  
11          well we can address these fairly extensive  
12          requirements that we've set out for ourselves  
13          and for our contractor, given the constraints  
14          we have. Don't -- if we have a magic way  
15          through that maze, it would be helpful if we  
16          started thinking about that.

17          **DR. ZIEMER:** And Jim, additional comment?

18          **DR. MELIUS:** Well, actually a -- a follow-up to  
19          that was my question was regarding an update on  
20          the budget related to this contract that we --  
21          we received a -- what was forwarded -- a note  
22          from the contracting officer raising some  
23          concerns about the spending rate on -- for this  
24          year on -- on that and I think before we can  
25          talk about what's being done next year, we need

1 to bet-- better understand the budget  
2 situation.

3 **DR. WADE:** Yeah, I don't know if David Staudt  
4 is on the line. David, are you with us?

5 **MR. STAUDT:** Yes, sir.

6 **DR. WADE:** I don't know if you want to address  
7 that or if I an address that.

8 **MR. STAUDT:** Yeah, you can address it.

9 **DR. WADE:** Okay. I don't think there are any -  
10 - any major worries with regard to the contract  
11 funding this year. I think John Mauro was  
12 trying to point out, in communications with the  
13 contracting officer, that the spending has been  
14 heavier in some areas than others, but I don't  
15 think we're looking at overall a dollar  
16 shortfall for the contract this year. I think  
17 we'll be fine. And we expect to have adequate  
18 funding to begin next year.

19 I do think it's worth the Board noting that,  
20 for example, when we get into a very deep SEC  
21 review -- like Rocky Flats -- there could be a  
22 million dollars expended on that.

23 **MS. MUNN:** Exactly.

24 **DR. WADE:** What has happened, though, that --  
25 there have been fewer SEC reviews done this

1 year, and that sort of balances. So far we've  
2 found a middle ground so I don't think it's a  
3 crisis situation with regard to funding.  
4 David or John, do you want to comment?

5 **MR. STAUDT:** This -- this is David. I just  
6 think -- think one of the points I was trying  
7 to make is that, you know, SEC (sic) is -- they  
8 have a very highly-skilled staff and they're --  
9 they're not inexpensive, so every time we're  
10 tasking them, it -- it costs quite a bit of  
11 money, so it does -- does add up pretty quickly  
12 and as these continue to go on it gets to be  
13 quite expensive. So I just wanted to make sure  
14 that the Board was cognizant of that as -- one  
15 of these SEC petitions take two years, it's  
16 going to cost quite a bit of money and there  
17 may be something else that may not get done  
18 because the budget is limited.

19 **DR. WADE:** John.

20 **DR. ZIEMER:** Let me add to that comment and  
21 then, John, you may wish to speak, also.  
22 Part of the concern was the NIOSH budget,  
23 because part of our ability to resolve issues  
24 also depends on NIOSH being at the table and --  
25 and being involved in the issue resolution



1 process. And -- and to some extent, NIOSH's  
2 own contractor, ORAU. Larry Elliott had  
3 indicated to us that because of the cuts in the  
4 NIOSH budget, their ability to maintain sort of  
5 the status on -- on supporting things like  
6 issue resolution might be impacted -- there's  
7 kind of a domino effect -- even though the  
8 Board's own budget may not be impacted so much.  
9 It may be -- maybe perhaps not SC&A's, but the  
10 fact that NIOSH's own budget would be impacted  
11 could have an effect on our ability to go  
12 through issue resolution, so --

13 **DR. WADE:** Right, I -- I mean I'll speak to  
14 that.

15 **DR. ZIEMER:** -- can you speak to that?

16 **DR. WADE:** But first let's John -- let John  
17 comment, since we're talking about his  
18 contract.

19 **DR. MAURO:** I -- I'd just like to add there is  
20 some good news on the side is that we are  
21 coming in -- it appears, unless there's some  
22 surprises -- under -- under budget on Task IV  
23 and on Task III. That's the dose  
24 reconstruction. We're managing to do our dose  
25 reconstruction audits in fewer work hours per

1 case than we anticipated, although there might  
2 be surprises, some -- if we get real  
3 sophisticated, complex realistic cases, you  
4 know. But right now, my best projection is  
5 that it appears we will be coming in under  
6 budget on Task IV, and on the procedure review,  
7 Task III. Certainly to the extent that the  
8 Board and NIOSH feels that -- that we might be  
9 having problems on Task V, which is the SEC,  
10 the degree to which the resources could be  
11 moved, this is something that might be an  
12 option that might be considered.

13 **DR. WADE:** I don't think there's an overall  
14 budget concern as to how SC&A will close the  
15 year. It might be, as John said, that  
16 resources need to be moved from one task to  
17 another. But again, the Board needs to comment  
18 upon that, think about that -- I mean Rocky  
19 Flats as an example consumed many more  
20 resources through the -- the iterative process  
21 than was forecast. And again, you know, are  
22 there others like that looming on the horizon,  
23 you need to understand that and -- you know,  
24 and deal with the -- the -- the movement of  
25 resources if that's the case and that's your

1           desire. But I don't think we're in a crisis  
2           mode for SC&A this fiscal year. And again,  
3           we'll start next year with the assumption of --  
4           of funding at a -- an equal level, and  
5           therefore you can begin to task them relative  
6           to that funding.

7           To Paul's question of NIOSH, the issue that  
8           Larry brought to you has not been resolved.  
9           There have been many meetings and there -- much  
10          deliberation going on trying to reach a  
11          resolution of NIOSH's funding situation this  
12          fiscal year that directly impacts its ability  
13          to fund ORAU. That has not been resolved. It  
14          could well be that we will have to back off on  
15          ORAU activities significantly for the remainder  
16          of this fiscal year. But again, we're looking  
17          at the remainder of this fiscal year, which is  
18          through the end of September, and then we will  
19          begin again -- remember, we'll be recompeting  
20          that support contract, so it might not be ORAU  
21          providing the support, but we expect to have  
22          funding to pick up at the start of next fiscal  
23          year. So there will be a -- could be a  
24          downturn and that downturn could affect  
25          progress, but it is for the remainder of this

1 fiscal year, through September 30.

2 Jim, is that correct?

3 **DR. ZIEMER:** Thank you for that update. Now we  
4 -- we don't have to do any tasking yet today  
5 for SC&A. This opens the -- the door for the  
6 discussions tomorrow. You also have the -- the  
7 list of SC&A SEC reviews, and -- and we need to  
8 be looking ahead also for next year's --

9 **DR. WADE:** Now there --

10 **DR. ZIEMER:** -- budget.

11 **DR. WADE:** -- you can't be geographically  
12 specific, but generally we've tasked SC&A with  
13 six --

14 **DR. ZIEMER:** Right, we'd be --

15 **DR. WADE:** -- SEC reviews.

16 **DR. ZIEMER:** -- talking about numbers of -- of  
17 reviews, and to some extent we can look at what  
18 has been done and -- and get a feel for what it  
19 takes, on average, to do a review and how many  
20 reviews would be reasonable in -- in the  
21 upcoming year. And -- and John has already  
22 indicated that on the dose reconstruction  
23 reviews they have reached a kind of -- I don't  
24 know if I want to call it equilibrium, but the  
25 process has gone pretty smoothly. We know how

1 to do that. However, we have the -- the blind  
2 reviews coming up, and that's kind of an  
3 unknown in terms of what that will take in  
4 terms of time and effort. But the numbers of  
5 blind reviews is small enough so that I can't  
6 imagine it would have a major impact on the --  
7 on the funding for that part of it.

8 **DR. MAURO:** Yeah, Kathy Behling and I have been  
9 speaking about that quite a bit and how we go  
10 about doing it. I don't think it's going to be  
11 burdensome in terms of some unusual expense.  
12 We have a pretty good idea on how -- based on  
13 the last meeting, from the discussion that was  
14 held on the process that would be most  
15 effective, so -- so I think that's not -- I'm  
16 not -- with regard to Task Order IV and the  
17 next set of 30 that we'll have to take care of,  
18 and the additional blind reviews, right now my  
19 best projection is that we will be coming in  
20 under budget to deliver those products to you.

21 **DR. WADE:** Okay. A typical year for SC&A is 60  
22 DR reviews. Is that what you want to start to  
23 think about asking them to provide us with a  
24 proposal for next fiscal year?

25 **DR. ZIEMER:** Well, and -- and we may have a

1 breakdown of what that is in terms of blind  
2 plus the normal reviews.

3 **DR. WADE:** Yeah, we can ask for anything we'd  
4 like from them --

5 **DR. ZIEMER:** Right.

6 **DR. WADE:** -- in terms of the cost breakdown.

7 **DR. ZIEMER:** And then on the procedure reviews,  
8 that's also reached a kind of equilibrium where  
9 we are able to pick up new procedures, without  
10 too much impact, as they come and -- and  
11 sometimes in the process of reviewing other  
12 things.

13 **DR. MAURO:** Ye-- yes, right now you have a --  
14 you should have a list in front of you of all  
15 the procedures that we've completed our reviews  
16 or are active. In total, from the beginning of  
17 this project, we reviewed a total of about 100,  
18 105 procedures. The -- the only -- the -- we --  
19 -- we know what they cost. The only one that  
20 was special, that cost more -- which we  
21 anticipated --

22 **UNIDENTIFIED:** Hello?

23 **DR. WADE:** Hello.

24 **UNIDENTIFIED:** Hello?

25 **DR. WADE:** Hello.

1           **UNIDENTIFIED:** Hi.

2           **DR. WADE:** Hi.

3           **UNIDENTIFIED:** This is (unintelligible).

4           **DR. WADE:** How are you?

5           **UNIDENTIFIED:** Good, how are you?

6           **DR. WADE:** Fine, thank you. This is a -- an  
7           Advisory Board meeting. Can we help you in  
8           some way?

9           **UNIDENTIFIED:** I'm sorry, what?

10          **DR. WADE:** This is a meeting of an advisory  
11          board that you've called in to.

12          **UNIDENTIFIED:** Oh, I'm very sorry. I -- I have  
13          the wrong number.

14          **DR. WADE:** Oh, don't be sorry. Thank you.

15          **DR. MAURO:** The list has been provided. I -- I  
16          guess it would be probably helpful to -- to  
17          Stu, also. Take a look. You know, I think  
18          that we're at the point where we may have  
19          reviewed just about the vast majority of the  
20          site-specific and generic procedures. There  
21          might be more on the horizon. There may be  
22          some major revisions to some of them that are  
23          forthcoming, but I think that we're -- with  
24          regard to procedure reviews, we -- I think we -  
25          - I call it the -- over the power curve. We've

1 really looked at the vast majority of them, and  
2 the question becomes are there others that need  
3 to be looked at.

4 **DR. ZIEMER:** Thank you.

5 **DR. WADE:** We normally task SC&A with 30  
6 procedure reviews per year. That might not be  
7 a number that's easy to meet in terms of new  
8 procedures. But remember this sort of issue of  
9 the -- the PERs now is starting to loom large,  
10 and how does the Board want to deal with that?  
11 Do you want to deal with that under this task  
12 of procedures reviews? I think that's worth  
13 discussing.

14 **DR. ZIEMER:** Okay, keep that in mind. Okay,  
15 Wanda.

16 **MS. MUNN:** For Mike, Mark, Dr. Ziemer and Bob,  
17 tomorrow when we begin our housekeeping issues  
18 in the afternoon, I'm going to request that we  
19 -- the procedures group set aside a date for a  
20 call so that we can identify exactly how we  
21 want to proceed and to choose some of these  
22 procedures to be up front for us on our first  
23 face-to-face, on our next face-to-face on  
24 these. So if you would be looking at your  
25 calendars and thinking in terms of, one, a



1 phone call that probably will be about half a  
2 day long; and then probably a full day of face-  
3 to-face meeting within a matter of short time  
4 after that, I'd appreciate it.

5 **DR. ZIEMER:** Good -- good point. Now when we  
6 task SC&A, we don't have to have that  
7 information. All we need is an estimate of  
8 numbers, and then the workgroup can come with a  
9 specific recommendation as to what procedures,  
10 and that can be done, for example, at our next  
11 meeting --

12 **MS. MUNN:** Yes, correct.

13 **DR. ZIEMER:** -- so that will work out fine.  
14 Well, this has just been sort of preliminary  
15 discussion on this issue. We're going to  
16 return to it tomorrow. We'll go ahead and take  
17 our break and return at a quarter of so we can  
18 begin the discussion of Sandia.

19 **DR. WADE:** That's right.

20 (Whereupon, a recess was taken from 11:30 a.m.  
21 to 11:55 a.m.)

**SANDIA LIVERMORE SEC**  
**NIOSH**  
**PETITIONER COMMENTS**

22 **DR. ZIEMER:** I'll call the meeting back to  
23 order. We'll now consider the Sandia Livermore  
24 SEC petition, and speaking on behalf of NIOSH

1 is Dr. Jim Neton. Jim?

2 **DR. NETON:** Thank you, Dr. Ziemer. Good  
3 morning, everyone. I don't have a lot to say  
4 other than I'd like to refresh everyone's  
5 memory as to what transpired at the last Board  
6 meeting regarding SEC Petition 0059 and -- and  
7 give a brief update as to where NIOSH is in re-  
8 evaluating our petition in light of some of the  
9 comments made in statements by the petitioner.  
10 If you recall, we issued an evaluation report  
11 on March 26, 2007 and presented that report at  
12 the Board meeting in Denver last -- in May, on  
13 May 4th, and in that presentation we concluded  
14 that we could reconstruct dose to the class of  
15 workers that was proposed for -- for Sandia  
16 National -- for Sandia Livermore Laboratory.  
17 And that was a class definition that  
18 encompassed X-ray technologists and materials  
19 technicians between 1967 and 1990 in certain  
20 rooms within Sandia National Laboratory.  
21 The petitioner could not attend the meeting,  
22 but he did have a -- a letter that he prepared  
23 that was read into the record at that meeting,  
24 if you recall, and many things were raised in  
25 that -- that letter. Among other things, the

1 letter raised certain issues regarding the non-  
2 homogeneity of -- of the exposures to workers  
3 on these X-ray diffraction units and in  
4 particular the inability of the film badge to  
5 accurately measure the radiation exposure in  
6 various parts of the body.

7 Because of that letter, the Board did delay  
8 discussion on this petition pending a NIOSH  
9 review and evaluation of the statements that  
10 were raised in the letter, and we've done that  
11 since the last meeting. We're re-evaluating  
12 our position. We've done literature reviews to  
13 try to get a better handle on the -- the types  
14 of equipment that were used in this laboratory,  
15 and in particular the exposure geometries in  
16 these unique -- unique settings. If you  
17 recall, the petitioner raised the -- the idea  
18 that these were not standard exposure  
19 geometries, but there were some homemade  
20 calibration jigs and such that were made to  
21 accommodate various-size samples at Sandia  
22 Livermore.

23 We also have, as of last Thursday, interviewed  
24 the petitioner to get further statements from  
25 him regarding his -- his exposure situation and



1           like to read.

2           **DR. ZIEMER:** Yes, please do.

3           **MR. GIOVACCINI:** And after I get done, if I  
4           could submit it to the Board in writing  
5           somehow?

6           **DR. ZIEMER:** That would be fine. It will be  
7           part of the official record, as well, since the  
8           meeting is being transcribed.

9           **MR. GIOVACCINI:** Okay. Well, bear with me and  
10          I'll read it for you. It's about a three- or  
11          four-minute discussion.  
12          I am the petitioner -- first of all, how many  
13          people am I addressing?

14          **DR. ZIEMER:** Well, the -- you have -- let's  
15          see, three, six, eight -- ten Board members,  
16          the Designated Federal Official; and in the  
17          audience, a number of federal staff people,  
18          some court re-- or some news reporters and  
19          members of the general public.

20          **MR. GIOVACCINI:** Well, okay. Well, I want to  
21          thank everyone for their time and effort  
22          regarding this SEC. Well, as I said, I am the  
23          petitioner and I am also the sick applicant of  
24          the EEOICAPA (sic) process. This Special  
25          Exposure Cohort, which is SEC-00059, was filed

1           for just three individuals that worked in the  
2           X-ray laboratory at Sandia California. One of  
3           the individuals later contacted (sic) one of  
4           the 22 cancers specified by the SEC guidelines.  
5           This individual's immunosystem has been  
6           detrimentally impacted to the point that he  
7           contacted (sic) a chronic cancer, that being  
8           non-Hodgkin's lymphoma, five times over a 15-  
9           year period. He was considered 100 percent  
10          disabled by both Sandia medical department and  
11          the Social Security Administration. That  
12          individual is myself.

13          But first and foremost, the debate in question  
14          is does NIOSH have enough dose information to  
15          accurately calculate the dose incurred by the  
16          proposed class. I believe that's the question.  
17          In 42 CFR Part 83, which I have read, the SEC  
18          qualifying criteria clearly states it is not  
19          feasible to estimate with sufficient accuracy  
20          the radiation dose that the class received.  
21          And I want to pinpoint the word "accuracy". It  
22          goes on to state that there's a reasonable  
23          likelihood that such radiation dose may have  
24          endangered the health of members of the class.  
25          I looked up the definition of the word

1 "accuracy" and it means precise. Precise means  
2 accurate in every detail. It also means exact.  
3 The evaluation report that I received on March  
4 30th clearly stated that assumptions,  
5 estimations and correction factors were  
6 utilized and personal monitoring records were  
7 missing. I interpreted this as not having  
8 sufficient data.

9 This SEC was filed because exposures went  
10 unmonitored and are inadequately recorded due  
11 to the lack of personal exposure data and the  
12 lack of area monitoring. The supporting  
13 documents of this SEC exemplify the fact that  
14 ionizing radiation exposures were incurred and  
15 inevitable, and that there was insufficient  
16 data to feasibly determine an individual's dose  
17 to any degree of accuracy or preciseness. To  
18 me, it appears that the Congressional intent of  
19 an SEC is not being followed.

20 And I already mentioned on June 7th, just last  
21 Thursday, I had a 90-minute telephone interview  
22 with four individuals requesting detailed data  
23 regarding my daily exposures and the incident  
24 that I experienced in 1978. I appreciate the  
25 effort made by those agencies to acquire this

1 crucial circumstances under which my associates  
2 and I worked. I was also informed that  
3 additional data for the working class has been  
4 recovered from Sandia. On June 7th I requested  
5 any new dose information that pertained to me.  
6 This was requested from David Sundin at OCAS.  
7 I have not received my dose information or  
8 evaluation report summarizing these exposure  
9 circumstances, and I would appreciate the  
10 opportunity to share this new information with  
11 the class so that we may examine them for  
12 accuracy.

13 One other additional point that I would like to  
14 bring to the attention of the Board is the  
15 Sandia California site profile, and of course  
16 the Sandia California site matrices. Many  
17 former Sandia employees would appreciate an  
18 opportunity to review them for Cold War time  
19 accuracy so that agencies adjudicating claims  
20 would have available to them the exact  
21 conditions under which these employees worked.  
22 Accurate data is a must if sick worker claims  
23 are to be adjudicated uniformly, fairly, and  
24 given scientific consideration based on  
25 exposure assessments by those who not only



1           witnessed the exposures but also experienced  
2           them. I make this comment based on the  
3           feedback from former Lawrence Livermore  
4           National Laboratory's employees who are  
5           attempting to correct their poorly-assembled  
6           site profile.

7           In closing I would like to cite just one other  
8           example that demonstrates unknown exposures.  
9           This is a conversation I had with a current  
10          Sandia employee when I requested my disability  
11          medical file for my last year of employment at  
12          Sandia. That was in 1997. This was the year I  
13          was placed on one year of sick leave before my  
14          actual disability retirement started. I cited  
15          this example because it was the professional  
16          opinion of the on-staff doctor at Santa Clea  
17          (sic), California, [Name Redacted]. From my  
18          personal 1997 work calendar I recorded ten  
19          office visits with him. He recommended that I  
20          strongly consider a disability retirement from  
21          Sandia, and apply for the Social Security  
22          disability to limit any further occupational  
23          exposures. When I requested my medical files  
24          for my last year of employment, I was told  
25          Sandia did not document that kind of

1 information in those days.

2 I personally find this hard to believe. This  
3 is an insult not only to myself but also to  
4 everyone concerned. Why should sick applicants  
5 be penalized for the careless record-keeping of  
6 those we entrusted our health and safety.

7 Needless to say, this burden of proof has added  
8 an enormous amount of stress to the stress I  
9 and other sick applicants already have in  
10 coping with our diseases.

11 Thank you for listening. I am finished.

12 **DR. ZIEMER:** Okay, thank you very much, Gerald.  
13 Board members, do any of you have questions for  
14 Gerald this morning?

15 (No responses)

16 Now my understanding from what Dr. Neton said  
17 is that there is a revised evaluation report  
18 that is in progress, and also do we know the  
19 status of the request that Gerald referred to -  
20 - to David Sundin?

21 **DR. NETON:** I do not, but I can follow up on  
22 that and find out more.

23 **DR. ZIEMER:** That request apparently must have  
24 occurred within the last couple of days.

25 **MR. SUNDIN:** Dr. Ziemer, this is --

1           **DR. ZIEMER:** Yes.

2           **MR. SUNDIN:** -- Dave Sundin.

3           **DR. ZIEMER:** Oh, Dave, you're on the line.  
4           Okay. Thank you.

5           **MR. SUNDIN:** Yes. I got Mr. Giovaccini's  
6           request on the 7th via e-mail and I sent the  
7           requested records to our Privacy Act officer in  
8           Atlanta on the 8th, so did re--

9           **DR. ZIEMER:** So that is in progress, the  
10          process?

11          **MR. SUNDIN:** I did request that that they be  
12          expedited.

13          **MR. GIOVACCINI:** Thank you, David.

14          **MR. SUNDIN:** All right. Thank you.

15          **DR. ZIEMER:** Any other questions or comments?  
16          Jim Melius.

17          **DR. MELIUS:** Yeah, I don't recall if -- what  
18          extent we discussed this at our last meeting,  
19          but I guess the question I have is are --  
20          should we consider involvement of SC&A in  
21          reviewing the evaluation and so forth? Where -  
22          - where do we stand with that? I -- or do --  
23          are we going to wait just till the revised  
24          evaluation report comes in?

25          **DR. ZIEMER:** I don't think we made -- my

1           recollection is we did not make any such  
2           assignment.

3           **DR. MELIUS:** Yeah.

4           **DR. ZIEMER:** The -- the questions that were  
5           raised last time were sort of new to NIOSH at  
6           that point. I think we were awaiting to see  
7           what their response was to that ques-- to those  
8           questions, and to the final ER report that is  
9           not yet available.

10          **DR. WADE:** But we could.

11          **DR. MELIUS:** Yeah. I -- I -- I guess I -- it's  
12          hard to tell from Jim's presentation how sort  
13          of narrow or broad their follow-up re-- this  
14          next report's going to be, but to me, the -- if  
15          it actually is ready three or four weeks ahead  
16          of our next meeting, then there may be some  
17          value in having at least SC&A do a sort of a  
18          narrow technical re-- you know, review of --  
19          you know, look -- focusing in on this  
20          particular set of issues.

21          **DR. ZIEMER:** Yeah.

22          **DR. MELIUS:** It might be helpful in trying to  
23          resolve things at our next meeting. It may not  
24          be. I -- it -- it's sort of trying to guess  
25          what -- where NIOSH is going to come down and

1           also how would -- how the Board's going to, you  
2           know, evaluate that, so...

3           **DR. ZIEMER:** Let -- let me ask a question of  
4           Dr. Neton, and I'll try to keep this somewhat  
5           general, but you have -- you have two issues  
6           here on this kind of exposure for X-ray  
7           diffraction units. You have the possibility of  
8           direct beam exposure, in which case there  
9           should be somatic effects that would be  
10          evident. And then you have the issue of  
11          scatter. Now do we know the -- it seems to me  
12          I read in one of these documents that the KVP  
13          was about 40 kilovolts for this --

14          **DR. NETON:** Correct --

15          **DR. ZIEMER:** -- unit.

16          **DR. NETON:** -- it's a very low energy X-ray.

17          **DR. ZIEMER:** And so the typical X-ray energies  
18          are more like 15 then for --

19          **DR. NETON:** Correct.

20          **DR. ZIEMER:** -- a 40 keV. And then the  
21          scatter's got to be much lower than that.

22          **DR. NETON:** Yes.

23          **DR. ZIEMER:** So in evaluating -- I -- the  
24          question I would have is what cancers, if any,  
25          in an SEC model would actually be caused by X-

1 rays at this low energy. You've got to get the  
2 dose in to some depth. Skin cancer might be a  
3 possibility, but what -- what --

4 **DR. NETON:** Yeah, I --

5 **DR. ZIEMER:** -- can you tell us -- and not on  
6 this case, but generically about this kind of -  
7 -

8 **DR. NETON:** I'd start by saying that we're  
9 still looking at this so anything I say --

10 **DR. ZIEMER:** Oh, okay.

11 **DR. NETON:** -- is of a preliminary nature, but  
12 --

13 **DR. ZIEMER:** So that's -- that's what you're  
14 looking at, in general.

15 **DR. NETON:** But it's -- it's an interesting  
16 conundrum because you have -- the highest  
17 potential exposures would be direct exposure to  
18 the beam, which would result in --

19 **DR. ZIEMER:** Burns.

20 **DR. NETON:** -- extremity exposures.

21 **DR. ZIEMER:** Right.

22 **DR. NETON:** You could get erythema or burns to  
23 the skin, 'cause these are very, very high --  
24 high dose rate devices in the -- in the primary  
25 beam, so that the primary skin cancer that one

1 would expect from such an exposure would be a  
2 skin cancer. Which is interesting, because  
3 that's one of the -- that's a -- that's a non-  
4 presumptive cancer.

5 **DR. ZIEMER:** So it's not on the list anyway, so  
6 --

7 **DR. NETON:** It's not on the list, but it  
8 doesn't preclude that from being added to the  
9 list because of -- of it being a cancer that we  
10 can't reconstruct. So it's an interest-- it's  
11 an interesting situation. But we're looking at  
12 all possible avenues, the scatter included, and  
13 -- and what energy that would be and what the  
14 consequences might be, how well the torso badge  
15 could reflect what the scatter radiation was  
16 and what the dose could have been to the hands  
17 if they were in the beam. It's an interesting  
18 scientific evaluation.

19 **DR. ZIEMER:** Thank you. Wanda Munn?

20 **MS. MUNN:** Just an observation with respect to  
21 the possibility of having our contractor review  
22 the document, alongside or before we've had an  
23 opportunity to look at it ourselves. My  
24 understanding from the outset was our purpose  
25 in establishing our contractor was to provide

1 technical information that we might not be able  
2 to deal with ourselves as a group. This is a  
3 relatively short and relatively easy to absorb  
4 document that we have before us. This SEC and  
5 the site profile are -- are not that complex.  
6 And my preference would be to not involve our  
7 contractor until we have identified that it's  
8 too complex for the Board to handle itself.

9 **DR. ZIEMER:** Well, and in fact we don't have  
10 the final ER in any event, so it may or may not  
11 be more complex than we think.

12 **MS. MUNN:** We'll see.

13 **DR. ZIEMER:** Other comments?

14 (No responses)

15 Now it appears to the Chair that we're not  
16 ready to make a recommendation on this since  
17 the final ER is not yet before us and the  
18 petitioner has some additional questions and  
19 has asked for additional information. So I'm  
20 going to rule that this is -- takes the nature  
21 of a status report and that we will have this  
22 item on the agenda for our next meeting to  
23 determine whether or not we are prepared to  
24 make a recommendation at that time.

25 Dr. Neton, did you have an additional comment?



1 No.

2 So if you'll put that on the agenda -- any  
3 further comments on this issue by the Board  
4 members or the petitioner?

5 Okay, Dr. Melius.

6 **DR. MELIUS:** Yeah, I'd just like a response  
7 from other Board members regarding do we  
8 involve SC&A or not. I mean I don't -- don't  
9 necessarily disagree with what Wanda said, but  
10 I'm just trying to get --

11 **DR. ZIEMER:** Get a feel.

12 **DR. MELIUS:** -- some -- some sense and -- I  
13 agree we're not going to take action --

14 **DR. ZIEMER:** Board members, would you like SC&A  
15 to get involved prior to our next meeting on  
16 this issue or would you rather wait and see the  
17 report?

18 **MR. PRESLEY:** I'd rather wait and see the  
19 report. I don't see us spending the time and  
20 the money 'cause SEC -- or SC&A is pretty busy  
21 right now. Let's look at the report and then  
22 see if we need the help.

23 **DR. ZIEMER:** Others, pro or con?

24 **MR. GRIFFON:** Yeah, I --

25 **DR. ZIEMER:** Mark.

1           **MR. GRIFFON:** -- I tend to wait and see the  
2           report on this one, save SC&A's resources, at  
3           least at this point.

4           **DR. ZIEMER:** Any others? Phil or Mike, are you  
5           guys on the line yet?

6           **MR. SCHOFIELD:** Yes.

7           **MR. GIBSON:** Yeah.

8           **DR. ZIEMER:** Any comments on this?

9           **MR. SCHOFIELD:** I agree, I think let's see the  
10          report first.

11          **MR. GIBSON:** Yeah, I agree.

12          **MS. BEACH:** I agree.

13          **DR. ZIEMER:** It appears that the consensus is  
14          to see the report and then make a determination  
15          if we need additional input.

16          Okay. Thank you.

17          **MS. MUNN:** Lunch?

18          **DR. WADE:** I might -- since you talked about  
19          the agenda for the July meeting, I -- maybe  
20          I'll move up an item from tomorrow. My plan is  
21          for the July meeting of the Board to be in  
22          Hanford, and we've talked about that. That's  
23          the plan we're going forward with, unless there  
24          is any comment or advice from the Board.

25          **DR. ZIEMER:** I think that's been the plan for

1 quite a while. I know that there has been some  
2 -- I perhaps shouldn't call it pressure, but at  
3 least some urging by other parts of the country  
4 for us to meet in other places, but Hanford is  
5 one of our big upcoming sites, complex site,  
6 and we -- we need to move ahead on Hanford  
7 issues.

8 Dr. Melius, additional comment?

9 **DR. MELIUS:** Maybe Jim can give us an update on  
10 the status of the S-- some of the SEC work at  
11 Hanford.

12 **DR. NETON:** Unfortunately I'm not prepared to  
13 comment on that right now, but I can -- I can  
14 get that term-- get that information to you.

15 **DR. ZIEMER:** And unless there's another  
16 location that appears to have that urgency, or  
17 an SEC that we -- where we need to go to a  
18 particular site, we will plan on the Hanford  
19 visit. Anything else on that?

20 **DR. WADE:** Nope. And for the record, that's  
21 July 17, 18 and 19.

22 **MS. MUNN:** We're looking forward to it.

23 **DR. WADE:** Thank you.

24 **DR. ROESSLER:** What will be the temperature?

25 **MS. BEACH:** Hot.

1           **MS. MUNN:** Hot.

2           **DR. ZIEMER:** Hot and dry. I'm looking to see  
3 whether we have time to address any other  
4 issues before our lunch break.

5           **DR. WADE:** I don't think so.

6           **DR. ZIEMER:** Board members, let me call  
7 attention to the fact that in your packet you  
8 have minutes -- are they in the packet?

9           **MR. PRESLEY:** Yeah, they're in the front, those  
10 minutes.

11          **MS. MUNN:** Stuck in the front of your folder.

12          **DR. ZIEMER:** Well, I think we need to see what  
13 the correct date here is. The -- the agenda  
14 says April 7th minutes and the minutes say  
15 April 5th. I think the 5th is the correct  
16 date.

17          **DR. WADE:** I believe so.

18          **DR. ZIEMER:** And it'll -- so you need to --  
19 homework assignment for tonight is to go  
20 through those minutes so we can approve them  
21 tomorrow.

22          Let's go ahead then with our lunch break. We  
23 will reconvene promptly at 2:00 o'clock. We're  
24 -- at which time we will begin deliberations on  
25 the Rocky Flats SEC.

1 (Whereupon, a recess was taken from 12:20 p.m.  
2 to 2:00 p.m.)

**ROCKY FLATS SEC**  
**DR. BRANT ULSH, NIOSH**  
**WORKING GROUP PRESENTATIONS**

3 **DR. ZIEMER:** We're ready to resume  
4 deliberations for this meeting of the Advisory  
5 Board on Radiation and Worker Health. For the  
6 record, we'll show that at the table are Mr.  
7 Presley, Clawson, Griffon and Ziemer, Ms.  
8 Roessler, Ms. Munn and Ms. (sic) Melius. Josie  
9 Beach is conflicted on this discussion and is  
10 seated in the audience. On the phone are other  
11 Board members. Let me just check to see who is  
12 here. Phil, are you back on the line?

13 **MR. SCHOFIELD:** Yes, I am.

14 **DR. ZIEMER:** And Mike?

15 **MR. GIBSON:** Yeah, I'm here, Paul.

16 **DR. ZIEMER:** Okay. And did Dr. Poston join us?

17 (No responses)

18 And Dr. Lockey?

19 (No responses)

20 Okay, Poston and Lockey not yet on the line.

21 They both have the call-in numbers.

22 **DR. WADE:** Right. I'll see that they're called  
23 again.

24 **DR. ZIEMER:** We'll double-check with them. We

1 are ready now to discuss the Rocky Flats SEC  
2 petition. The -- this afternoon we will be  
3 hearing from NIOSH on some of the issues that  
4 the Board raised at the last meeting. We will  
5 also hear from our Board working group that's  
6 been working on the Rocky Flats SEC petition.  
7 We will have an opportunity for discussion on  
8 both these presentations. We will have later  
9 this afternoon and into the evening a public  
10 comment period, and then tomorrow we will begin  
11 our session with continued discussion and  
12 comments on the Rocky Flats petition and com--  
13 presentation from the petitioners. And then,  
14 after further discussion, we hope to reach a  
15 point where we can have appropriate motions and  
16 actions by the Board on the Rocky Flats  
17 petition so that we can come to closure.  
18 So we'll begin this afternoon with the  
19 presentation by Dr. Ulsh from NIOSH, and he's  
20 at the podium already. Brant, the podium is  
21 yours.

22 **DR. ULSH:** Thank you, Dr. Ziemer. As Dr.  
23 Ziemer mentioned, my name is Brant Ulsh. I am  
24 the NIOSH scientist in charge of our evaluation  
25 of the Rocky Flats SEC petition. Some of you I

1 recognize. I'm sure have recogni-- recognize  
2 me. I spoke to you on April 29th of last year  
3 when I presented our evaluation report, and  
4 then again last month when the Board met here  
5 in Denver to talk about the -- the SEC  
6 petition.

7 Now it's been a -- a long road to get us to  
8 this point. I think everyone feels that very  
9 acutely. And before I dive into the three  
10 issues that the Board requested supplemental  
11 information on, I think it's worthwhile just to  
12 take a -- a step back and look at how we  
13 arrived at this point, and I'll be very brief  
14 because I know that Mark Griffon, the chair of  
15 the Rocky Flats working group, is going to be  
16 talking about this in more detail.

17 The primary issue -- well, not the primary, but  
18 one of the biggest issues that the working  
19 group considered was the issue of data  
20 integrity. And this was a concern that was  
21 expressed both in the petition and by members  
22 of the public in public comment. And the  
23 working group chose to approach this issue of  
24 data integrity from a number of different  
25 angles, and I just want to briefly touch on

1           what those were.

2           The first one that I want to talk about is  
3           individual data integrity concerns, and I --  
4           before I get into this, I want to also specify  
5           that of course I only speak for NIOSH. Mark  
6           Griffon will speak later for the working group.  
7           And I don't speak for SC&A. I only speak for  
8           NIOSH.

9           So our conclusion on the individual data  
10          integrity concerns were based on our  
11          examination of the concerns that were presented  
12          in the evaluation, concerns that were expressed  
13          by you all, by member of the public at the  
14          public meetings, and also by the petitioners as  
15          they participated in our working group  
16          meetings. And when I talk about individual  
17          data integrity concerns, what I'm talking about  
18          are individual instances where there was  
19          information that was specific enough that we  
20          could go track it down. We could go look at an  
21          individual person's records for an individual  
22          period of time, and this was an enormous  
23          effort. It wound up being about 70 pages worth  
24          of concerns and analysis.

25          And what we found were some very important



1 issues, some issues that definitely had safety  
2 implications. There's no question of that.  
3 But they were the types of issues that you  
4 typically find in a large dosimetry program  
5 like at Rocky Flats. We didn't find -- and  
6 this is NIOSH's conclusion -- we didn't find  
7 any issues that systematically prevented us  
8 from doing dose reconstructions.

9 Now the next issue -- I'm sorry, the next angle  
10 of approach on this data integrity issue dealt  
11 with logbooks, and the concern that was  
12 expressed here was that some workers felt that  
13 the exposures that they had experienced in the  
14 field were not reflected in their dosimetry  
15 records. And they suggested that we look in  
16 logbooks -- you know, the field logbooks at the  
17 time to see what kind of a match, or mismatch,  
18 that you would find between the data in those  
19 logbooks and the data in the workers' rad  
20 files.

21 So NIOSH located 65 logbooks that had useful  
22 information in them -- and I'm talking about  
23 the same kind of information now, specific  
24 bioassay results, specific external dosimetry  
25 results, notations that people went for a lung

1 count on a particular day -- and we pulled out  
2 a random sampling of data from those logbooks  
3 and we compared them to the information that we  
4 found in the individuals' radiation files. And  
5 what we found was a 94 percent agreement  
6 between those two sources of data. So again  
7 we concluded that there was nothi-- no  
8 systematic evidence of a problem here that  
9 would prevent us from doing dose  
10 reconstruction.

11 And the last avenue of approach on this data  
12 integrity concern involved what are known as  
13 safety concern documents. Now this was a  
14 formal mechanism established at Rocky Flats for  
15 workers to submit items that concerned them  
16 from a safety standpoint. That's why they're  
17 called safety concerns. And they submitted  
18 them to management, and management was required  
19 to respond to those concerns. And if the  
20 worker was not satisfied with that response,  
21 then it could be elevated to a joint  
22 company/union safety committee.

23 And we -- the petitioner turned us on to this  
24 database of about 5,000 of these safety  
25 concerns and suggested that we examine them,

1           and so we did that. And we worked with SC&A to  
2           identify those individual safety concerns, of  
3           the 5,000 universe, that might have data  
4           integrity implications based on the title or a  
5           brief description of the content. And for  
6           those that we identified, we did a detailed  
7           analysis of those particular safety concerns.  
8           And again, we found some very important issues,  
9           some with very important safety implications.  
10          But there was nothing there that would prevent  
11          us from doing dose reconstruction.  
12          So that was the three approaches that we --  
13          that we -- the working group took to look at  
14          this data integrity issue, and that was a big  
15          part of the investigation that has occurred  
16          over the last year. And I can tell you, as a  
17          participant in all of the public comments --  
18          public comment sessions, the discussions of the  
19          Rocky Flats petition and the working group  
20          meetings that the working group was exhorted on  
21          numerous occasions to give a very serious  
22          consideration to the concerns that were  
23          expressed in the petition and the concerns that  
24          were expressed by -- by you all, by members in  
25          the audience. And I can tell you that the

1           working group took that to heart. They kicked  
2           over every rock, they looked behind every leaf,  
3           they took your concerns very, very seriously.  
4           And in turn, they requested information from us  
5           and from SC&A to support their investigation.  
6           So I can tell you that I -- you know, I know  
7           some of -- some people have expressed dismay at  
8           how long this process has taken, and I  
9           certainly understand that. But I think that  
10          the level of detail that this working group has  
11          gone into far exceeds what you would see at  
12          other sites, and it is a testament to the  
13          seriousness with which they took your concerns.  
14          So that's a look back. I can tell you that on  
15          all of these issues that the working group has  
16          -- has looked into, they've made, you know,  
17          requests of SC&A, they've made requests of  
18          NIOSH for information, and we have responded as  
19          fast as humanly possible to every request that  
20          has come our way. We've responded in a timely  
21          manner to those requests.  
22          And in the meantime, something else has been  
23          going on at NIOSH. We've been accumulating  
24          completed dose reconstructions from Rocky  
25          Flats. And as of last Friday we've completed

1           1,052 of the 1,230 dose reconstructions from  
2 Rocky Flats that have been referred to us from  
3 the Department of Labor.

4           Now again, we all know that this has been a  
5 long process, and some have expressed the  
6 opinion that the fact that over the course of  
7 this investigation NIOSH has changed the way we  
8 do dose reconstructions to mean that that in  
9 somehow me-- some manner means that an SEC  
10 petition should be granted on that basis.  
11           However, at Rocky Flats it's the same as at any  
12 other site. We do dose reconstructions. As  
13 new information becomes available, we adjust  
14 the way we do dose reconstructions for the  
15 affected claims.

16           Now the -- I would ask you to consider the  
17 alternative. We would sit on the claims and  
18 wait till we have perfect information, which  
19 would never happen, and nobody would get an  
20 answer. The alternative is to do it the way  
21 that we have done it, where we go ahead with  
22 the dose reconstructions. If new information  
23 comes up, we incorporate that. We go back and  
24 we look at any claim that has been completed  
25 where that might have an effect. And so that's

1           what we have done here at Rocky Flats, just as  
2           we have done at any other site.  
3           And so that leads us to the three issues that  
4           approximately one month ago the Advisory Board,  
5           who you see up here at -- in the front of the  
6           room, they requested some supplemental  
7           information from NIOSH on three specific  
8           issues. And they also at that time recommended  
9           the addition of a class of worker to the SEC  
10          consisting of anyone who was or should have  
11          been monitored for neutrons from 1952 to '58.  
12          The three issues that they requested more  
13          information on are thorium; Building 881  
14          external monitoring in the '50s; and then also  
15          neutron doses from 1959 to 1970. Now I have to  
16          apologize here. There are a couple of slides  
17          that are missing from the handout. Somehow I  
18          managed to delete them from the final version  
19          of this report and -- this one is in there.  
20          The first issue is thorium. I think -- I think  
21          this is the first of the slides that is missing  
22          from the -- the handouts.  
23          And basically this is -- the slide summarizes  
24          the thorium activities that occurred at Rocky  
25          Flats. The first that I want to talk about is

1 the use of preformed thorium metal parts that  
2 were received from Y-12. These parts were used  
3 in mock-ups, weapons mock-ups. The only thing  
4 that occurred at Rocky Flats was they took  
5 these parts out of the shipping containers and  
6 they used them in the models. There was no  
7 metallurgy. There was no machining. There was  
8 no chemistry. There was no intake potential.  
9 We know this because we talked to five former  
10 workers at Rocky Flats who were R&D machinists.  
11 They did not recall ever machining any of these  
12 parts from Y-12. Therefore, we concluded that  
13 there was simply no internal exposure potential  
14 from this particular thorium activity.  
15 The next thorium activity is listed here, a  
16 thorium ingot operation that occurred in 1960.  
17 This particular operation represented the bulk  
18 of the mass of thorium that was ever present at  
19 Rocky Flats, and I'm going to talk to you about  
20 that in a little more detail.  
21 The third is really mistakenly called a thorium  
22 operation. It's a thorium strike. It wasn't a  
23 thorium operation, it was a U-23-- uranium-233  
24 operation. I'll talk to you some more about  
25 that, as well.

1           And finally, just for completeness, I'm going  
2           to talk to you about some laboratory scale uses  
3           of thorium at Rocky Flats. And here is, I bel-  
4           - yeah, the second of the slides that I didn't  
5           include in the handouts. After that I think  
6           we're good, we're going to match up on the  
7           slides and the handouts.  
8           So this is the first thorium project that would  
9           involve a potential intake that -- a potential  
10          for intake at Rocky, and this particular  
11          project we have extremely detailed information  
12          on it. It occurred over 38 hours on eight  
13          working days in 1960. It involved 11 workers.  
14          I know them by na-- I have their names, so I  
15          know exactly who was involved in this, and  
16          those names come from the health physics  
17          logbooks that covered this period of time.  
18          Now this project -- the purpose of it was to  
19          press three thorium ingots that weighed 80  
20          kilograms each. One ingot was pure thorium  
21          metal, one was thorium with a small percentage  
22          of alloying agents -- two of them were -- so we  
23          had three total ingots, a total of 240  
24          kilograms. These ingots were rolled. They  
25          were canned in stainle-- I believe it was



1 stainless steel, and then they were pressed  
2 into the desired shapes, and then the cans were  
3 removed. I can tell you that there was limited  
4 air sampling taken during this operation, and  
5 there was also limited urinalysis, but the  
6 urinalysis had a very high limit of detection.  
7 And the bottom line here is that in the wor--  
8 throughout the working group discussions, we've  
9 discussed this at great, great length. And  
10 that the only point of discussion remaining, I  
11 believe, deals with -- let me see if I can find  
12 the laser pointer -- ah, there it is -- the  
13 part of the process where the cans were  
14 removed. The cans -- it basically -- we've --  
15 we've talked with SC&A, we've talked with the  
16 working group, and I believe that we have come  
17 to agreement on every other step in this  
18 project except for that removal of the can.  
19 And this particular part of the project  
20 involved cutting off the steel can from the  
21 ingot using a plasma torch. And the only part  
22 -- the only point of disagreement I think  
23 involves whether or not an air sample that was  
24 taken at three feet from the ingot while it was  
25 being removed from the can, whether that

1           constitutes a breathing zone sample.  
2           Now this project involved 11 workers. This  
3           particular part of the project probably  
4           involved one worker, and we're talking about  
5           the parti-- the part of the process that took  
6           about two hours, and the plasma torch was used  
7           to remove the can. We used that air sample.  
8           We treated it as if it were a breathing zone  
9           sample, and I know that there is some  
10          disagreement on that. But I think it's a  
11          reasonable thing. If you put your face much  
12          closer to a plasma torch, you're going to get  
13          very severe burns. So this is what we're down  
14          to, and I think that on this issue, clearly I  
15          don't think that this presents an SEC issue.  
16          Now the next thorium activity is the thorium  
17          strikes. And as I mentioned, this is not  
18          actually a thorium activity. This is a  
19          uranium-233 activity. We know when these  
20          thorium strikes occurred. There were two of  
21          them. The first occurred on April 26th through  
22          the 28th in 1965. The second occurred on  
23          January 12th and 13th, 1967. We know that they  
24          occurred in Building 881, Room 266.  
25          Now, I have to tell you that, in true Murphy's

1 Law fashion, there is some question, some  
2 debate at the last minute about this particular  
3 part, Building 881, Room 266, and let me  
4 explain. There was a history of uranium-233  
5 document that was written -- oh, sometime after  
6 2000, I don't remember the exact year, and it  
7 referenced a classified document that was  
8 written in 1965. And Mark expressed some  
9 concern about this last week, and so we very  
10 rapidly had that document located and redacted  
11 the affected pages, and that document does say  
12 that the strike occurred in Building 771.

13 However, that document was written -- it was --  
14 it was a -- an investigation report that was  
15 written to handle contamination of the U--  
16 potential -- or contamination of the U-233 with  
17 uranium-235. And it was written by an  
18 independent investigation committee, and the  
19 investigation committee was selected because  
20 they were not involved in the project. They  
21 wanted independence. So these were managerial  
22 personnel.

23 Now our conclusion that the thorium strike  
24 actually happened in Building 81, Room 266, is  
25 based on extensive conversations that we had

1 with the project manager over the uranium-233  
2 project, including the thorium strikes. And I  
3 can tell you that his recollections are  
4 extremely clear, and he was very, very firm in  
5 stating that the thorium strikes occurred in  
6 Room 266, Building 81. And the level of detail  
7 that he was able to provide gives us very good  
8 confidence -- a very high degree of confidence  
9 that his recollection is correct.

10 However, let's assume for the worst case that  
11 he's not correct. Well, we have located air  
12 sampling for this time period in Building 71.  
13 I'm not proposing that we revise what we --  
14 what we've said, but it's there in case, you  
15 know, that conclusion is reached.

16 Now the thorium strike, the purpose of it was,  
17 as I mentioned, the uranium-233 project. And  
18 the purpose of the thorium strike was to remove  
19 a small level of contamination, and that  
20 consisted of uranium-232 in a concentration of  
21 less than 50 parts per million from the  
22 uranium-233. Now the problem with uranium-232  
23 is that it has a short half-life, and it has  
24 many energetic radioactive daughter products  
25 that also have short half-lives. One of those

1 daughter products is thorium-228, and that's  
2 why this is called a thorium strike, because it  
3 removes the thorium-228 and the daughters. And  
4 the reason that those are a concern is because  
5 they present a very significant external  
6 exposure hazard, a high gamma field, so you  
7 have to get that out of there if you want to  
8 work with the uranium-233.

9 Again, I told you that we had very detailed  
10 information on the chemistry of this process.  
11 It was a report written by the project manager  
12 and a health physicist that was directly  
13 involved. Here's an important point: This  
14 process was a wet chemistry process. It was  
15 performed inside a reaction vessel, some kind  
16 of -- sometimes called a reaction bomb, inside  
17 a dry box or a glovebox, under negative  
18 pressure. Now the reason that these points are  
19 important is because it tells us that there was  
20 minimal, if any, potential for a release of  
21 this material. This wasn't an ingot that they  
22 were sawing on and generating dust. It wasn't  
23 a bucket of yellowcake that they were stirring  
24 up and generating dust. It was a wet chemistry  
25 process, performed inside a glovebox, under

1 negative pressure.

2 Now, it is certainly true that on occasion,  
3 under accident scenarios, gloveboxes can be  
4 breached. That is certainly true. However, we  
5 looked at the health physics logbooks that  
6 covered this operation. We talked to the  
7 health physicist -- I'm sorry, the project  
8 manager who was standing right there, directly  
9 involved in the project. And there were no  
10 such incidents involved with the thorium  
11 strikes. The gloveboxes were not breached.  
12 There was no release of material.

13 We know that there were nine workers who  
14 participated in this project. Again, I have  
15 their names. I can tell you exactly who it  
16 was. And we also know that there was air  
17 sampling performed during this project. There  
18 were ten samplers in the room where this  
19 operation occurred. And so even though it is  
20 NIOSH's position that there was simply no  
21 release potential and therefore no internal  
22 exposure potential from this project, we  
23 recognize that the Board explicitly requested  
24 that we provide a bounding dose reconstruction  
25 for this process, and so we have done that.

1 Oh, wrong -- wrong button -- there we go.  
2 Okay. Now I apologize for the quality of these  
3 photos. I knew -- I knew going in that they  
4 weren't great quality, but they are the best  
5 available. This is Building 881, Room 266.  
6 And what you can see here is there are some  
7 hoods along this wall, and what you can't see  
8 here is that two of the ten samplers are right  
9 here and right here, the fixed location  
10 samplers.  
11 Now, if you look along this wall, you see this.  
12 This is the glovebox where the thorium strike  
13 was performed. Here are the -- here are the  
14 glove ports. And the project manager that we  
15 talked to, before we located these pictures,  
16 drew us a sketch of this room and it exactly  
17 matched what we saw in the picture and what we  
18 saw in a rad survey for much later. So that  
19 again gives us confidence that his  
20 recollections are -- are pretty reliable.  
21 Now the reason that they did the thorium  
22 strikes in this location were because I told  
23 you -- as I told you, they had a significant  
24 external exposure field associated with this  
25 project. And so they chose to do it in

1 Building 881 because there weren't a lot of  
2 people in this building. Recall that we're  
3 talking about 1965 here. And Building 81 is an  
4 enriched uranium production handling facility.  
5 Well, by 1965 the enriched uranium operations  
6 had been transferred to Y-12, so there was not  
7 a lot going on in this building. It was a good  
8 place to perform this kind of a project,  
9 because of the gamma potential and also because  
10 of security concerns. This was a classified  
11 project and they didn't want, you know, a lot  
12 of people knowing about it. So this was done  
13 in -- in Building 881.  
14 And the -- the health -- I'm sorry, the project  
15 manager that we talked to told us how they did  
16 these -- this process, the thorium strike.  
17 Because of the gamma field, they would approach  
18 the glovebox, go into the glove ports, do the  
19 particular step in the chemical process, and  
20 then retreat. Why did they do this? To keep  
21 doses ALARA, As Low As Reasonably Achievable.  
22 There was a significant gamma field. They  
23 didn't want to spend a lot of time standing  
24 here if they didn't have to, so they retreated.  
25 So, since the Board requested a bounding dose



1 reconstruction for this process, we produced  
2 one, and it's based on the air sampling done in  
3 this room. There were ten samplers. I'm  
4 showing on the graph here -- this is the  
5 average of the ten samplers, although in our  
6 dose reconstruction we picked the highest of  
7 the ten and used that for our bounding dose  
8 reconstruction. But here is the average. And  
9 what you see here is pretty typical of -- oh, I  
10 also have to mention that these are gross alpha  
11 samples, and they are uncorrected for radon and  
12 its daughters, and that's very significant and  
13 I'm going to tell you why here.  
14 You can see that these -- these periods here  
15 without bars, these correspond to weekends. We  
16 checked the calendar. One of the guys on -- on  
17 the team, the ORAU team that has worked on this  
18 wanted to go pull the meteorological records  
19 and look to see if there was an inversion here,  
20 but I waived him off on that. And the reason  
21 that he wanted to do that is because, again,  
22 these are gross alpha samples. What you're  
23 looking at is radon. Building 881 was  
24 basically closed -- closed up. I'm not saying  
25 that no one was in there, but I'm saying there

1           wasn't a lot of activity like during the  
2           production days. And so when you shut a  
3           building up, don't have a lot of traffic  
4           through it, you see a -- a buildup of radon  
5           daughters.

6           Now this data represents a subset of all of the  
7           air sampling data from Building 881; it's that  
8           set that occurred in this room. But we also  
9           saw that some of the samples from other  
10          locations in the building -- they took a  
11          handful and did do radon decay corrections, and  
12          they saw a dramatic decrease in the alpha  
13          activity in the air, and that again indicates  
14          that this was radon. So it is very, very, very  
15          conservative for our bounding dose  
16          reconstruction to attribute this alpha air  
17          activity to thorium-228, 100 percent, which is  
18          what we did, because really what you're seeing  
19          is radon here. So this is very, very  
20          conservative.

21          Okay. What we concluded -- well, before I move  
22          on to this slide, we -- we provided the  
23          bounding dose reconstruction, although it is  
24          still NIOSH's position that there was simply no  
25          release and no intake from this operation.

1           That is supported by the project manager who we  
2           talked to, who was very sharp; his  
3           recollections are very clear. It is supported  
4           by the health physics logbooks at the time.  
5           Nevertheless, we've provided the bounding dose  
6           reconstruction.

7           Okay. And finally, just for completeness, I've  
8           included the laboratory-scale uses of thorium  
9           at Rocky Flats. We know that thorium -- we  
10          have detailed thorium inventory sheets that  
11          tell us exactly how much thorium was on site  
12          and exactly what form it was, what chemical  
13          form. And we see that there was thorium  
14          nitrate on site. It was used as a titrating  
15          agent in the analysis of fluorine. That is  
16          explicitly noted on the thorium inventory  
17          sheets. The quantity used -- this notation  
18          occurred in 1967, and the quantity used was  
19          seven kilograms over a period of years.

20          Now keep in mind that this is thorium nitrate,  
21          seven kilograms of thorium nitrate. So really  
22          only about half of this quantity is actually  
23          thorium. The rest is the nitrate. That is a  
24          pretty small amount of thorium compound, and it  
25          was used in a typical chemistry-type procedure

1           that you would see where they were doing a  
2           titration.  At other sites these -- this has  
3           never been considered as a basis for an SEC  
4           petition, and I present to you here that --  
5           that it should be similarly treated here at  
6           Rocky Flats.

7           Also there was another small-scale -- possible  
8           small-scale operation, and that was using  
9           thorium oxide, or thoria.  And we saw a  
10          notation in Bob Bistline's account that he  
11          wrote in 1976 of thorium operations at Rocky  
12          Flats, this was mentioned that it was possible  
13          that this was done.  And we see on the thorium  
14          inventory sheets between 1957 and '65 that they  
15          carried an inventory of about seven, and then  
16          it went up to eight, kilograms between those  
17          dates, and it didn't really go down.  It wasn't  
18          up and down.  It was pretty constant.  They had  
19          it in inventory.  And I should specify also  
20          that mold coating -- by that I mean molds like  
21          for making metal parts, so they would coat the  
22          molds -- but we just don't see evidence of a  
23          large-scale program to do this.  They carried  
24          it in inventory and then all of a sudden they  
25          disposed it and it was not on the

1 inventory sheets anymore.

2 So again, I included these for completeness,  
3 but they are the types of laboratory-scale,  
4 small-scale operations that -- at least at  
5 other sites the precedent has been that we  
6 don't treat these as an SEC issue.

7 All right. I want to talk to you about  
8 something that the Board has heard about in  
9 another context, and that is the possibility  
10 that large quantities of magnesium-thorium  
11 alloy were shipped and used at Ro-- shipped to  
12 Rocky Flats and used there. Board members, you  
13 heard about this in the consideration of the  
14 Dow Madison SEC discussion. And primarily -- I  
15 mean there was one worker who had an explicit  
16 recollection that they shipped truckloads of  
17 magnesium alloy to Rocky Flats, and there were  
18 other workers who mentioned it as well.  
19 We interviewed five Rocky Flats workers, some  
20 of whom served on the shipping, receiving and  
21 authorization -- shipping/receiving  
22 authorization committee. These are the people  
23 who were in charge of material -- approving the  
24 shipments of material that came onto the site.  
25 Nobody had any recollection of magnesium alloy

1 coming onto the site from Dow Madison, or from  
2 anywhere else.

3 So we're left with a problem here. We've got  
4 one group of workers saying we shipped  
5 truckloads of this stuff to Rocky Flats. We've  
6 got another group of workers who say well, we  
7 never used this stuff at Rocky Flats and we  
8 didn't get it at Rocky Flats.

9 So what do we know? Well, we know that  
10 magnesium alloy was used in the aircraft  
11 industry and also in missile construction. And  
12 the reasons are because magnesium alloy, which  
13 contains about two percent, maybe up to four  
14 percent, thorium is very heat-resistant, is  
15 very lightweight, and is very strong. All of  
16 these properties make it attractive for uses in  
17 aircraft and missile industries.

18 We also know from the affidavits submitted by  
19 the Dow Madison workers that the alloy produced  
20 at Dow Madison was used in missiles, and  
21 specifically it was used in the Titan missile.  
22 And it was even specifically mentioned that it  
23 was used in the nose cone of the Titan missile.  
24 Let's see, right here is the nose cone of the  
25 Titan missile. And so what the Dow Madison

1 workers are telling us is that the alloy from  
2 that site was used right here.

3 Okay. So what does that do for us? Well, we  
4 know that the Titan missile work was performed  
5 in Colorado. It was performed at Rocky --  
6 Mountain Arsenal. We know that it was not  
7 performed at Rocky Flats.

8 Now I can tell you, as a former Denver  
9 resident, that unless you worked at one of  
10 these two facilities, Rocky Flats or Rocky  
11 Mountain Arsenal, a lot of people -- even  
12 people who live here -- get these two  
13 facilities confused. They know that they're  
14 some kind of secret sites that did defense  
15 work. They're very distinct facilities, as  
16 everyone in this room I'm sure knows.  
17 We also know that there was another facility  
18 south of Denver on the Lockheed Martin  
19 property, the PJKS test facility. This was the  
20 main test facility for the Titan missile  
21 program.

22 Now furthermore, I also know that when they  
23 were re-mediating the test facility, the PJKS  
24 test facility, they found magnesium-thorium  
25 alloy, two percent thorium, in a landfill at

1           the PJKS test facility. This exactly matches  
2           the description given to us of the magnesium  
3           alloy produced at Dow Madison.

4           Now Mark asked me to run this by the individual  
5           from Dow Madison who said that he had seen  
6           crates of -- of alloy going to Rocky Flats, and  
7           so I did. I called him up and -- a very nice  
8           fellow, and I asked him. I said is it possible  
9           that the recipient of the magnesium alloy from  
10          the Dow Madison facility was Rocky Mountain  
11          Arsenal and not Rocky Flats? And he thought a  
12          minute and he said well, could be. He said I  
13          didn't even know that there were two different  
14          facilities. So again, similar to even people  
15          who live here and -- and this guy lived in  
16          Illinois -- so I mean there's no -- no reason  
17          to think that he was being in any way  
18          dishonest. I don't think that. I have no  
19          reason to think that. But we're asking them to  
20          remember details from 40 years ago.

21          And I submit to you that the most plausible  
22          explanation here, given that we have Rocky  
23          Flats workers saying we did not use large  
24          quantities of this material, was that there was  
25          confusion between Rocky Mountain Arsenal and



1 Rocky Flats. And we also have, in addition to  
2 the statements that were given to us by the  
3 five former Rocky Flats workers, we have no  
4 evidence in the inventory records that  
5 magnesium alloy came to Rocky Flats. We have  
6 no evidence that it was found in the chem risk  
7 reports that inventoried the radionuclides and  
8 toxic chemicals present at the site. There's  
9 simply no evidence that magnesium alloy ever  
10 came to Rocky Flats.

11 And so that leads us to our conclusion -- NIOSH  
12 conclusion on the first -- oops, I went the  
13 wrong way -- on the first of the issues that  
14 the Board requested more information on,  
15 thorium. As we stated in our evaluation report  
16 over a year ago, the thorium activities at  
17 Rocky Flats were very limited. They involved  
18 very limited quantities of thorium, and they  
19 involved very few workers. Over the course of  
20 the past year we've provided extremely detailed  
21 information on where, when and how these  
22 activities were performed, and also who was  
23 involved. And as we said in our evaluation  
24 report, there is simply no evidence that a  
25 thorium intake ever occurred at Rocky Flats.

1           And therefore NIOSH concludes that this does  
2           not present SEC implications.  
3           Now the second issue that the Board requested  
4           information on was Building 881, external  
5           monitoring in the 1950s. And the source of  
6           this concern is that -- well, first of all, let  
7           me tell you that Building 881 is an enriched  
8           uranium facility. They were handling and doing  
9           various activities with large quantities of  
10          enriched uranium. And it was judged at the  
11          time by the radiation protection staff, the  
12          health physicists at the time, that these  
13          workers in this building had exposure  
14          potentials that were less than ten percent of  
15          the regulatory limit for that time period --  
16          and at that time that was 12 rem per year --  
17          and therefore external monitoring was not  
18          required for these workers -- in the '50s.  
19          That is a fact. And that extended up to the  
20          fourth quarter of 1960. That's when we see the  
21          first external monitoring for these workers.  
22          They were monitored in '61, '62, on through  
23          until the enriched uranium operations were  
24          transferred to Y-12. So the obvious question  
25          here is well, what are we going to do about

1           these workers, their external doses, prior to  
2           the period when they were monitored, so we're  
3           talking about in the '50s.

4           Well, I can tell you that we see that when the  
5           monitoring did begin in the fourth quarter of  
6           1960 and 1961, we see that even the maximally  
7           exposed worker received less than ten percent  
8           of the regulatory limit. So that tells us --  
9           that gives us some indication that the  
10          radiation protection staff at the time was  
11          probably correct in their judgment.

12          Now let me show you some information -- okay.  
13          This graph shows you shallow dose first, and  
14          the next graph will show you deep dose. For  
15          the shallow dose, let me say that these red  
16          bars here represent not the 95th, not the  
17          average, this is the maximally exposed worker  
18          in Building 81. In the fourth quarter of 1960  
19          -- you know, we annualized that, and then also  
20          in 1961, and you see those bars right here.  
21          These blue bars represent the coworker data  
22          that NIOSH uses to -- in dose reconstruction  
23          when workers are not monitored. And you can  
24          see that the coworker data increases slightly  
25          throughout the '50s. I can also tell you that

1 production activities increased through the  
2 '50s, although I don't want to draw a -- a  
3 distinct connection between those two facts.  
4 I've been taken to task on that, and probably -  
5 - and I don't want to get into a discussion  
6 about whether those two are actually tied.  
7 I'll just say that production did go up  
8 throughout the '50s and into the '60s. Our  
9 coworker doses also reflect a similar trend.  
10 And what we conclude -- well, first of all, let  
11 me show you, this is the shallow dose and you  
12 can see that the coworker doses when the  
13 workers were monitored, we exceed even the  
14 maximally exposed worker by a comfortable  
15 margin here.  
16 And here is the similar picture of deep dose.  
17 You can see that in 1960, '61, here is the  
18 maximally exposed worker; and here's the  
19 coworker dose that we propose to assign -- that  
20 we have been using.  
21 Now, is it possible that as you go back in time  
22 these red bars would be higher than they were  
23 in 1960 and '61. Sure, it is. We've seen  
24 similar trends at other sites. You know, there  
25 are lessons learned, industrial hygiene

1           measures improve over time.    So sure, these  
2           could be higher.    But how much higher?    This  
3           dotted line that I've shown here -- let me tell  
4           you what that is.

5           Enriched uranium, like other -- like -- like  
6           plutonium and some of the other materials, are  
7           fissile materials, and so there's always a  
8           concern about criticality.    And in order to  
9           prevent criticality, they had storage  
10          containers that maintained a safe geometry and  
11          avoided criticality.    One of those was a  
12          birdcage -- it's called a birdcage, and I'm  
13          sure that some of you have seen those and know  
14          what they look like.    So we modeled for another  
15          site -- this is -- I borrowed this from an  
16          evaluation we did at another site.

17          We considered what deep dose, what penetrating  
18          dose, would a worker get if he stood next to a  
19          five-by-five array of birdcages containing  
20          enriched uranium, one foot from that array, for  
21          2,000 hours a year.    Now that is obviously not  
22          a realistic scenario.    That is a bounding  
23          scenario.    I mean no one is going to stand next  
24          -- one foot from a bird-- five-by-five array of  
25          birdcages for 2,000 hours a year, but what dose

1 would a person get if they did something like  
2 that? They would get this dose. And so I put  
3 this in just for perspective.

4 Could the red bars here have been higher? Yes,  
5 they could have. But could they have been so  
6 much higher that they exceed that bounding  
7 scenario, at the same time that they were  
8 judged by the health physics staff at the time  
9 to be less than ten percent of the exposure  
10 scenario, and when our coworker doses are  
11 overestimating these even maximally exposed  
12 individuals by factors of ten, 13? I want to  
13 remind you that we are required to bound doses  
14 under plausible exposure scenarios. It is  
15 simply not plausible that workers in Building  
16 881 got doses that were higher than these  
17 coworker doses that we are assigning.

18 Okay. There was another question related to  
19 Building 81, and that involved plutonium in  
20 this building. This question came up at the  
21 last Board meeting a month ago and the Board  
22 asked us to look into it.

23 Let me tell you what we know about this. There  
24 were enriched uranium parts, parts of weapons,  
25 that came back to the site -- they were retired

1 from the field and they came back. Those  
2 enriched uranium parts had been spot-welded to  
3 plutonium components in the particular weapons  
4 designs, and we don't really need to go into a  
5 lot more detail there, just to tell you that  
6 there were these spot welds. And the spot  
7 welds had some -- it was described by one  
8 worker that we talked to as nuisance  
9 contamination of plutonium. And so what they  
10 did was they rinsed these enriched uranium  
11 parts components with nitric acid to remove  
12 that surface plutonium contamination, and then  
13 the residues were sent back to Building 71 for  
14 recovery of that material.

15 But here's the important thing -- well, there  
16 are actually two important things. Number one,  
17 this operation occurred after the site started  
18 getting site returns, after 1962. Well,  
19 external monitoring for Building 881 worker  
20 started in the fourth quarter of 1960, so these  
21 operations occurred when these workers were  
22 externally monitored. So that's one --  
23 probably the most important point. Any  
24 external dose that they might have gotten from  
25 the plutonium would have been recorded on their

1 badges, would have been reflected on their  
2 badges. However --

3 **UNIDENTIFIED:** (From the audience and off  
4 microphone) (Unintelligible).

5 **DR. ULSH:** I'll get to that. However, you've  
6 got to remember that the surface contamination  
7 was on kilogram-sized parts of enriched  
8 uranium. So I submit to you that the -- the  
9 external dose that people would have  
10 experienced came from the enriched uranium and  
11 not the plutonium.

12 Now the question just came up, what about  
13 internal, and that's a good question. We know  
14 that this operation resulted in some  
15 contamination -- plutonium getting into the  
16 ductwork of Building 81. And so the obvious  
17 question is well, when they D&D'd this  
18 building, you know, could people have been  
19 exposed to plutonium? Well, sure, they could  
20 have. But I can tell you that, and we have  
21 found examples of this -- and I provided this  
22 to Mark, at his request. We have found  
23 examples that the workers who were involved in  
24 the D&D of Building 81 were monitored for  
25 plutonium, either through lung counts or



1           urinalysis primarily. So that is how we would  
2           detect an internal intake.

3           Furthermore, we -- we do have internal coworker  
4           models for plutonium, based on the plutonium  
5           workers. Now I just don't think it's plausible  
6           that the workers in this -- in Building 81  
7           would have gotten -- been at higher exposure  
8           potential than the plutonium workers that  
9           actually worked in the plutonium buildings.  
10          So that's why we have concluded that, first of  
11          all, the Building 81 uranium workers' exposure  
12          were less than ten percent of the limit at the  
13          time, and I've shown you data that shows that  
14          our coworker models are very, very favorable  
15          for these claimants. They overestimate the  
16          doses that they might have received; they bound  
17          them.

18          Furthermore, the plutonium contamination, while  
19          it wasn't an external hazard, certainly there's  
20          a concern here about internal. But they were -  
21          - but the D&D workers were monitored for  
22          plutonium. And therefore, we conclude that  
23          this is not an SEC issue.

24          And that leads us to the final topic that the  
25          Board requested additional information on, and

1           that is neutron doses from 1959 to '70.  
2           Now I need to tell you, just to give you a  
3           little bit of background information on this  
4           topic, the Department of Energy funded a study  
5           called the Neutron Dose Reconstruction Project.  
6           And the purpose of that project was to re-eval-  
7           - reread films, neutron track films from 1952  
8           through 1970. And the reason that that was  
9           necessary is because it was recognized that  
10          there were problems with the first readings of  
11          these films, and there was the potential for  
12          workers to have their doses significantly  
13          underestimated. So that is why the DOE funded  
14          the NDRP. It took ten -- approximately ten  
15          years to complete. It was multi-million dollar  
16          project.  
17          I can also tell you that the NDRP was overseen  
18          by a scientific advisory board, similar to this  
19          program where we're overseen by an advisory  
20          board.  
21          Now at the last meeting the Board did two  
22          things. First of all, they recommended the  
23          addition of a class for neutrons, '52 to '58.  
24          And the second thing that they did was  
25          requested more information on the rest of the

1 period covered by the NDRP, and that's '59 to  
2 '70. And the Board also explicitly expressed  
3 concerns about one of the techniques used in  
4 the NDRP and that is the neutron-to-gamma  
5 ratio, and they requested -- the Board  
6 requested that NIOSH present a new approach,  
7 and that exp-- that request was explicit. And  
8 we responded to that request within two weeks.  
9 That was the schedule set by the working group,  
10 and we met that. We responded to this request  
11 in a timely manner.

12 Oops, wrong way -- there we go. Okay.

13 So let's look at how neutron doses are  
14 evaluated. What you see over here is the total  
15 neutron dose, and it consists of up to three  
16 components. The first, D original, D re-  
17 evaluated, D notional. Well, let me explain  
18 what these are.

19 This D original means that it is a particular  
20 badge, neutron badge, that was read the first  
21 time -- you know, at the time that it was worn  
22 in the NDRP period. However, they were not  
23 able to retrieve that badge and re-evaluate it  
24 in the NDRP. There are a few of these, and  
25 I'll talk more about how the NDRP handled them

1 and how we handled them.

2 The next piece is the re-evaluated films, the  
3 films that were reread in the -- in the '90s  
4 and into the 2000s to re-evaluate these films.  
5 And the final piece is the notional dose, and  
6 that covers the time period when workers were  
7 not monitored.

8 So just to give you a bird's eye view before I  
9 dive into the details here, for the situations  
10 where there are original films that were not  
11 re-evaluated, NIOSH is proposing to use -- at  
12 the Board's request, this is the new approach -  
13 - we're proposing to use the 95th percentile of  
14 the badges that were reread.

15 In terms of this second piece, the re-evaluated  
16 films, we're going to use those as reported by  
17 the NDRP.

18 And in terms of the notional dose piece, we are  
19 proposing, since the Board expressed some  
20 reservations about the neutron-to-gamma ratio  
21 method used by the NDRP, we are proposing to  
22 use coworker neutron dose rates as measured by  
23 these re-evaluated films. This does not rely  
24 on the neutron-to-gamma ratios, and the reason  
25 is the Board expressed concern about that.

1           So what we are required to do here is to bound  
2           the total neutron dose. But I'm going to show  
3           you evidence that we not only bound the total  
4           neutron dose, but we bound each term that makes  
5           this up.

6           All right, so here's that first term, those  
7           original films that were not able to be reread.  
8           What we did -- what we propose is to apply the  
9           95th percentile of the re-evaluated films for  
10          those cases. And I need to tell you, just to  
11          give you some perspective here, that 90 percent  
12          of the original films were available for re-  
13          evaluation under the NDRP. They were  
14          retrieved, they were re-evaluated, so we're  
15          talking about the remainder, that ten percent.  
16          And of those films that were not available for  
17          re-evaluation, 80 percent of them were --  
18          occurred in 1969 and 1970. So here is a  
19          picture of the number of original films that  
20          were not re-evaluated, by year. And what you  
21          see is that it's very minimal, until you get to  
22          1968 and into 1969 and 1970. Well, what was  
23          going on here? I mean this -- this could be a  
24          problem. Right? You've got a lot of re-  
25          evalua-- well, a significant number of films

1           that weren't re-evaluated.

2           Well, here's the reason this occurred. In 1968  
3           the Atomic Energy Commission had a policy  
4           change. Prior to that time the AEC said that  
5           the official dose record was the neutron film  
6           itself. And then they changed that policy to  
7           say the official dose record is not the NTA  
8           film, but rather the worksheet that is filled  
9           out when the films are read. And so the site  
10          was not required to archive these films,  
11          beginning -- we heard 1969, it could have  
12          easily been 1968. I mean, again, we're asking  
13          people to remember 40 years ago. So it would  
14          be consistent to see this kind of an increase  
15          in those unre-evaluated films based on that  
16          policy.

17          Well, that could be a problem, because the  
18          whole reason for the NDRP was that we knew that  
19          the -- it was recognized that the original  
20          readings could significantly underestimate  
21          dose. So what about these years here?

22          Well, I can tell you that there was a  
23          significant event in 1969, and that was the  
24          Mother's Day fire that occurred in Building 76  
25          and 77. That fire significantly disrupted

1 plutonium production activities. In fact, it  
2 shut it down. And within a short time after  
3 that fire, the source term -- the neutron  
4 source term, I'm talking about the plutonium  
5 here, was secured and removed. The production  
6 workers from those buildings were reassigned to  
7 the cafeteria. And the reason that they did  
8 that was because these were highly skilled  
9 workers. They were very valuable workers. And  
10 they determined that it would be prudent to  
11 retain these workers, even if they were idle,  
12 until they could get back up and running,  
13 versus taking the chance that these workers  
14 would go find other work. I mean the bills  
15 don't stop. So they assigned them to the  
16 cafeteria while they cleaned up from the fire  
17 and tried to get production going.  
18 So I submit to you that the only way that these  
19 -- that the doses that we have assigned from  
20 these years, the production years for these  
21 unre-evaluated doses -- in order for that not  
22 to be claimant favorable, you would have to  
23 hypothesize that the doses -- the films that  
24 were not able to be re-evaluated in these years  
25 were higher than back here, and that is just

1 not plausible. These workers were in the  
2 cafeteria. They were not -- they were not in  
3 Building 76 and 77 doing plutonium production.  
4 Now is it possible that they were doing some  
5 other things? Sure, they were. Sure, that's  
6 possible. But could they have been getting  
7 neutron doses that were higher than when  
8 production was going full scale? I'm sorry,  
9 that's just not plausible.

10 And similarly, in 1970 there was a strike. And  
11 I'm talking about the kind of strike where  
12 people don't go to work anymore, not a thorium  
13 strike. That occurred in the summer of 1970.  
14 So there were many workers who weren't even on  
15 site, but those badges were not recovered in  
16 1970. So I submit to you that not only are the  
17 badges not equal to the unread badges in the  
18 earlier years, they are lower than because of  
19 the significant disruption in the source term  
20 and the fact that there was a strike.

21 **UNIDENTIFIED:** (From the audience and off  
22 microphone) (Unintelligible)

23 **DR. ULSH:** The people who did the decon were  
24 monitored with special TLDs, and we know  
25 exactly what they got, penetrating doses. The



1 highest was about 200 -- I think on the order  
2 of 200 millirem. A great majority of the  
3 people received less than 50 millirem.  
4 So let's take a look at how we handled -- how  
5 NIOSH proposes to handle these films that were  
6 not reread, and there are two different  
7 scenarios here, based on what the original film  
8 reading was. This graph shows what we are  
9 going to do when the original films were zero  
10 and they were not re-evaluated. What we  
11 propose to do is to assign the 95th percentile  
12 of the films that were re-evaluated. We've  
13 calculated a 95th percentile daily neutron dose  
14 rate, and that's going to be assigned to each  
15 and every day that a person was covered by a  
16 badge that was not able to be reread.  
17 And so how does that work out? Well, we  
18 compared what would be predicted by this  
19 approach versus what was actually measured by  
20 the people who wore the badges and had them re-  
21 evaluated. And what you would see here is that  
22 if you see a lot of datapoints down here in  
23 this region, it would indicate that our method  
24 under-predicts, and that would be a big  
25 problem. That would tell you that we don't --

1 we are not bounding the doses. And let me tell  
2 you what this graph -- give you some details on  
3 this.

4 This axis right here shows what people -- what  
5 their measured dose was. And each dot here  
6 represents the total dose a worker received  
7 over his employment, that was measured. And  
8 recall that I told you that we are required to  
9 bound the total neutron dose -- not necessarily  
10 every individual badge result, but the total  
11 dose. And the reason that's significant is we  
12 have taken the highest badge -- rather the 95th  
13 percentile badge read and applied it to every  
14 single day that this situation exists. Now I  
15 can tell you that the workers who showed the  
16 highest badge -- you know, the highest badge  
17 region in one year or one cycle, it wasn't  
18 consistent. The workers -- some got high doses  
19 in one per-- in one cycle, some got high doses  
20 in another cycle, and that is the explanation  
21 for why all of these dot-- no, not all of them,  
22 99.1 percent of the workers' doses, we over-  
23 predicted. This is a bounding methodology. We  
24 did this because, number one, it's bounding.  
25 Number two, it's simple. We recognize the late

1 hour which this request came in that we  
2 responded. And number three, it's consistent  
3 with the way that we approach coworker doses at  
4 other sites.

5 Now, what about the case where the original  
6 dose reading was greater than zero? Well,  
7 similarly, what you see here is we took the  
8 95th percentile ratio, so if you have an  
9 original reading and then you have a re-  
10 evaluated reading, what's the ratio between the  
11 two. Well, we took the 95th percentile and we  
12 applied that for these badges where the  
13 original reading was greater than zero. And  
14 again, NIOSH's technique here over-predicts the  
15 doses that the workers received in 99.0 percent  
16 of the cases. This is bounding.

17 Okay, let's move to the next term. Those --  
18 those two slides showed you the badges that  
19 were not re-evaluated. This slide talks about  
20 the badges that were re-evaluated, and this is  
21 a very important point right here. There were  
22 90,0-- almost 90,000 films, plus 757 track  
23 plates, that were retrieved and located for the  
24 NDRP. We're not talking about a few films  
25 here. We're talking about 90,000 films. 87,

1 almost 88,000 of these films were matched to  
2 individual workers, and many of them were  
3 reread multiple times for QA purposes. This  
4 covered approximately 5,300 workers who were  
5 included in the NDRP, that's an approximate  
6 number.

7 And I can tell you that there was rigorous  
8 quality assurance associated with these re-  
9 readings. The individual readers' performances  
10 were compared against the senior reader, and  
11 the senior reader's performance was compared  
12 against calibration films. And the readers'  
13 performance was tracked over time because, you  
14 know, as you know, when you start something new  
15 or as you progress, get better, you know, your  
16 results might change a little bit. Well, they  
17 explicitly looked at that.

18 They also made the readers take qualification  
19 tests every day that they came in to read  
20 films. And finally, the first thing that the  
21 reader would do when he came in to read films  
22 was to re-evaluate ten percent of the films  
23 that he had read the previous day, just to make  
24 sure that he was getting the same results, he's  
25 doing it the same way. This is a very rigorous

1 QA process.

2 So as I mentioned for that second term, those  
3 re-evaluated films, we are going to use them as  
4 reported by the NDRP.

5 And finally -- we're almost done -- the last  
6 term in the neutron dose equation deals with  
7 notional doses. This was terminology used by  
8 the NDRP. We have also adopted it, and it  
9 covers times when there was no neutron  
10 monitoring data. Now the NDRP, as you know,  
11 relied on neutron-to-gamma ratios, and the  
12 Board expressed some concern with that  
13 approach. Therefore, we ha-- we have proposed  
14 an approach, as requested by the Board, that  
15 relies on a distribution of measured neutron  
16 and gamma dose rates.

17 Now remember here that the philosophy, at  
18 least, was that the workers at the highest risk  
19 were monitored. And I know that there is, you  
20 know, some disagreement about that. But that  
21 was certainly what they were trying to do.

22 Now I've told you that we are going to apply  
23 the 95th percentile daily neutron dose rate to  
24 every single day that this worker is not --  
25 that a worker is not monitored. And if you can

1 at least agree that they tried to monitor the  
2 highest workers, this is very, very claimant  
3 favorable to do this because the -- the workers  
4 that showed high badge readings, individual  
5 badge readings, did not show consistently high  
6 badge readings. But we're applying the 95th  
7 percentile to every single day that they were  
8 not monitored.

9 So the question is, is this bounding? Well...  
10 Okay, I'm locked up.

11 (Pause)

12 Oh, the light just went out. Let me try again.  
13 Ah, there we go.

14 This is a similar graph to the previous two,  
15 and it shows that yes, indeed, on the notional  
16 dose piece of this we are also bounding. And  
17 what this graph shows is that 98.3 percent of  
18 the actual measured doses, we over-predicted.  
19 So again we conclude that for each and every  
20 term of that neutron dose equation, in addition  
21 to the total neutron dose, we are bounding.  
22 Now as I mentioned, we chose this method  
23 because we recognized the late hour in this  
24 process. I think everyone hopes that this will  
25 be concluded tomorrow. So we could have done a

1 lot of fancy -- fancy techniques that would  
2 have taken the Board a long time to re-  
3 evaluate, but we chose a method that is  
4 bounding, that is simple, and that is  
5 consistent with what we have done at other  
6 sites.

7 Now, in closing -- I've heard expressed, the  
8 opinion expressed, that the NDRP is -- well,  
9 you know, it's -- it's okay for epidemiology  
10 studies, but it's just not sufficient for dose  
11 reconstruction under the NIOSH program. Well,  
12 some people may have that opinion, but I  
13 mentioned to you that there was a scientific  
14 advisory board that oversaw the NDRP project,  
15 and here's what they had to say.

16 First of all, they said that the committee  
17 recommends that the neutron doses estimated by  
18 the NDRP be included as the final dose of  
19 record for affected workers at Rocky Flats.  
20 And this next one is especially telling. This  
21 is a direct quote from minutes from the  
22 meetings of the Scientific Advisory Board of  
23 the NDRP, and they said that this will clearly  
24 serve as a model for other DOE facilities and  
25 provide reliable dose estimates for workers

1           under EEOICPA. That's NIOSH dose  
2           reconstruction program. And this is what the  
3           NDRP Scientific Advisory Committee had to say.  
4           Now let me tell you a little bit about that  
5           Scientific Advisory Committee, and some of you  
6           Board members will recognize some of these  
7           names. [Name Redacted], [Name Redacted], [Name  
8           Redacted], [Name Redacted], [Name Redacted],  
9           [Name Redacted] -- this is just some of the  
10          people that are -- were on the NDRP advisory  
11          committee. These are some of the preeminent  
12          health physicists in this country, if not the  
13          world. They are some of the preeminent neutron  
14          dosimetry experts in the country, if not the  
15          world. And this is what they had to say about  
16          the NDRP.  
17          So that was their conclusions. Let me tell you  
18          the NIOSH conclusions. We conclude that the  
19          almost 90,000 films that were included in the  
20          NDRP form a reliable basis for dose  
21          reconstruction. We concur with the Scientific  
22          Advisory Committee of the NDRP that the doses  
23          that were estimated by the NDRP are reliable  
24          for NIOSH dose reconstruction. However, at the  
25          Board's request we have provided methods that



1 are even more claimant favorable than the NDRP,  
2 and therefore we conclude that this issue, as  
3 well as the previous two, do not present SEC  
4 implications.

5 **UNIDENTIFIED:** (From the audience and off  
6 microphone) Question.

7 **DR. ULSH:** Well, I would be happy to entertain  
8 questions from the Board and however they want  
9 to handle things.

10 **DR. ZIEMER:** Thank you, Brant. Board members,  
11 do you have questions?

12 **DR. WADE:** Well, we can take that question.

13 **DR. ZIEMER:** Yeah. Sir, you can raise your  
14 question. Generally we don't allow public  
15 questions right now, but go ahead, we'll --  
16 we'll allow it.

17 **UNIDENTIFIED:** (From the audience and off  
18 microphone) (Unintelligible) --

19 **DR. ZIEMER:** You'll have to use the mike and  
20 identify yourself, please.

21 **UNIDENTIFIED:** He talks about the subjects  
22 expiring film badges. Film badges are fine for  
23 external dose construction, you want to use  
24 that. But what internal? Workers on that fire  
25 worked days -- 24 hours a day, seven days a

1 week for months. PPE and half-mask  
2 respirators.

3 **DR. ZIEMER:** Could you identify yourself for  
4 the record, please?

5 **MR. ROMERO:** My name's Dennis Romero. I was 18  
6 years at Rocky Flats.

7 **DR. ZIEMER:** Thank you.

8 **MR. ROMERO:** The workers' protection with film  
9 badges is fine, but that's not going to show  
10 the work and process they went through to decon  
11 that building. Half-mask respirators. You  
12 tell me the protection factor of a half-mask  
13 respirator in a high concentration of plutonium  
14 and uranium building.

15 **DR. ULSH:** Well, sir, I can tell you the  
16 protection factor that we assign for half-mask  
17 respirators in NIOSH dose reconstruction, and  
18 that is that we don't adjust in any way, and  
19 that is very claimant favorable. Even if they  
20 don't perform at the protection -- at the  
21 nominal protection factor, we don't take that  
22 into account.

23 **MR. ROMERO:** That's an internal.

24 **DR. ULSH:** Instead, what we rely upon is  
25 internal bioassay data, urinalysis, lung counts

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25

--

**MR. ROMERO:** That's providing we did it.

**DR. ULSH:** -- and those are going to reflect any doses that might have been incurred, any intakes that might have been incurred while workers were doing exactly the work that you're saying. And you're exactly right, the external dosimetry badges -- and what I said was that those were special TLDs at that time for the people who went in and cleaned up after the fire. Those have nothing at all to do with internal.

**MR. ROMERO:** Right.

**DR. ULSH:** And I absolutely agree with you that the primary hazard experienced by workers who were doing that D&D was from internal doses resulting from intakes of plutonium that they might have experienced. And that's considered completely separately.

**MR. ROMERO:** So that couldn't be possibly where their health has changed, not from external dose but from the internal dose?

**DR. ULSH:** Absolutely it could be.

**MR. ROMERO:** You talk about 81 as far as the external dose not to be your problem. Why was

1           there so many stainless steel plates on the  
2           floors and the walls in that building? It was  
3           to knock down the dose in those buildings. We  
4           had uranium fires in those buildings and that a  
5           internal dose.

6           **DR. ULSH:** Absolutely.

7           **MR. ROMERO:** Film badge is not going to pick up  
8           a fire --

9           **DR. ULSH:** You're absolutely --

10          **MR. ROMERO:** -- uranium fire.

11          **DR. ULSH:** -- right.

12          **MR. ROMERO:** That's internal.

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

14          **MR. ROMERO:** Those -- that's stuff that people  
15          are breathing in their body.

16          **DR. ULSH:** That's correct.

17          **MR. ROMERO:** So how are you going to assess  
18          that on your dose reconstruction?

19          **DR. ULSH:** Urinalysis data.

20          **MR. ROMERO:** You can't.

21          **DR. ULSH:** Urinalysis data.

22          **MR. ROMERO:** It wasn't done back in that time.

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

24          **MR. ROMERO:** Not like it was later on in years.  
25          They didn't do bioassay on people like they

1 used to in the old days.

2 **DR. ZIEMER:** Sir, you'll have a chance at the  
3 public comment period to add to this  
4 discussion, but we need to let the Board  
5 continue their deliberations, sir. Thank you.  
6 Jim Melius.

7 **DR. MELIUS:** Yeah, I have just a couple of  
8 general questions. Who worked on this report  
9 that was given to us, the NIOSH response? I  
10 mean I -- this one, which is --

11 **DR. ULSH:** That was --

12 **DR. MELIUS:** I'm just --

13 **DR. ULSH:** Go ahead.

14 **DR. MELIUS:** -- trying to understand where the  
15 sources of the information are.

16 **DR. ULSH:** I wrote that report, Dr. Melius.

17 **DR. MELIUS:** You wrote that entirely. So  
18 there's no contribution from anybody else.

19 **DR. ULSH:** Now hold on before I say that.

20 **DR. MELIUS:** I didn't -- I wasn't putting words  
21 in your mouth. I'm just asking.

22 **DR. ULSH:** I certainly had help from the ORAU  
23 team, as I did with all stages of this process,  
24 so yes, there were other people who  
25 contributed. However, I was the direct author

1 of all of the material in that report, unless  
2 it's otherwise referenced.

3 **DR. MELIUS:** Oh. Well, I -- certainly would be  
4 helpful to know who -- who also contributed to  
5 this. I thought we were providing such  
6 attribution in reports that were provided to  
7 the Board.

8 Secondly, I did notice that even though you're  
9 quoting from the Scientific Advisory Committee  
10 from the NDRP, I see no reference to that in  
11 the report, and so I'm a little confused on  
12 sort of how to go back and look at sources.

13 It's -- all you provided so far has been one  
14 quote taken off of a -- I believe to be a  
15 transcript, and I don't know if that's a --

16 **DR. ULSH:** It was the meeting minutes and the  
17 final recommendations of the NDRP -- yeah, the  
18 NDRP committee. I provided those to the  
19 working group. I don't recall if I put those  
20 on the O drive. Do you recall, Mark?

21 **MR. GRIFFON:** I -- I don't know. We do have --  
22 the workgroup got copies, though.

23 **DR. ULSH:** Yeah, SC&A requested those minutes  
24 and we provided them.

25 **DR. MELIUS:** Okay.

1           **DR. ZIEMER:** Further comments or questions  
2 before we go to the workgroup? Mark?

3           **MR. GRIFFON:** Just to pick up on that point for  
4 a second, I -- I don't know -- it's my  
5 understanding that the advisory board never did  
6 a peer review of the -- I mean they didn't  
7 produce a -- a document or a peer review report  
8 saying -- these are quotes from -- I -- this is  
9 the first I've seen these quotes, actually. I  
10 mean I'm sure they're in the minutes, like you  
11 said, but --

12           **DR. ULSH:** Yeah.

13           **MR. GRIFFON:** -- they didn't produce a report  
14 from their work, I don't think, did they?

15           **DR. ULSH:** They -- I don't believe that they  
16 produced a report like you're talking about, an  
17 --

18           **MR. GRIFFON:** Right.

19           **DR. ULSH:** -- extensive report. They did  
20 provide minutes. They did provide  
21 recommendations. And it was in fact as a  
22 result of their recommendation that the NDRP  
23 protocol was produced. That was a direct  
24 recommendation from the board. That was not  
25 written by the board, though.

1           **MR. GRIFFON:** Right.

2           **DR. ULSH:** I don't mean to imply that.

3           **MR. GRIFFON:** Okay.

4           **DR. MELIUS:** When did this take place?

5           **DR. ULSH:** Pardon me?

6           **DR. MELIUS:** When did this take place?

7           **DR. ULSH:** The NDRP?

8           **DR. MELIUS:** Yeah.

9           **DR. ULSH:** Oh, it was initiated I believe in  
10           1994 -- might be a year or two earlier -- and  
11           then it was completed in the early 2000s, so it  
12           was about a ten-year project.

13           **DR. MELIUS:** And the peer review was what year?

14           **DR. ULSH:** The peer review?

15           **DR. MELIUS:** Yeah, or the expert panel review -  
16           -

17           **DR. ULSH:** Oh, well --

18           **DR. MELIUS:** -- that you're referring to.

19           **DR. ULSH:** Yeah, the expert panel functioned  
20           just as this Board functions. I mean they were  
21           overseeing this process all the way along and  
22           they produced meeting minutes from -- after  
23           each of the meetings. So I mean they were --

24           **DR. MELIUS:** So -- so --

25           **DR. ULSH:** -- involved from the beginning to



1 the end of the project.

2 **DR. MELIUS:** Yeah. So the quote you were --  
3 I'm just trying to get the attribution for the  
4 quote that you're -- seem to be relying on for  
5 your conclusions. I'm just -- is it 1994, 1998  
6 --

7 **DR. ULSH:** No, it would --

8 **DR. MELIUS:** -- 2000?

9 **DR. ULSH:** -- have been, at the earliest, the  
10 late '90s. I think it was near the end of the  
11 process, though. The first -- let me back up  
12 here and get -- pull up those quotes.

13 This first one here, the committee recommends,  
14 that was from the final recommendations. That  
15 was at the very end of the NDRP.

16 This one here, I don't remember exactly the  
17 year. I'm thinking '98 or 2000, near the end  
18 of the project. I can provide copies of those  
19 minutes if you'd like to see them.

20 **DR. MELIUS:** Well, I'd like to at least have an  
21 attr-- what year it is.

22 **DR. ULSH:** Yeah, it was -- it was, at the  
23 earliest, late '90s. I think it was right  
24 around -- maybe 2000 --

25 **DR. ZIEMER:** Yeah, perhaps you can pull that --

1           **DR. ULSH:** Actually, you know, that can't be  
2 right. It has to be after 2000 --

3           **MR. GRIFFON:** After EEOICPA, I would think.

4           **DR. ULSH:** -- because EEOICPA didn't pass until  
5 2000, so it was sometime after 2000.

6           **DR. ZIEMER:** If they referred to EEOICPA, it  
7 had to have been after that.

8           **DR. MELIUS:** Well, they might have been, you  
9 know -- you know, smart --

10          **DR. ZIEMER:** Yeah --

11          **DR. MELIUS:** -- as these people were, you know  
12 --

13          **DR. ZIEMER:** -- crystal ball -- crystal ball.  
14 Other questions --

15          **DR. MELIUS:** -- (unintelligible) named it.

16          **MR. GRIFFON:** Yeah, I have some more specific  
17 ones.

18          **DR. ZIEMER:** Go ahead.

19          **MR. GRIFFON:** The -- the -- going back to the  
20 front of your presentation, Brant --

21          **DR. ULSH:** Okay.

22          **MR. GRIFFON:** -- the thorium strike --

23          **DR. ULSH:** Yes, let me back up.

24          **MR. GRIFFON:** -- data, you showed some -- a bar  
25 graph there with the thorium strike data. I

1 think that was from 1965. Is that correct?

2 **DR. ULSH:** That is correct, Mark.

3 **MR. GRIFFON:** I'm just -- I know that -- and  
4 this may have not been included in your slide  
5 presentation, but you provided us with the  
6 other -- the data from the other strike in '67  
7 --

8 **DR. ULSH:** Yes.

9 **MR. GRIFFON:** -- and I'm looking at two data  
10 sheets -- well, I think I might have lost the  
11 one now, here -- oh, here they are -- where --  
12 these are from January 27th and 30th of 1967,  
13 and they -- basically these data sheets record  
14 the sample results that are greater than 25  
15 percent of the RCG --

16 **DR. ULSH:** Yes.

17 **MR. GRIFFON:** -- and there's -- there's one  
18 that's 102.5, one that's 129.6 and one that's  
19 209.8 percent of the RPG --

20 **DR. ULSH:** Mark, are those from Room 266?

21 **MR. GRIFFON:** -- and they all -- they're all --  
22 they're Room 264, but they say U-233  
23 operations, and that's why I'm asking for --

24 **DR. ULSH:** Yeah --

25 **MR. GRIFFON:** -- a clarification.

1           **DR. ULSH:** -- yeah, okay. The thorium strike  
2 operation occurred in Room 266. Then they went  
3 down the hall, which was also in Ken Freiburg's  
4 -- oh, I'm sorry, I shouldn't have said that.  
5 They were on the graph of the project manager  
6 that he -- sketch of the room that he provided,  
7 and what they showed was that the thorium  
8 strike operation occurred in Room 266. Down  
9 the hall, I believe it was Room 264, is where  
10 they took the uranium-233 to do the subsequent  
11 steps, the machining and --

12           **MR. GRIFFON:** After the thorium was removed --

13           **DR. ULSH:** That's correct.

14           **MR. GRIFFON:** -- is what you're saying this  
15 would have been.

16           **DR. ULSH:** Yes, that's correct.

17           **MR. GRIFFON:** Okay. Just wanted clarification  
18 on that. The other question I had was in -- in  
19 Building 881, I wondered if you had -- I don't  
20 -- I don't know that we asked about this, but  
21 the process chan-- I mean we -- it was noted  
22 that there were fair-- fairly significant  
23 process changes done in that early time period,  
24 especially, and it -- it -- we have references  
25 that are saying now that these sub-critical

1 experiments were done in Building 881 --

2 **DR. ULSH:** Okay.

3 **MR. GRIFFON:** -- and I wondered if you had  
4 looked into that and --

5 **DR. ULSH:** I certainly did. Thank you for  
6 asking. The process change -- first -- let's  
7 talk about the process changes first. Those  
8 occurred right around here, and what they  
9 consisted -- 1957-ish. What they consisted of  
10 was the addition of an additional machining  
11 shop, and that was to support the new pit  
12 design, hollow core pit design. And we know  
13 that that hollow core pit design required more  
14 extensive machining of the enriched uranium  
15 components than previously. So what you would  
16 expect, naturally, is that with more machining  
17 perhaps the doses would, if anything, go  
18 higher. So they did not add -- to the best of  
19 our knowledge, they did not add significant  
20 shielding, anything which would make the dose  
21 go down. In fact, if anything, you would  
22 expect the doses would go up. And that is also  
23 one reason that I put in this dotted line, just  
24 to give you some perspective about how much  
25 they could have gone up.

1           Now, in terms of the in situ experiments -- I'm  
2           very glad that you asked about that, because  
3           this deals with the activities that were done  
4           before the critical mass laboratory came on  
5           line in -- oh, I don't remember the exact year,  
6           sometime in the middle of 1960s. And you asked  
7           me some time ago, Mark, if the activities that  
8           were done in the critical mass lab were  
9           performed anywhere else on site prior to that -  
10          - you know, to the critical mass lab coming on  
11          line. And my answer to you then was no, that -  
12          - that they weren't. And my answer is still  
13          no, that they weren't, because the experiments  
14          that you're talking about, the in situ  
15          experiments, those were described in a report  
16          that was called *A Technically-Useful History of*  
17          *the Critical Mass Laboratory at Rocky Flats.*  
18          It was authored by Robert Roth, I think is how  
19          you say his name, and those in situ experiments  
20          are mentioned in that report. In fact, SC&A  
21          quoted that document in their report. And in  
22          the quote that they provided, it is stated that  
23          these in situ experiments were performed off-  
24          shift because they wanted to do -- there was  
25          some degree of risk involved. I mean what they

1           involved was taking uranium components and  
2           stacking them in different configurations to  
3           see whether or not you've got a safe  
4           configuration here. They wanted to determine  
5           safe stacking configurations.  
6           That's not the same thing as they were doing in  
7           the critical mass lab. That involved uranium  
8           solutions. It was solution chemistry. Also in  
9           that report, though, a couple of pages after  
10          the supplied quote, it says that the in situ  
11          experiments were performed in the '50s, and the  
12          people who were involved in the in situ  
13          experiments were the same people involved in  
14          nuclear criticality safety across the plant.  
15          They were the same people. And then a couple  
16          of pages before, I think it says -- it gives  
17          the names of the two individuals -- there were  
18          two individuals who consis-- who comprised the  
19          nuclear criticality safety staff during the  
20          1950s at Rocky Flats. So the in situ  
21          experiments involved two people. I know who  
22          they are. I can provide those names to you.  
23          They were also the same people involved in  
24          nuclear criticality safety. Therefore it's  
25          reasonable to assume that they were monitored,

1 and I have verified that. So those people were  
2 monitored, and there were two people.

3 **MR. GRIFFON:** So -- but -- but back to the --  
4 I'm -- I got a little confused there.

5 **DR. ULSH:** Okay.

6 **MR. GRIFFON:** It did go back to the mid-'50s in  
7 Building 881, though -- or --

8 **DR. ULSH:** Yes.

9 **MR. GRIFFON:** -- or in the '50s sometime.

10 **DR. ULSH:** Yes, these --

11 **MR. GRIFFON:** And they were doing --

12 **DR. ULSH:** -- these in situ experiments --

13 **MR. GRIFFON:** -- some of these experiments, but  
14 you're saying it was limited -- this is the  
15 first I heard that it was limited to two  
16 people. I -- I hadn't heard it was --

17 **DR. ULSH:** Right, that's in that report, that  
18 Robert Roth report. I think I have it right  
19 here in my folder. I can show you afterwards  
20 if you'd like to see it.

21 **MR. GRIFFON:** Right.

22 **DR. ZIEMER:** Further questions, Mark?

23 **MR. GRIFFON:** Not right now, no.

24 **DR. ZIEMER:** Okay. Thank you very much, Dr.  
25 Ulsh.



1           **DR. ULSH:** Thank you.

2           **UNIDENTIFIED:** (From the audience and off  
3 microphone) Excuse me, I have something  
4 (unintelligible) comment about  
5 (unintelligible).

6           **DR. ZIEMER:** Public comment period will be  
7 later today, so --

8           **UNIDENTIFIED:** (From the audience and off  
9 microphone) (Unintelligible) neutron ratio  
10 (unintelligible)

11          **DR. ZIEMER:** That's all right, we'll --

12          **UNIDENTIFIED:** (From the audience and off  
13 microphone) (Unintelligible)

14          **DR. ZIEMER:** Yeah, we'll catch you later today.  
15 Thank you.

16          We're going to take our break since the report  
17 from the working group --

18          **MR. GRIFFON:** Oh --

19          **DR. ZIEMER:** -- is rather extensive.

20          **MR. GRIFFON:** -- did -- I did have one more --

21          **DR. ZIEMER:** Oh, one more question.

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

23          **DR. ZIEMER:** Okay.

24          **MR. GRIFFON:** I thought other people were going  
25 to give me time to get my other question

1           together. In going through your neutron  
2           slides, the -- I think these are important  
3           slides, the predicted versus mea-- or -- yeah,  
4           predicted versus measured.

5           **DR. ULSH:** Yes.

6           **MR. GRIFFON:** Can you explain how you came up  
7           with those datapoints?

8           **DR. ULSH:** Yes, I would be happy to, Mark.

9           **MR. GRIFFON:** Yeah, it might be worth everyone  
10          hearing --

11          **DR. ULSH:** Okay.

12          **MR. GRIFFON:** -- a little more detail on that.

13          **DR. ULSH:** Yeah, I -- I should have --

14          **MR. GRIFFON:** Yeah.

15          **DR. ULSH:** -- talked about this in a little  
16          more detail. This bottom axis here, this  
17          horizontal axis, represents the entire reread  
18          dose. One dot equals one worker, so this dose  
19          right here represents the reread dose, the  
20          measured dose for that worker over his  
21          employment in the NDRP period, because what we  
22          are required to bound is total neutron dose.

23          **MR. GRIFFON:** Right, for that worker, so it's  
24          not one badge reading, it's one worker?

25          **DR. ULSH:** That is correct.

1           **MR. GRIFFON:** Okay.

2           **DR. ULSH:** And so if you drop down to this  
3 axis, you'll see what his measured dose was.  
4 If you go to this axis, you'll see what his  
5 predicted dose, using the methods that we have  
6 proposed.

7           **MR. GRIFFON:** Right.

8           **DR. ULSH:** And what you see here is that if we  
9 had fallen exactly on the line, then our  
10 predictions would exactly match what was  
11 observed. We would have a real problem if we  
12 fell down in this region, because what that  
13 would tell you is that we are significantly  
14 under-predicting; we are not bounding. But  
15 what you see here is -- and I don't remember  
16 the -- I think -- this is the first one, so it  
17 was 99.1 percent of these workers are bounded  
18 by the approach that we have shown. We're  
19 over-predicting in 99.1 percent of the -- of  
20 the time.

21           **MR. GRIFFON:** Yeah, it would be -- that -- that  
22 sounds good, but it would be interesting to see  
23 the data on this. Was this in your report? I  
24 don't recall this graph being in your...

25           **DR. ULSH:** This graph was not in our report.

1           **MR. GRIFFON:** No.

2           **DR. ULSH:** I prepared this graph in response to

3           --

4           **MR. GRIFFON:** Right.

5           **DR. ULSH:** -- SC&A's report on that.

6           **MR. GRIFFON:** Oh, okay. Okay. I -- I --  
7           because I'm -- I'm just trying to figure out,  
8           predic-- it's a worker's dose, I understand  
9           that.

10          **DR. ULSH:** Correct.

11          **MR. GRIFFON:** Obviously we know that these  
12          people didn't have 100 percent monitoring for  
13          every year.

14          **DR. ULSH:** That is correct, and that --

15          **MR. GRIFFON:** So when you're comparing  
16          predicted versus measured, you're comparing it  
17          only for the time frame --

18          **DR. ULSH:** That is--

19          **MR. GRIFFON:** -- that they were measured?

20          **DR. ULSH:** Yes.

21          **MR. GRIFFON:** Okay.

22          **DR. ULSH:** Exactly right.

23          **MR. GRIFFON:** All right.

24          **DR. ULSH:** The notional piece, the time they  
25          weren't monitored, would be shown a couple of

1 graphs later.

2 **MR. GRIFFON:** Right. It -- it -- it would be  
3 nice to see the data related to this 'cause  
4 this -- you know, we're getting this like --  
5 the graph looks good, but I always like to see  
6 the data behind the graphs. Anyway, anybody  
7 else have a follow-up on that? I...

8 **DR. ZIEMER:** Other questions or comments?

9 (No responses)

10 Okay. I -- I want to double-check to see  
11 whether Dr. Lockey -- did -- are you on the  
12 line?

13 (No responses)

14 Dr. Poston, are you on the line?

15 **MR. GRIFFON:** I've got to ask --

16 **DR. ZIEMER:** Yeah, hang on. John Poston?

17 (No responses)

18 **MR. GRIFFON:** Yeah.

19 **DR. ZIEMER:** Okay. Thank you. Stay at the  
20 mike, Brant -- a further question. Mark?

21 **MR. GRIFFON:** So -- so this is not -- is this  
22 just one year or is it -- it's for the entire  
23 '59 through '70 or what -- what --

24 **DR. ULSH:** If they were mon-- if they were  
25 employed and (unintelligible) --

1           **MR. GRIFFON:** So it's however long they're in  
2           NDRP is --

3           **DR. ULSH:** Yes, that's correct.

4           **MR. GRIFFON:** Okay. Okay.

5           **DR. ULSH:** So the question is, can you carve  
6           out perhaps particular years, particular people  
7           in particular buildings where the 95th  
8           percentile of that sub-population might be  
9           higher than the overall 95th percentile for  
10          that particular badge cycle? Probably. But  
11          when you look at real people, real doses, we  
12          are over-predicting, and that's what we are  
13          required to do. We are provi-- we are required  
14          to bound for total neutron dose.

15          **MR. GRIFFON:** But -- but here in this slide  
16          you're comparing the -- the measured dose --

17          **DR. ULSH:** Yes.

18          **MR. GRIFFON:** -- I mean I'm just -- I'm trying  
19          to figure out if this is a self-fulfilled  
20          prophecy here. I mean --

21          **DR. ZIEMER:** Let's take one example, maybe  
22          it'll help.

23          **MR. GRIFFON:** Yeah, give us a num-- number  
24          example from one datapoint.

25          **DR. ZIEMER:** Take the point and --

1           **MR. GRIFFON:** Yeah.

2           **DR. ZIEMER:** -- let's take the -- somebody at  
3           1,000 millirems.

4           **MR. GRIFFON:** Yeah.

5           **DR. ZIEMER:** Just pick out one of those points.

6           **DR. ULSH:** Okay, how about this one right here?

7           **DR. ZIEMER:** Yeah.

8           **DR. ULSH:** So their measured dose -- now wait,  
9           this slide shows that -- these are the  
10          situations where the original dose was zero --

11          **MR. GRIFFON:** Right.

12          **DR. ULSH:** -- but the film -- this film was not  
13          reread. So let me tell you what this is. This  
14          -- when -- when you drop down to 1,000, this is  
15          the time -- we took all of the badge cycles  
16          where this particular person was monitored and  
17          it was re-evaluated. Okay?

18          **MR. GRIFFON:** Okay.

19          **DR. ULSH:** And they had about 1,000 milli--  
20          1,000 millirem here -- wait, I can't -- sorry,  
21          10,000, 10,000 millirem, right here. And then  
22          we pretended -- let's just pretend that in fact  
23          they were not monitored. What would our meth--  
24          or rather that their films were monitored but  
25          they were not re-evaluated, they were

1 originally zero, what would the methods that we  
2 apply in that situation predict. Well, if you  
3 go over here, you find what we predicted, and  
4 it's somewhere north of -- oh, maybe around  
5 11,000 'cause this is pretty close to the line.

6 **MR. GRIFFON:** 1,100, yeah.

7 **DR. ULSH:** So it's one that matches fairly  
8 closely, but -- and what you see then here is  
9 that in 99.1 percent of the cases, we over-  
10 predict for those situations. Does that help?

11 **MR. GRIFFON:** Yeah, I -- I -- I think so. I  
12 mean -- but -- but I guess all you're doing is  
13 adding 183 millirem for the -- every time they  
14 had a zero. Right? So...

15 **DR. ULSH:** The 18--

16 **MR. GRIFFON:** I mean what -- what else is the  
17 difference here? You're looking at --

18 **DR. ULSH:** Well, the 183 millirem per badge  
19 cycle and that --

20 **MR. GRIFFON:** For any --

21 **DR. ULSH:** -- you know, you take into account  
22 how long that badge cycle spans.

23 **MR. GRIFFON:** Right.

24 **DR. ULSH:** And -- right -- right, so that's  
25 what we applied here in this situation. And



1           what you see is --

2           **MR. GRIFFON:** And -- and you're --

3           **DR. ULSH:** -- by doing that, we're over-  
4           predicting.

5           **MR. GRIFFON:** But you're comparing that to  
6           their measured, you're not...

7           **DR. ULSH:** That is correct.

8           **MR. GRIFFON:** I mean if you -- I guess the --  
9           the thing we were looking at also was the --  
10          the reread data versus -- there -- there's --  
11          this is the zero versus reread, and then  
12          there's the other ones that are the non-zeroes  
13          versus the reread --

14          **DR. ULSH:** Right.

15          **MR. GRIFFON:** -- and the cases where you got  
16          non-zero reread -- now I'm talking about the  
17          cycle data. You're talking about overall dose.  
18          That's what I was trying to clarify.

19          **DR. ULSH:** Right.

20          **MR. GRIFFON:** But in the individual cycle,  
21          there are some circumstances where you have --

22          **DR. ULSH:** That's correct.

23          **MR. GRIFFON:** -- you have doses that are -- you  
24          know, there's a reread portion -- there's a  
25          dose of maybe 2,000 -- 2,000 millirem overall

1 original dose and it turns out like 20 millirem  
2 was reread --

3 **DR. ULSH:** Right.

4 **MR. GRIFFON:** -- and the reread portion is --  
5 no, I'm telling you a fact from --

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

7 **MR. GRIFFON:** -- the database, you know.

8 **DR. ULSH:** Okay, sure.

9 **MR. GRIFFON:** But -- but -- but that's a --  
10 that's one cycle where the -- where the  
11 difference would be very large, but you're  
12 saying you're looking at the overall dose for  
13 an individual for all years together, sort of  
14 as a final neutron dose, not -- not comparing  
15 cycle by cycle where you're predicting - over-  
16 predicting or under-predicting --

17 **DR. ULSH:** Correct.

18 **MR. GRIFFON:** -- but rather the final dose.

19 **DR. ULSH:** Correct.

20 **MR. GRIFFON:** Okay.

21 **DR. ULSH:** There certainly could be -- I mean -  
22 - because we picked the 95th percentile, not  
23 the 100th percentile --

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

25 **DR. ULSH:** -- there certainly could be a few

1 badge cycles where we didn't predict. But  
2 there are other badge cycles where we  
3 dramatically over-predicted, and so what is the  
4 net result? The net result is that we over-  
5 predicted the doses, the total doses that these  
6 workers received, 99.1 percent of the time in  
7 that previous slide.

8 **MR. GRIFFON:** I -- I -- I guess the oth-- the  
9 other -- the only other question I had, just to  
10 stay on -- and I know this is down in the weeds  
11 --

12 **DR. ULSH:** Yeah.

13 **MR. GRIFFON:** -- but I think we need to  
14 understand it. For -- in -- in evaluating  
15 these factors that -- that resulted in your  
16 graphs here, you have the -- the two different  
17 scenarios. One is the zeroes that were never  
18 reread, zero badges that were never reread.

19 **DR. ULSH:** Correct.

20 **MR. GRIFFON:** Then you have greater than zero  
21 values that were not reread in the NDRP project  
22 --

23 **DR. ULSH:** That's correct.

24 **MR. GRIFFON:** -- and there -- there's a -- some  
25 information we have, SC&A has this in their

1 report certainly, at least during that '67  
2 through '70 time frame, some of these values  
3 were not measured doses and I think we need to  
4 -- to address that or understand how NIOSH  
5 addressed that. I mean you have zeroes in  
6 there --

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

8 **MR. GRIFFON:** -- which are clearly not a result  
9 of measured film badges, they're -- they're a  
10 result of somebody assigning a zero when they -  
11 - you know, assuming that the worker was likely  
12 low exposure --

13 **DR. ULSH:** Right.

14 **MR. GRIFFON:** -- scenario.

15 **DR. ULSH:** Right.

16 **MR. GRIFFON:** And then you also have original  
17 doses, these non-reread original doses which  
18 are assigned a value, but the value is based on  
19 an N/P ratio rather than -- rather than a  
20 measured dose again, so it's -- it's -- there's  
21 original doses that are almost like a notional  
22 dose, and it's -- it's a little confusing in  
23 there --

24 **DR. ULSH:** Let me see if --

25 **MR. GRIFFON:** -- and -- and I'm a little

1 concerned that, you know, where you have descr-  
2 - you know, data in this database --

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

4 **MR. GRIFFON:** -- that is resulting in these  
5 factors that you're using to -- to fill in  
6 these gaps in the data for people that are  
7 relying on -- you -- you have zeroes that are  
8 not really measured zeroes and --

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

10 **MR. GRIFFON:** -- that's a concern.

11 **DR. ULSH:** I understand what you're saying.

12 There were -- there came a time in the mid-  
13 1950s (sic), I don't remember the exact year --  
14 '65, '66, '67, sometime around in there --  
15 where you are correct. At the time these  
16 badges were read the first time -- in fact,  
17 these badges -- there were some badges that  
18 were not originally read. They were assigned a  
19 dose based on an NG -- neutron-to-photon ratio  
20 based on some criteria that they had set up.  
21 You know what they were; we don't need to get  
22 down in the weeds.

23 **MR. GRIFFON:** Right.

24 **DR. ULSH:** That was at the time. When the NDRP  
25 retrieved these films, they reread the films.

1 They reread them. Now if you look --

2 **MR. GRIFFON:** I -- I --

3 **DR. ULSH:** -- at the time period right here,  
4 you see that there are not many films, Mark,  
5 that they were unable to reread during this  
6 time period.

7 **MR. GRIFFON:** I'm talking '67 through '70 is  
8 where we're saying that there were --

9 **DR. ULSH:** Okay, '67 --

10 **MR. GRIFFON:** -- non-reread instances like  
11 this.

12 **DR. ULSH:** Correct.

13 **MR. GRIFFON:** Yeah.

14 **DR. ULSH:** You might have a case here -- there  
15 might be a -- there's a few in 1968; 1969 and  
16 '70 there are more of them. However, I've told  
17 you what the circumstances were here and I  
18 submit to you that -- what's plausible here? I  
19 don't think that you can say that it's  
20 plausible that these people were receiving  
21 higher neutron doses when production wasn't  
22 happening and when the strike was going on than  
23 they did back here. That's just not plausible.

24 **MR. GRIFFON:** I'm just saying that -- that you  
25 have zeroes and -- and/or non-- non-measured

1 data in your database which you're  
2 extrapolating your correction factor and your  
3 95th percentiles from, so -- so in a -- you  
4 know, basically the --

5 **DR. ULSH:** Well, again --

6 **MR. GRIFFON:** -- the source of the data that  
7 you're using is problematic.

8 **DR. ULSH:** -- we don't have that in the NDRP  
9 dataset, Mark, because those original films  
10 where they did that, where they assigned it  
11 based on an N/P ratio, they went back and they  
12 reread them. The only time you could have the  
13 situation that you describe is where the  
14 original dose was assigned based on an N/P  
15 ratio and they were not able to re-- not able  
16 to get that film.

17 **MR. GRIFFON:** Yeah. That's the -- that's the  
18 example I'm giving.

19 **DR. ULSH:** That's primarily -- you can see when  
20 that occurred --

21 **MR. GRIFFON:** '68 through '70. Right?

22 **DR. ULSH:** Right.

23 **MR. GRIFFON:** Yeah.

24 **DR. ULSH:** And so what I'm saying to you is  
25 that the doses that were re-- actually received

1           are likely to be quite low compared to earlier  
2           years, and therefore when we assign a dose that  
3           is based on the data that occurs in those  
4           earlier years, we are very likely over-  
5           predicting.

6           **MR. GRIFFON:** But the -- the -- the ratios that  
7           you're deriving for correcting measured data,  
8           the 6.95 -- I mean it's still using all this  
9           data, '67 through '70.

10          **DR. ULSH:** Not --

11          **MR. GRIFFON:** And so the fact that your doses  
12          are lower, how does that affect your ratios?

13          **DR. ULSH:** Not -- that ratio does not include  
14          original films that were not reread. It does  
15          not include that. It includes the films that  
16          were reread.

17          **MS. MUNN:** Were reread.

18          **MR. GRIFFON:** Yeah, but you're applying it to  
19          the non-reread, that's what I'm saying.

20          **DR. ULSH:** Yes, you are correct in that. You  
21          are correct on that, we are applying it --

22          **MR. GRIFFON:** Yeah.

23          **DR. ULSH:** -- to the -- to the reread.

24          **DR. ZIEMER:** Wanda had a comment, I think, or a  
25          question.



1           **MS. MUNN:** I --

2           **MR. GRIFFON:** And that 95th -- the -- how you  
3 derived that 6.95, the 95th percentile is 6.95  
4 --

5           **DR. ULSH:** Yes.

6           **MR. GRIFFON:** -- but it includes all those data  
7 up through '70. Am I correct in that?

8           **DR. ULSH:** You are correct that it includes all  
9 the data up through 1970 where the films were  
10 reread.

11          **MS. MUNN:** And that was 90 percent of all of  
12 the --

13          **MR. GRIFFON:** Yeah, go --

14          **MS. MUNN:** -- original films anyway.

15          **MR. GRIFFON:** Okay, go ahead, Wanda. Wanda had  
16 a question.

17          **DR. ZIEMER:** Did you have an additional comment  
18 then, Wanda?

19          **MS. MUNN:** No, I just was (unintelligible).

20          **DR. WADE:** Poston.

21          **DR. ZIEMER:** Let me check again if Dr. Poston  
22 is on the line.

23          **DR. POSTON:** Yes, I'm here. I'm having trouble  
24 hearing you.

25          **DR. ZIEMER:** Okay, very good. Just wanted to

1 confirm that you were there.

2 **DR. WADE:** Yeah, we can take a break, ten  
3 minutes.

4 **DR. ZIEMER:** We're going to take about a ten-  
5 minute break, and I want to have you come back  
6 promptly. It's our understanding that  
7 Congressman Udall will be here at 3:45 so we  
8 want to be back and assembled so that he can  
9 address the assembly at that point. So take a  
10 ten-minute break.

11 (Whereupon, a recess was taken from 3:35 p.m.  
12 to 3:55 p.m.)

13 **DR. ZIEMER:** If you'd get your seats, please.

14 (Pause)

15 I want to check and see if -- if our Board  
16 members are here by phone. Mike Gibson, are  
17 you still there?

18 **MR. GIBSON:** Yeah, I'm here, Paul.

19 **DR. ZIEMER:** Yeah. And Phil, are you still  
20 there, Phillip Schofield?

21 **MR. SCHOFIELD:** Yes, I am.

22 **DR. ZIEMER:** John Poston?

23 **DR. POSTON:** Yes, I'm here.

24 **DR. ZIEMER:** And Jim Lockey?

25 **DR. LOCKEY:** Yes, I'm here.

1           **DR. ZIEMER:** Very good. We're going to proceed  
2 with the working group's presentation. Mark  
3 Griffon will be presenting on behalf of the  
4 workgroup. And Mark, if -- if Congressman  
5 Udall does arrive, I'm going to interrupt your  
6 presentation so that he can address the  
7 assembly. We -- we were told he would be here  
8 about quarter of 4:00, but apparently he's not  
9 arrived yet so if he does show up we'll simply  
10 stop at that point, so -- but otherwise, why  
11 don't you -- hang on a second.

12           Is -- he apparently is arrived. Oh, yes.  
13 Welcome, Congressman, and we'll turn -- give  
14 you the podium right away, if you're ready.  
15 We're ready to hear from you. Welcome.

16           **CONGRESSMAN UDALL:** Thank you. Doctor, thank  
17 you for including a little bit of time for me  
18 this afternoon.

19           **DR. ZIEMER:** Thank you for being with us, we  
20 appreciate it.

21           **CONGRESSMAN UDALL:** And I have a prepared  
22 statement, would be pleased if I could share it  
23 --

24           **DR. ZIEMER:** We'd be very pleased to hear it.

25           **CONGRESSMAN UDALL:** -- with you and the Board.

1           Let me start out by saying I appreciate the  
2           fact that you're here today. I also appreciate  
3           your hard work on behalf of our nation's  
4           nuclear weapons workers. As I've said, I  
5           appreciate the opportunity to briefly speak in  
6           front of you today and share my concerns.  
7           As you may know, I am the author of  
8           legislation, H.R. 904, designed to reinforce  
9           Congress's efforts to provide compensation and  
10          care for the many nuclear weapons workers made  
11          sick by on-the-job exposure to radiation. Now  
12          I want to say that I -- that I mention the word  
13          "reinforce", or used the word "reinforce"  
14          Congress's efforts because it's clear that  
15          establishing the medical and scientific basis  
16          for individual compensation has gotten tied up  
17          in red tape, the often elusive search for  
18          missing documentation, and other bureaucratic  
19          delays that have conspired to create a Kafka-  
20          esque nightmare for many workers. I know  
21          you're well aware of this problem, and that is  
22          in fact what you are seeking to address today  
23          by reviewing the petitions before the Board in  
24          your deliberations.  
25          My purpose is two-fold in being here. As I

1           said earlier, I want to thank you all for  
2           taking on this difficult task and for your  
3           interest and attention in addressing the  
4           pressing medical and health needs of these  
5           workers, many of whom are here with us. I also  
6           want you, secondly, to urge you -- your  
7           favorable consideration of several very  
8           technical issues that will, if approved, expand  
9           the kind of exposure covered and the number of  
10          workers deserving benefits.

11          I'm not an expert in dose reconstruction,  
12          cancer studies or radioactive science, and I  
13          would not presume to pretend any expertise in  
14          these areas. That's your job. What I am an  
15          expert in and what many members of my staff  
16          have become expert in is listening to the  
17          heart-rending stories of men and women who  
18          worked at Rocky Flats for many years -- Cold  
19          War warriors, if you will -- who felt they were  
20          not only making a living, but serving their  
21          country, and who today are often the victims of  
22          horrendous and rare cancers.

23          What I can offer as a member of Congress is my  
24          strong sense of our public duty and obligation  
25          to these workers and their families. That is

1           why I have authored legislation extending  
2           Special Exposure Cohort status to Department of  
3           Energy employees, Department of Energy  
4           contractor employees and atomic weapons  
5           employees who can demonstrate that they worked  
6           at Rocky Flats for 250 days.  
7           As the law now stands, before a Rocky Flats  
8           worker suffering from a covered cancer can  
9           receive benefits, it must be established that  
10          the cancer is as likely as not to have resulted  
11          from on-the-job exposure to radiation. Your  
12          deliberations today can help many of these  
13          workers if you accept the entire petition. I  
14          believe if you approve special cohort status  
15          for thorium for the entire site, include  
16          neutron exposure from 1959 to 1970, and  
17          plutonium exposure in Building 881 before 1960,  
18          you will also help many of these workers and  
19          their families.  
20          I also understand that you may be close to  
21          determining a process for addressing exposures  
22          to so-called high-fired oxides, and this would  
23          be very useful as well.  
24          Again, as I close, I want to make it clear, I -  
25          - I have no pretense to expertise in evaluating

1 the scientific or medical basis for dose  
2 reconstruction. But as one who believes we owe  
3 a debt of gratitude to these workers, I believe  
4 our inclination should be to err on the side of  
5 inclusion rather than exclusion.

6 And again, I want to thank you for your  
7 consideration and for the hard work that you've  
8 undertaken here, Doctor.

9 **DR. ZIEMER:** Thank you very much, Congressman.  
10 We appreciate you taking time to share with us  
11 your concerns on behalf of the petitioners  
12 here.

13 **CONGRESSMAN UDALL:** Thank you very much.

14 (Pause)

15 **DR. ZIEMER:** Now we're going to hear from our  
16 working group, chaired by Mark Griffon. Mark  
17 has a number of slides and -- and some of these  
18 are fairly detailed. And let me just double-  
19 check now, Mark. Copies of your presentation  
20 are also available for members of the public as  
21 well. Is that correct?

22 **MR. GRIFFON:** Yeah, they -- they should be. I  
23 think LaShawn made 75 copies, so --

24 **DR. ZIEMER:** So those are available --

25 **MR. GRIFFON:** -- if they run out, let us know

1 and we'll get more -- more copies made.

2 **DR. ZIEMER:** Okay, yeah. And members of your  
3 working group, if you would introduce them,  
4 too, Mark, as you begin here.

5 **MR. GRIFFON:** Yeah, my name's Mark Griffon and  
6 I'm chairing the Rocky Flats working group, and  
7 the members of our workgroup include myself,  
8 Wanda Munn, Robert Presley and Mike Gibson, who  
9 -- Mike is on the phone, I believe?

10 **MR. GIBSON:** Right.

11 **MR. GRIFFON:** Yeah. Yeah, my presentation is  
12 going to -- I'm going to save the -- the three  
13 issues that Brant discussed for the end of the  
14 presentation and start off with going through a  
15 little of our process. And also I want to  
16 discuss some of the issues that the workgroup  
17 has resolved through the workgroup resolution  
18 process with SC&A and the -- and the -- and  
19 NIOSH.

20 The -- as most of you know by now, the  
21 workgroup's been at this since February, 2006,  
22 and it's been a lengthy process. Many  
23 workgroup meetings, many conference calls --  
24 workgroup conference calls, many technical  
25 conference calls. Some of those were not



1 workgroup, they weren't open to the public, but  
2 all of them -- we developed minutes and pro--  
3 and made sure the minutes were part of the  
4 record. And it's been an extensive effort by -  
5 - certainly by, you know, all parties involved  
6 to go through this data.

7 Next slide? Thanks.

8 I -- I want to -- to go back to a document that  
9 -- that we, as the Board, developed. And we  
10 have a -- a Board SEC review procedure, and I  
11 think it's important that as we, the Board,  
12 deliberate on this, as well as the public,  
13 should be aware that this exists. And some of  
14 our criteria -- this is certainly not the  
15 regulation and it's certainly not what drives  
16 NIOSH in -- in doing their evaluation report  
17 and some of the deadlines that -- that they're  
18 -- have, as far as the regulatory deadlines.  
19 But we developed these internal review  
20 procedures and I think we had, you know, very  
21 important criteria we laid out for ourselves  
22 when we're doing these SEC reviews.  
23 The credibility and validity of data; certainly  
24 our workgroup has spent a lot of time on this  
25 question, this pedigree of data. The

1           electronic databases basically -- I guess the -  
2           - my stance on this is that we're looking for -  
3           - if there's a da-- electronic data used in any  
4           fashion, we want to try to get back to the raw  
5           data and -- and in some way verify or validate  
6           that this electronic database is usable, is  
7           reliable, is useful data. And that probably  
8           took the largest chunk of time on this  
9           workgroup process. We spent a lot of time  
10          looking into that -- that factor.  
11          Second criteria that we have within our -- our  
12          procedure is the representativeness of the  
13          data. And you know, this certainly was a -- a  
14          large challenge for Rocky Flats because we have  
15          all areas, all workers and all time periods  
16          that we're considering here. We're going from  
17          '52 through 2005, with all areas covered, and  
18          we have to make sure that any coworker models  
19          or any approaches that are going to -- that are  
20          -- are used are going to be representative for  
21          all those populations, all the class of  
22          workers.  
23          Then we have our demonstration of feasibility  
24          and sufficient accuracy. Again, something that  
25          the Board decided that we wanted to -- to have,

1           and this is the -- this sort of falls into that  
2           proof of principle thing. We wanted to see a  
3           demonstration that -- not only that the  
4           information exists to do a dose reconstruction,  
5           but how is that information going to be used  
6           for certain cases. And we tried to pick cases  
7           which we thought were -- were going to be the -  
8           - the -- the most troublesome or the -- you  
9           know, the cases which we'd be most concerned  
10          about.

11          And then the last factor, which I'm sure is on  
12          many people's minds, is the timeliness factor.  
13          And -- go to next slide on that? Yeah, you're  
14          way ahead of me.

15          Timeliness has been on our minds. It -- it  
16          might not seem like it, but you know, we've  
17          been at this since 2006. As I said, the -- the  
18          -- part of the reason for -- for a long period  
19          of time that the workgroup deliberated on this  
20          was that in -- that broad scope of -- of  
21          workers covered, the broad time period, and  
22          this question of, you know, this criteria in  
23          our own procedure, that we wanted to validate  
24          data that was used. And I think that -- that  
25          is a -- a slight difference in -- in where

1 NIOSH comes at -- at this program versus where  
2 we've sort of approached this in our workgroup.  
3 In many cases I feel like the approach being  
4 offered is that the database is reliable unless  
5 proven otherwise, and I -- I certainly take a  
6 different stance going into these reviews. I -  
7 - I want to see that the -- you know, I want to  
8 validate the data to make sure that it is  
9 useful for -- for the compensation program. So  
10 in several of these cases we -- we have several  
11 different databases that are used for internal  
12 dose data, for the NDRP database, as we know,  
13 and each one of these is -- is, you know, very  
14 -- very complex databases to go through. And  
15 on top of that, to try to find raw records to  
16 sort of validate was -- was certainly not  
17 straightforward and that consumed a lot of our  
18 time and effort.

19 And I guess the final point on that is we -- we  
20 did have some -- some delays and some action  
21 items. And in retrospect, the -- the delays in  
22 response to neutron action items were -- were  
23 certainly critical. I -- I don't think many  
24 people thought that the neutron dose question  
25 was going to be as critical until we sort of

1 got the -- the individual data, the -- the --  
2 some of the requests that had been out by SC&A  
3 during the workgroup process, I think a lot of  
4 -- a lot of us involved thought that it was  
5 really going to be a site profile sort of  
6 issue, so some of those actions were sort of  
7 put on the back burner by NIOSH and ORAU. Once  
8 we -- once we got those and other things  
9 unfolded out of those, it certainly caused us  
10 this frenzy to look into the NDRP project more  
11 closely, so -- but -- but I guess that's enough  
12 said on timeliness.

13 Now I'm going to -- first couple slides here  
14 are going to address the major issues that we -  
15 - we as a workgroup feel that we've resolved in  
16 this process. We've worked with SC&A and NIOSH  
17 and we have resolution between all -- all --  
18 all the groups involved.

19 The -- the second bullet on this, or the second  
20 point here, I think is very important. As a  
21 result of this resolution process, some of  
22 these items are going to require NIOSH to  
23 reassess dose reconstructions for -- for  
24 affected cases, and I'll -- I'll speak more to  
25 that in -- in the next couple of slides. But I

1           -- I think what that points out is that even  
2           though we say we've resolved these issues, it -  
3           - some of the resolution involved claimant-  
4           favorable changes to existing approaches or  
5           TBDs, and they're going to require NIOSH -- if  
6           they're not already doing -- I know they have  
7           some of these reassessments already underway,  
8           but it will require NIOSH to re-evaluate some  
9           of the cases. So I think that's important for  
10          people to -- to remember.

11         Next slide?

12         The major issues that we feel are resolved in  
13         the workgroup process, and people that were at  
14         the meeting last time certainly remember these.  
15         The high-fired plutonium -- and I'll speak a  
16         little more on each one of these -- high-fired  
17         plutonium, the data completeness, data  
18         reliability, internal dose coworker model and  
19         the D&D internal dose question.

20         For the -- the high-fired plutonium oxide, this  
21         is the super S material, the question there was  
22         -- was did NIOSH have an -- an approach that  
23         could adequately bound the doses to this very  
24         unique type of plutonium, which is re--  
25         retained in the lungs for much longer than the

1 other forms of plutonium. And we had -- this  
2 is under this TIB-49, which I know -- I believe  
3 some people have now gotten copies of. We  
4 looked at this -- we had SC&A look at this  
5 extensively. We first looked at the -- the  
6 sort of theoretical model that they provide in  
7 TIB-49 -- or theoretical approach, and then we  
8 looked at the -- the data which they used to --  
9 to develop this model in TIB-49 and they used  
10 case data. And then we went one step beyond  
11 that. We said well, you -- you picked out six  
12 cases of -- of -- of a population which  
13 arguably had exposures to super S material but  
14 didn't have other exposures which would  
15 complicate the analysis. And we said there's -  
16 - there's 25 other people that we, you know,  
17 just by description, would think could also  
18 fall into this category. Can you -- we -- we'd  
19 like you to examine those. We had SC&A examine  
20 those and determine whether this approach,  
21 using those six cases -- six or seven, I -- I  
22 don't -- I don't remember the exact number, but  
23 that TIB-49 approach did bound for those other  
24 25 workers -- 25 or so. We had a few  
25 additional cases, too. And the report back

1 from SC&A was that in fact this approach does -  
2 - is bounding of tho-- of all those cases. So  
3 you know, we -- we -- we feel we looked at  
4 worst case scenarios, worst case worker  
5 exposures, and this approach met all -- all  
6 challenges on that front.

7 The final point in this is that since this mod-  
8 - TIB was developed, they -- NIOSH is in the  
9 process of and -- I don't know that they've  
10 completed, but they're in the process of re-  
11 evaluating all affected cases and -- it's not  
12 going to affect everyone, but it affects a fair  
13 number of cases, I believe -- using this super  
14 S model.

15 The external and internal data completeness,  
16 where -- this is the -- we -- we spent -- we  
17 looked at this with -- with several different  
18 reviews of the data. The -- the final one  
19 included this review of 52 DR claim radiation  
20 files, going through line by line and -- and  
21 looking at those radiation files and -- and  
22 then ultimately, through the workgroup process,  
23 comparing the -- the si-- the annual data for  
24 external and internal against sort of their job  
25 history to -- to see if periods with missing



1 data actually could be justified or not. And -  
2 - and some of the things that came out of this  
3 were -- this review were in this workgroup  
4 conclusion bullet, which I know is a little  
5 difficult to see, but this question arose  
6 through this review through -- this had several  
7 prongs in this review, several different things  
8 we were looking at at the same time, but one  
9 thing that came out of it was this -- this  
10 question of 1969 and '70 having zeroes that  
11 were not really measured zeroes. And in this  
12 case NIOSH said if -- if these are zer-- zeroes  
13 were just put in there and they weren't  
14 measured data, we don't want to use bad data so  
15 we're going to strip all the zeroes out of  
16 those years and the coworker model will not  
17 include that data. So they eliminated that  
18 data. That response satisfied the workgroup  
19 and SC&A.

20 For Building 44 -- this came up sort of out of  
21 the data completeness review, also. We -- I  
22 think it was due to some of the questions about  
23 the early -- the '50s and whether people were  
24 monitored or not monitored, and we looked into  
25 Building 44 and questioned whether there was

1 sufficient data to bound doses for people that  
2 were not monitored but working in Building 44.  
3 And the conclusion there was also that they  
4 could bound the doses.

5 And then the last sub-bullet there is for Plant  
6 B -- 881 workers, and this we still have -- I  
7 have another slide on this. This is one of the  
8 issues that -- that Brant went over, the three  
9 issues, 881 and whether the doses could --  
10 could bound. And I guess the final question we  
11 had is the -- whether the operational history  
12 was reviewed closely enough to assure that the  
13 doses would be bounding, and -- this is photon  
14 doses -- and you know, we just saw Brant's  
15 slides and -- and Brant's presentation.

16 Certainly there's evidence there that looks  
17 like it -- it may bound. The doses are much  
18 higher than '60/'61, but there was also reports  
19 of extensive process changes. I think Brant  
20 talked about one. I'm not sure that -- that  
21 was the universe, so I -- I think we -- we  
22 might have more on that to discuss.

23 Then going to data reliability -- and -- and  
24 the data reliability question, a lot of this  
25 comes from the -- the petition itself, from

1 public comments. This question of -- of --  
2 well, several of the -- the questions there are  
3 outlined, the -- replacing positive doses with  
4 zeroes, several of these things we looked into.  
5 If you remember the matrix that we developed  
6 through this workgroup process, several of the  
7 individual matrix items were actually data  
8 integrity issues. I think there were 37 or  
9 some matrix items and many of them were data  
10 integrity questions. We're sort of rolling  
11 that up into this one -- one item here.  
12 Again, we -- we -- you know -- and this is --  
13 you know, what we found on this was that there  
14 may be some discrepancies. SC&A and NIOSH have  
15 some disagreement on -- on certain of the -- of  
16 the specific cases that we reviewed, but SC&A -  
17 - and the workgroup agrees with this that --  
18 found that there's no systemic evidence and no  
19 systemic problem here with the data  
20 reliability.  
21 Internal dose -- this is the internal dose  
22 coworker model, and I think we -- I mentioned  
23 this at the last meeting, the -- this coworker  
24 model. NIOSH has agreed -- the -- the  
25 workgroup basically agrees that if NIOSH -- and

1 NIOSH is committed to using the 95th percentile  
2 for all coworker models, for all people that  
3 they'll use the coworker model for, and -- and  
4 if they use that approach, then the workgroup  
5 agrees that they can bound the doses. The  
6 previous -- previous approach sort of relied on  
7 -- on a full distribution of the -- of the  
8 coworker data rather than just looking at the  
9 upper bound of the data. And we're saying if  
10 you just use the upper bound, we -- we -- we  
11 agree that it -- it does bound.  
12 For the D&D period, a similar -- a similar sort  
13 of question comes out of this and we're  
14 basically coming down with the same sort of  
15 conclusion, which is that as they -- as we went  
16 through this workgroup process, NIOSH actually  
17 sort of did an extension of TIB-38 to TIB-14 --  
18 TIB-14 covers the D&D period workers, I believe  
19 I got that correct, and the workgroup is  
20 basically concluding here that as long as they  
21 use the 95th percentile approach for all  
22 relevant nuclides, and I think that's one --  
23 one distinction; it may be intuitively obvious,  
24 but I don't want to assume anything. By -- by  
25 this we mean that certainly for the D&D period

1 we found that many of the workers -- a fair  
2 percentage of workers never gave a closeout --  
3 end of employment bioassay sample. So given  
4 that, we want to make sure that -- we -- we  
5 can't be sure that -- that -- that workers that  
6 were in certain buildings had -- for example,  
7 881 where now we have seen some plutonium  
8 contamination and we do know that many of the  
9 workers -- Brant has followed up on this and  
10 determined that many of the workers from 881  
11 that did the D&D were actually bioassayed for  
12 plutonium. So we're saying if -- if you have  
13 somebody that, for whatever reason -- a D&D  
14 worker that did not have monitoring data and  
15 did not have a -- a -- sort of a -- something  
16 that you can reconstruct their own dose from,  
17 then if they worked in 881 you have to assume  
18 all relevant radionuclides apply, not just --  
19 you might think it was a uranium building, but  
20 we want to make sure all relevant radionuclides  
21 are applied and applied at the 95th percentile  
22 -- little distinction there.

23 And the last point, and this is just a sort of  
24 summary of those previous resolved items, the  
25 super S, just to -- to reiterate here,

1 reassessment of affected cases is underway and  
2 ongoing, I guess is another way to say it.  
3 I think I just said the second one, the  
4 internal coworker model, which includes the  
5 coworker -- TIB-38 and TIB-14, the coworker  
6 model and the coworker model for the D&D  
7 workers. And as I said just now -- and -- and  
8 part of this is that NIOSH must carefully  
9 consider the work history, what buildings the  
10 individuals worked in and what radionuclides  
11 were present, so -- 'cause we know -- just from  
12 testimony we know that many of the D&D workers  
13 went to several different areas and worked  
14 around the site, so we want to make sure that  
15 all relevant radionuclides in all -- and their  
16 work history is researched completely and, you  
17 know, they -- they probably -- part of this can  
18 be the -- the interview that the worker  
19 provides if -- if the worker -- if there's --  
20 if it's not a survivor case.  
21 The last one is the neutron dose, and this says  
22 neutron dose '59 through '70. This obviously  
23 is pending our discussion on that particular  
24 item whether we -- whether the Board proposes  
25 an SEC for that time period or part of that

1           time period, but if -- if an SEC is not  
2           proposed, then obviously Brant just went  
3           through a modified approach that NIOSH would  
4           then have to apply and reassess all those cases  
5           based on, so there's another -- another  
6           reassessment. And I would argue all these  
7           reassessments are -- are claimant favorable, so  
8           you know, even though -- I mean the-- these  
9           items were resolved, but in many cases where we  
10          weren't sure, we resolved them in a claimant-  
11          favorable fashion, so -- and that -- that  
12          covers the items that the workgroup feels were  
13          resolved through our -- our process.  
14          And now I'm getting into a -- the three items -  
15          - these were from the last meeting, the actions  
16          that the Board gave us, the workgroup, to -- to  
17          follow up on. And some of this I'll -- I'll  
18          cover ground that Brant went over a little bit,  
19          but I think it's worth repeating some of --  
20          especially the neutron stuff gets very  
21          complicated, but we -- we did ask for follow-up  
22          on the method for neutron dose reconstruction  
23          during '59 through '70. We asked for sort of  
24          proof of principle for the thorium issues and -  
25          - that were -- that were mentioned earlier.

1           And we asked for follow-up on external dose  
2           reconstruction method for 881, and then I think  
3           an add-on to that was, you know, research the -  
4           - research whether plutonium was in -- in that  
5           building, and to what extent. And that was --  
6           I can't remember if that was actually in our  
7           action or if we just added that on as a sub-  
8           task.

9           Finally at the bottom, I know during our  
10          discussions we -- we had asked for NIOSH to --  
11          to further research the question of what  
12          buildings encompassed neutron exposures. And  
13          part of this was to help us in -- the first SEC  
14          we voted on, '52 through '58 for neutrons, the  
15          phrase we -- we used was monitored or should  
16          have been monitored, but we know -- we just  
17          have a concern that is that specific enough for  
18          the Department of Labor to be able to do their  
19          job in finding the right people, so we -- we  
20          did ask NIOSH to follow up on which buildings -  
21          - make sure we -- we knew all the buildings  
22          where neutron exposures occurred over -- over  
23          the time.

24          So going through these one at a time, the first  
25          one, the neutron dose reconstruction, four



1 aspects and -- and I won't harp on this too  
2 much, Brant covered this, but the NDRP reread  
3 individual data is going to be used when they -  
4 - when they have it available. They're going  
5 to use the 95th percentile of the reread badges  
6 that were originally recorded as zeroes to  
7 replace the zeroes, so it -- it's a little  
8 confusing, but they're basically saying if you  
9 had a -- they have some zeroes in the database  
10 which were actually reread, and they're looking  
11 at all that data collectively and they're  
12 looking at the 95th percentile -- the high end  
13 of that, and then they're saying for all the  
14 zeroes that we did not reread, we'll assign  
15 that high end value in place of the zero. And  
16 I'll go through these each one at a time, too,  
17 but I just want to -- this is very difficult,  
18 even -- even for us who have been in the  
19 workgroup process, to -- all this non-reread  
20 terminology and so forth, so I want to go  
21 through it fairly specifically.

22 The third factor is when you have a non-reread  
23 greater than zero value. They're -- they're  
24 looking at correcting that with a -- again, a  
25 95th percentile correction factor, and that was

1 derived from the reread data, obviously, so...  
2 And then the fourth item is the 95th percentile  
3 of all measured cycle data, so it's -- it's not  
4 the annual data but the individual badge data  
5 are going to be used for unmonitored periods.  
6 So as Brant said, and -- and this is sort of  
7 the -- what was used -- what was called the  
8 notional dose, this is going to be sort of a  
9 new way of substituting for unmonitored  
10 periods. Instead of using that neutron/photon  
11 ratio that we discussed at the last meeting,  
12 they're looking at -- they -- they looked at  
13 all the measured data -- in this case they  
14 looked by year by building, so in the other two  
15 cases it's across the entire time period -- a  
16 little distinction there, but -- but they're  
17 looking at the high end of the measured data.  
18 And wherever someone has an unmonitored period,  
19 they're going to fill it in with that high end  
20 value.  
21 So taking these one at a time, those four that  
22 I just listed, the use of the NDRP data, I -- I  
23 think one -- one thing that we -- that we have  
24 to lay out up front is -- is this -- this fact  
25 that the -- that the data was actually -- there

1           -- there was no independent calibration of the  
2 primary reader's accuracy, and -- and you have  
3 one -- one sort of gold standard that everybody  
4 was corrected against. And I think, you know,  
5 that -- that question -- and it wasn't part of  
6 that project, but it -- it wasn't considered  
7 later by NIOSH's review certainly, and -- and  
8 this -- this -- you know, I mean we -- we -- we  
9 interview-- we certainly relied on this person  
10 for his knowledge and -- extensively about this  
11 program and what they did, but he also did say  
12 that he made the calibration sources years  
13 before they were used, but he did make them and  
14 then when he measured them -- them himself or  
15 when he looked at them himself and counted them  
16 himself, he trained himself not to remember the  
17 original result, and then everybody else was  
18 calibrated against him. So thi-- this question  
19 that no independent calibration was done on  
20 these films is -- sort of looms over this whole  
21 set of data, in my opinion.

22           The next slide.

23           Thi-- this is for the non-reread zero doses. I  
24 guess the main thing to take away from this is  
25 that the 183 millirem per cycle -- per badge

1 cycle is likely pretty bounding for -- 'cause  
2 remember, you're replacing basically zero doses  
3 or -- or zeroes in the database with 183  
4 millirem, and it's likely pretty bounding for -  
5 - at least for most buildings. There might be  
6 a question on 771. One of the troubling  
7 problems, and I -- I started to raise some of  
8 this with -- questioning with Brant, one -- one  
9 -- one concern I have is that -- that some of  
10 the original zeroes are not actually zero  
11 measured data. So you have a question where  
12 you're -- and you're only -- you're looking at  
13 the reread to establish this 183 millirem, I  
14 agree with that. But if you don't know whether  
15 you're looking at a measured zero or just an  
16 assigned zero, you have a mix of data here  
17 which you're relying on and -- I think I'll  
18 leave it at that, that the ex-- you know, I  
19 haven't digested completely the explanation  
20 that Brant gave for those certain events that  
21 happened in those later years, which way that  
22 would likely affect the results, but I -- we do  
23 know for a fact that -- that in that '67  
24 through '70 period there were some zeroes that  
25 were not measured film badge zeroes, so...

1           Item C? Okay. And on the non-reread, I guess  
2           the -- the primary question here is that you're  
3           -- you're -- in some cases you're -- you're  
4           taking a -- they're taking a correction factor,  
5           which is a 95th percentile correction factor --  
6           there -- there are some questions on how it's  
7           derived, but then you're also correcting  
8           values, unless I -- unless I misunderstand  
9           this, correcting values -- sometimes the  
10          original doses that were in the database could  
11          have been assigned based on N/P ratios, so you  
12          don't know if you're correcting a measured  
13          value or an assigned value in that original  
14          dose column, so you've got a mix of data -- I  
15          think I'm right on that -- and you're -- you're  
16          applying a correction factor for -- to that, so  
17          again, this is the question of the --  
18          understanding what data is in that, and this is  
19          especially related to that '67 through '70 time  
20          period again.

21          And then the final item, item D, this is the --  
22          using the 95th percentile of the cycle data,  
23          and I -- I think Brant mentioned this up front,  
24          we -- we -- we still have -- I still have  
25          concerns, I think the workgroup shares the

1 concern, to some extent, as to whether all  
2 workers or, as I say in this slide, even the  
3 highest exposed jobs were monitored for all  
4 time periods. And you know, in reviewing the  
5 NDRP data, we've looked at this, we've looked  
6 at the fact that for -- for I think '59 through  
7 '64 at least several of those years have --  
8 many of the -- the final neutron doses are 100  
9 percent notional doses. Beyond -- so -- so  
10 that -- that isn't conclusive, in and of  
11 itself, but I don't think we -- we've been able  
12 to have demonstrated to us that -- that the  
13 individual jobs in those periods were -- the  
14 highest exposed jobs were monitored. And I  
15 also want to relay -- you know, we -- during  
16 the course of our deliberations on this, we did  
17 have Roger Falk basically sort of -- his  
18 statements sort of went along with the trend in  
19 the data in that he said the highest exposed  
20 were phased in from -- from probably '60  
21 through '64. And if you look in '65 or -- I  
22 don't know if I have that year exactly, but I  
23 think in '65 all of a sudden you see that --  
24 that almost all the -- the highest final  
25 neutron doses were measured doses, they -- they

1 weren't notional doses anymore. So that seems  
2 to -- to give with what Roger told us in that  
3 the -- the highest exposed were phased in, also  
4 suggesting by -- by reverse that they weren't  
5 all done for all time periods. So we still  
6 have a question of whether the highest exposed  
7 cycles would be in that data and therefore if  
8 the 95th is going to be bounding for all  
9 workers. Do I think it's bounding for a lot of  
10 them? Yes, I do. But is it bounding for all  
11 workers within this population we're  
12 considering? I don't think we can -- can say  
13 that conclusively.

14 And this is I think -- just to follow up on  
15 that -- that action I just mentioned, the  
16 question of whether we know all the neutron  
17 buildings, I don't -- I don't think we have to  
18 follow up on that. That's more important in  
19 considering how DOL is going to apply -- or  
20 interpret any SEC motion that the Board makes.  
21 The second bullet I had on here -- and I think  
22 to some extent I -- this may be resolved, but  
23 it was on here before I had talked to -- I had  
24 e-mails from NIOSH, but there were a couple  
25 conflicting documents that -- one suggested

1           that the NTA film was phased out in '70 and --  
2           and one said June of '72, and I -- I think we -  
3           - I might have to even call NIOSH to -- to  
4           respond to that, but you -- we can wait till  
5           the end.

6           And then I guess the final note here is that we  
7           -- we do have sort of a new proposed model on  
8           the table, and I'm not sure it would be  
9           terribly burdensome to -- to rework the  
10          coworker TIBs, but they would -- would have to  
11          be reworked, so we haven't examined, you know,  
12          how long that would take. And it gets into  
13          this feasibility question, but -- just putting  
14          it out there.

15          Okay, on to item two, the thorium dose  
16          reconstruction issues. Basically -- on -- on  
17          this front there's three items looking at here,  
18          the machining and rolling, including the  
19          cutting, and I think it's the workgroup's sense  
20          that -- that both these could be bounded and  
21          that there might be a caveat on the cutting  
22          operation. Brant sort of alluded to that. But  
23          I think that we have -- we are of the opinion,  
24          on the workgroup, anyway, that that's sort of a  
25          site profile issue. They've modified -- they -



1           - they've had a similar situation with  
2           Bethlehem Steel where they've modified an air  
3           sample, and if need be it wouldn't -- it  
4           wouldn't be more than a site profile issue to  
5           modify. But the data is there and sufficient  
6           to bound, and I think that's the SEC question.  
7           So we think that's -- that's okay.  
8           For the -- the second item speaks to the  
9           thorium strike question, and I -- I guess the  
10          only -- we -- we have data. The -- the only  
11          concern that I would raise, and I think Brant -  
12          - Brant's already put it on the table, but we  
13          have a person who -- who was clearly involved,  
14          and the logbooks and everything show that he  
15          was clearly involved, in the management of this  
16          -- this -- these short-term projects or however  
17          we want to frame that. But we have two  
18          documents now that sort of suggest that the  
19          operation took place in 71 and -- and the  
20          person's memory is that it was done -- and  
21          pretty clear memory, as Brant has laid out to  
22          us, it was done in 81, that -- you know, it --  
23          the only problem we, as the Board, have to  
24          wrestle with I think here is that we have an  
25          expert versus a document, we have sort of

1 different conclusions, although it was pointed  
2 out that there is air sampling data available  
3 in 71 as well, so if further research points us  
4 to the fact that -- or to the conclusion -- I  
5 think it's unlikely, based on the interview  
6 that NIOSH has conducted, but if they had found  
7 that it was done in another area, they still  
8 have air sampling data that could be used to  
9 bound it, so -- so again, in this situation I --  
10 -- I don't think we have a -- an SEC issue.  
11 On the last item, everything that we've seen  
12 thus far and -- and all -- and extensive  
13 interviews that have been done on the thorium  
14 magnesium question, it -- it seems highly  
15 unlikely to the workgroup and to all of us  
16 involved that -- that -- we were talking --  
17 even these Dow Madison shipments, apparently  
18 they were talking about large shipments over a  
19 long period of time, and it -- it -- it is  
20 showing up nowhere in the records at Rocky  
21 Flats, and none of the recollections of experts  
22 interviewed can remember this material being  
23 shipped there. And given that, along with the  
24 Rocky Fl-- Rocky Mountain Arsenal tie-in, we  
25 believe that the -- that the thorium magnesium

1 alloy was not -- you know, the stuff from Dow  
2 Madison was -- it's very unlikely that that  
3 material was worked on at Rocky Flats. So we -  
4 - we don't really see an SEC issue there,  
5 either.

6 And then the last slide. Building 881 -- I --  
7 I think the question remains here of -- of --  
8 of whether the process changes, and I -- I -- I  
9 know we just heard from NIOSH and there was a  
10 discussion of one process change. I thought  
11 there were also process changes closer to 1960,  
12 but I -- I will -- we may want to even hear  
13 from our contractor and -- and what they found  
14 in this regard. But the -- the doses -- the  
15 coworker doses assigned compared to those  
16 measured in '60 and '61 really seem to suggest  
17 that it -- it's very likely that these doses  
18 are bounding, but we -- we felt like or -- or  
19 this may not be a majority opinion on the  
20 workgroup, but there's at least some question  
21 in my mind as to whether we accounted for all  
22 the process changes within that building,  
23 especially between '59 and '60 when -- when you  
24 have -- I think '60 starts the measured data, I  
25 think I'm getting that right, but you know --

1           so we -- you know, it -- it may be that this  
2           data is bounding, the coworker approach is  
3           bounding, but we're not sure that all the  
4           operational changes have been adequately  
5           accounted for in -- in making this claim.  
6           And I guess the -- the last thing, and th--  
7           this was new information to me from NIOSH's  
8           presentation, but I did mention that the sub-  
9           critical experiments were -- at least according  
10          to SC&A's report -- were conducted in the '50s  
11          to early '60s, I -- I'm not sure if it was  
12          stated -- stated exactly that way in the  
13          report. You know, it may be, as -- and like I  
14          said, this is new information to me, as of  
15          today. It may have been a very small  
16          population of workers that were involved in  
17          this -- in these experiments, so it -- if it's  
18          two workers, you know, it may not be an issue.  
19          And if they have badged data themselves, it may  
20          not be an issue. But that was certainly a  
21          potential neutron exposure source that we were  
22          concerned about and I think we need to at least  
23          consider, you know, who might have been  
24          affected and what years it was and whether  
25          there is data, and Brant has responded to that

1           today. Like I said, I didn't know that when I  
2           was developing these, but...  
3           And I think that's -- that sort of wraps --  
4           wraps up what I have. You know, at this point  
5           I think we just want to have discussions and  
6           not -- we don't have any specific  
7           recommendation right now, but -- 'cause we've  
8           also -- I guess the other thing I would ask for  
9           is if sometime in the next couple of hours if  
10          NIOSH can provide that data that backs up those  
11          graphs that you show with predicted versus  
12          measured, it might be useful to be able to look  
13          at the data for that. But I don't think we  
14          want to offer any motions now. I just wanted  
15          to sort of lay out where we felt we were with  
16          all -- with these three issues, and also all  
17          the other previously-resolved items.

18          **DR. ZIEMER:** Okay. Thank you, Mark, and we're  
19          going to have our opportunity to discuss this  
20          in more detail in the morning. I want to ask,  
21          Board members, do you have any pressing  
22          questions right now for Mark? We will return  
23          to this. We do want to have time for a break  
24          before the open public comment period, so if  
25          there are no pressing questions, I'm going to

1 recess us for 45 minutes and you have a chance  
2 to grab some brief nourishment, and we will  
3 reconvene at 5:30 for the public comment  
4 period. And then tomorrow morning we will have  
5 an opportunity to hear in detail from -- well,  
6 to discuss the working group's presentation and  
7 to hear in more detail from the petitioners and  
8 additional comments and questions that they may  
9 have.

10 **DR. WADE:** Right, the time period will be from  
11 8:00, 8:15, when you begin until 9:00 there'll  
12 be opportunity for questions to the workgroup.  
13 Then from 9:00 to 10:00 we'll hear from the  
14 petitioners, and then the floor is open for the  
15 Board's deliberations moving to decision.

16 **DR. ZIEMER:** So we are in recess till 5:30, at  
17 which time we will have -- have the public  
18 comment period. Thank you.

19 (Whereupon, a recess was taken from 4:50 p.m.  
20 to 5:30 p.m.)

21 **PUBLIC COMMENT**

22 **DR. ZIEMER:** I'd like to introduce your  
23 Lieutenant Governor -- Lieutenant Governor  
24 O'Brien, and she has some remarks for us.  
25 Welcome your Lieutenant Governor.

1           **LIEUTENANT GOVERNOR O'BRIEN:** Can you hear me  
2 back there? Good, thank you. I'm getting to  
3 an age where I can't do anything without my  
4 reading glasses anymore. Some of you can  
5 probably sympathize with that.  
6 Good evening. I am Lieutenant Governor Barbara  
7 O'Brien, and I'm here to represent Governor  
8 Ritter and myself. And I think all of you  
9 should have a copy of the letter that Governor  
10 Ritter wrote and submitted, so does everyone  
11 have a copy of that? Good.  
12 And we have some expertise from the Department  
13 of Public Health and Environment here, so if at  
14 the end of my remarks there are any questions  
15 of a technical nature, we do have someone who  
16 can help answer them, so thank you very much.  
17 I really appreciate the opportunity to talk to  
18 you. We think this is an awfully important  
19 issue for Colorado and for the Cold War  
20 veterans who experienced some very significant  
21 health challenges over the past couple of  
22 years, and we strongly believe that Special  
23 Exposure Cohort status should be extended to  
24 them.  
25 The Ritter administra-- the Ritter

1 administration believes that it is crucial that  
2 you take the appropriate action based on the  
3 scientific studies and reviews, and that you  
4 move expeditiously to provide the financial and  
5 medical support that these forgotten heroes of  
6 the Cold War deserve. Action is long overdue.  
7 Further delays simply add to the burden that  
8 these employees have experienced, as well as  
9 their families, and in some cases survivors.  
10 The Rocky Flats Plant played a crucial role in  
11 our nation's security during the Cold War.  
12 Even today much of our nuclear defense  
13 capability relies on products produced at Rocky  
14 Flats. The working men and women who,  
15 knowingly or unknowingly, put themselves in  
16 harm's way for the sake of their country are  
17 entitled to justice and appropriate  
18 compensation for their sacrifice.  
19 Our own Department of Public Health and  
20 Environment, in collaboration with the  
21 University of Colorado Health Sciences Center,  
22 clearly supports extending Special Exposure  
23 Cohort status beyond the currently-recognized  
24 1952 to 1958 time period to all workers who  
25 have had life-threatening exposures. The



1 research is clear that workers in numerous  
2 buildings at Rocky Flats were at risk of  
3 neutron exposure which arose mainly in the  
4 context of working with plutonium. We request  
5 that you fulfill your charter and support this  
6 extension in your advisory role for the Energy  
7 Employees Occupational Illness Compensation  
8 Program. We request that you provide expedited  
9 financial and medical care to these employees  
10 and compensation to the eligible survivors of  
11 those who have died awaiting determinations, as  
12 mandated by the federal legislation that  
13 created this Presidential Advisory Board.  
14 If you fail our Cold War heroes, members of  
15 Congress seem poised to step in. Each day of  
16 delay means another sick employee comes closer  
17 to death. The workers have earned our  
18 gratitude, and they and their families deserve  
19 fair compensation from the nation.  
20 We are here in support of you, and I'm here,  
21 grateful for the opportunity to speak to you  
22 and hopeful that you'll act on behalf of these  
23 fine Americans. Thank you very much.  
24 **DR. ZIEMER:** And we thank you for being with us  
25 today. We're also pleased to have with us --

1           joining us this evening Senator Joan  
2           Fitzgerald, who's currently President of the  
3           Colorado State Senate, and she has some remarks  
4           for us, too. Welcome Senator Fitzgerald.

5           **SENATOR FITZGERALD:** Thank you. Is this on?  
6           Thank you. Thank you for this opportunity. I  
7           will be brief.

8           I want to remind all of you that time is not on  
9           our side; that the people that sit behind me  
10          are very aware of every moment of every day  
11          that they live. Many of these people have been  
12          before boards and commissions many times  
13          before. This is my first time, and I am well.  
14          For many of these people who are not well, who  
15          come time after time to ask not their  
16          government but our government to do the right  
17          thing, this is a stain on the conscience of  
18          America. We need to support those who asked no  
19          questions about their responsibilities at Rocky  
20          Flats, who did the job assigned to them despite  
21          the fact that it may have been perilous, and  
22          who seek no more today than justice. I ask you  
23          to consider what kind of conscience this nation  
24          must have. Thank you very much.

25          **DR. ZIEMER:** And we all thank you, Senator

1 Fitzgerald, for being with us tonight, as well.  
2 Then I also would like to add -- to introduce  
3 David Hiller, who is going to read a statement  
4 which is signed by a number -- I believe a  
5 number of U.S. Senators, and David Hiller,  
6 welcome back to our podium, as well. David  
7 Hiller is on Senator Salazar's staff.

8 **MR. HILLER:** Thank you, Dr. Ziemer. Senator  
9 Salazar is working in Washington, D.C. this  
10 week so he can't be here personally. As many  
11 of you know, he did speak with the Board by  
12 telephone at the -- the May meeting. The  
13 Senator strongly supports the petition and asks  
14 the Board to approve the petition in whole as  
15 soon as possible.

16 But Senator Salazar is also working in Congress  
17 to focus attention on the failings in  
18 implementing the Energy Employees Occupational  
19 Illness Compensation Act in compliance with the  
20 original intent of Congress. As part of that  
21 effort, Senator Salazar is one of 15 senators  
22 who have sent a letter that I'd like to read to  
23 you this evening.

24 This letter is addressed to Senator Kennedy and  
25 Senator Enzi, the Chair and the ranking member

1 of the Senate Committee on Health, Education,  
2 Labor and Pension. (Reading) Dear Senator  
3 Kennedy and Ranking Member Enzi: We are  
4 writing to request that the Committee on  
5 Health, Education, Labor and Pensions hold a  
6 hearing on the administration's implementation  
7 of the Energy Employees Occupational Illness  
8 Compensation Act of 2000.

9 Congress created EEOICPA to provide appropriate  
10 compensation and medical benefits to workers  
11 who contracted radiation-induced cancers,  
12 beryllium diseases or silicosis during the  
13 course of their work for the Department of  
14 Energy or its contractors. However,  
15 implementation of the statute by Department of  
16 Labor and the Department of Health and Human  
17 Services has come under significant scrutiny in  
18 recent months due to delays in processing  
19 cases, denial of a high percentage of workers'  
20 claims, and allegations that the administration  
21 has limited payouts as a means of cutting  
22 costs. As a result, nuclear weapons workers  
23 with work-related diseases in 20 states are not  
24 being compensated, although they have filed  
25 claims.

1 EEOICPA was designed to fairly compensate sick  
2 Energy workers. Where radiation dose cannot be  
3 estimated due to the government's inability to  
4 maintain or create records of workers'  
5 radiation exposure levels, the Act allows  
6 workers with cancer to petition to receive  
7 Special Exposure Cohort status and secure  
8 compensation without dose reconstruction if  
9 their cancer's among the list of cancers  
10 specified within the original law.  
11 Energy workers from at least 13 sites, 11  
12 states, representing thousands of workers, have  
13 petitions for SEC status pending. The  
14 Department of Health and Human Services has  
15 been slow to consider petitions and places high  
16 burdens on petitioners seeking to be added to  
17 the Special Exposure Cohort. A front page  
18 story from the May 12, 2007 *Washington Post*  
19 highlighted these problems.  
20 We strongly urge the committee to hold a  
21 hearing on the implementation of the statute  
22 during this legislative session, and we offer  
23 our support in finding solutions to the  
24 problems identified above.  
25 And briefly let me read you the names of the

1 senators who -- who signed this letter. In  
2 addition to Senator Salazar, Senator Sherrod  
3 Brown, Senator Lamar Alexander, Harry Reid,  
4 Charles Schumer, Bernard Sanders, Maria  
5 Cantwell, Claire McCaskill, Barack Obama,  
6 George Voinovich, Richard Durbin, Hillary  
7 Rodham Clinton, Barbara Boxer, Christopher Bond  
8 and Robert Casey. I'd point out that that list  
9 includes both Republicans and Democrats. Thank  
10 you, Dr. Ziemer.

11 **DR. ZIEMER:** Thank you very much, Mr. Hiller.  
12 We appreciate your being with us this evening,  
13 as well.

14 I'm now going to proceed to the list that's  
15 before us. Let me ask this question. How many  
16 of you were here last month for the public  
17 comment?

18 (Indications)

19 Okay, not everybody. Let -- let me make just a  
20 couple of brief comments. This -- I'll stand  
21 up so I can see people. I want to remind you  
22 that this Board is an advisory board. We are -  
23 - we are not employed by the Department of  
24 Labor, we're not employed by NIOSH. These are  
25 independent people, some of whom are still

1 workers in other capacities, some of whom are  
2 retired people such as me. But we are  
3 advisory, and one of our many -- amongst our  
4 jobs is the -- the job of overseeing in a sense  
5 the work of NIOSH, and our advice goes to the  
6 Secretary of Health and Human Services. Part  
7 of that advice has to do with SEC petitions.  
8 Whenever there is a petition, this Board is  
9 required under the law to provide its advice.  
10 So that really is -- is our role in this whole  
11 thing. And in -- in making that advice, we  
12 solicit information from the agency, from  
13 NIOSH. We solicit information on our own  
14 behalf through our own contractor, SC&A, to  
15 give us an independent look. And we solicit  
16 information from petitioners, and that's our --  
17 our effort here tonight.

18 Now I have a list of quite a few people, and  
19 beginning at our last meeting we -- we actually  
20 had to impose a time limit on -- in order to  
21 give everybody a fair chance to speak. The  
22 Board's operating time limit per person is --  
23 is ten minutes. Now I -- I don't want you to  
24 look at that as a goal to be achieved. If you  
25 have a two-minute remark, that's fine. But the

1 ten minutes is an upper limit, and I can do  
2 some quick calculations and tell you that if  
3 everybody speaks ten minutes we will be here  
4 many, many hours. So simply keep that in mind,  
5 particularly for people who may be at the end  
6 of the list, that the fatigue factor could set  
7 in. But in any event, show that kind of  
8 courtesy at least to others who may wish to  
9 speak as well. And I'm simply going to go down  
10 the list in order and you'll have the  
11 opportunity to come to the mike and -- and make  
12 your comments.

13 This is not a question and answer period.

14 Tomorrow during the regular session where the  
15 petitioners present more information, there  
16 will be an opportunity for more give and take  
17 between the petitioners and -- and the Board,  
18 but this is simply an opportunity for you to  
19 present your views, your -- your insights, your  
20 comments, whatever they are, and we're pleased  
21 to receive them.

22 Yes, a question first?

23 **UNIDENTIFIED:** (From the audience and off  
24 microphone) Is NIOSH going to answer my  
25 question (unintelligible)?



1           **DR. ZIEMER:** That will be appropriate for  
2 tomorrow for the discussion period, so we'll --  
3 that would be tomorrow morning. So this is  
4 mainly input to the Board -- input to the Board  
5 from you as members of the public.

6           So let's begin with James Horan. James, are  
7 you here? Please approach the mike.

8           **MR. HORAN:** Hello. My name is James Horan. I  
9 worked for 32 years at Rocky Flats. I als-- I  
10 worked there from February 1961 to November  
11 1992. First job at Rocky Flats was in health  
12 physics as a radiation monitor. The next job I  
13 had, from 1971 to 1980, was in the maintenance  
14 department as an electrician technician. The  
15 last twelve years I worked, 1980 to '92, in the  
16 R&D engineering department, specializing in  
17 electron beam welders. But of the 32 years at  
18 Rocky Flats, I was assigned 90 percent or more  
19 of the time in the plutonium areas. The  
20 remaining ten percent I worked in the uranium  
21 areas.

22           As a monitor I took special interest in  
23 learning everything possible about the work  
24 that I was doing. I joined the Health Physics  
25 Society and the Central Rocky Mountain chapter

1 of the Health Physics Society to learn  
2 everything possible. I was involved in all  
3 aspects of processing nuclear materials and  
4 nuclear weapons product. This included  
5 plutonium, uranium, beryllium at Rocky Flats.  
6 I was also involved with many hundreds of  
7 radiation incidents involving the release of  
8 radioactive material. Many of these radiation  
9 incidents might be called minor in nature, but  
10 some were very major, including the very  
11 dangerous plutonium fire in Building 776. I  
12 was actually supposed to be there but I turned  
13 overtime down for the day. I came there later  
14 that night.

15 In February 1971 I was assigned as a radiation  
16 monitor in the plutonium fluoride area in  
17 Building 71; 71 is a plutonium processing area.  
18 Part of the assignment was to advise other  
19 workers to be aware of the gamma neutron  
20 radiation in that area, so I took a survey and  
21 kept it for my own reference. Because of  
22 certain nuclear properties, when plutonium is  
23 combined with fluoride it gener-- it enhances  
24 the radia-- the nuclear radiation -- neutron  
25 radiation. There was a ratio of neutron

1 radiation to gamma radiation. Neutron  
2 radiation was ten times greater than the gamma.  
3 The dosimetry reading for me was nowhere near  
4 what I expected when we got the results. The  
5 rati-- was -- results was way off on the ratio  
6 and also for what I experience in the area, so  
7 I filed a joint company/union safety committee  
8 concern, which I have copies of; I saved it for  
9 37 years.

10 The first two supervisors had no idea what I  
11 was talking about when I talked to them about  
12 this concern. Then I met a supervisor in the  
13 dosimetry department. He said I was right --  
14 in other words, my -- for the -- what I knew  
15 was right on the ratio and the exposure, but he  
16 said he -- we're not changing any exposure  
17 records, none. I did get a written response  
18 from the company. Part of that response is the  
19 inherent inaccuracy of the neutron film  
20 dosimetry is known by health physics. It was  
21 the best system known. Shortly after this  
22 incident I changed jobs because it was obvious  
23 I was not welcome in health physics.  
24 In 1990 -- I said in 1971 I started as an  
25 electrician technician in the maintenance

1 department. One of the major projects that I  
2 worked on was installing and wiring a new  
3 control panel in the existing plutonium  
4 processing area. I was present during the  
5 operation of this equipment to test the  
6 reliability. I was also there for like eight,  
7 nine months in the area. There was plutonium  
8 there in those dry boxes all the time. I told  
9 this -- I was told later this process was part  
10 of the neutron bomb.

11 After this project I started working with  
12 electron beam welders which are also in the  
13 plutonium area. In 1980 I took a salaried  
14 position with R&D joining specializing in  
15 electron beam welders. I was assigned the rest  
16 of the time in the plutonium area in Building  
17 779, but I went into the plutonium production  
18 areas of Building 707 and some of the other  
19 areas many times 'cause that's where I did my  
20 work.

21 After 32 years I left Rocky Flats in November  
22 of 1992, or -- but you could say Rocky Flats  
23 did not leave me. I was a member of the Former  
24 Workers Advisory Group. This is a committee in  
25 association with National Jewish Hospital on a

1 health study for former workers from Rocky  
2 Flats. I've also been to National Jewish many  
3 times for physical exams. I'm waiting now for  
4 the last test exposure to beryllium. I also  
5 have plutonium in my lungs for over 40 years.  
6 In 1994 I received from Rocky Flats some  
7 dosimetry results involving internal radiation  
8 that I received on my dosimeter records. These  
9 -- the accuracy of these records were very  
10 questionable. They listed zero radiation  
11 exposure for the time that I was working on the  
12 neutron bomb, zero for a whole month. There  
13 was nothing there, no -- there was nothing at  
14 all. I also received one millirem exposure for  
15 the time that I worked with welding equipment  
16 in the final production area of Building 707.  
17 These are where we make the bombs. They're all  
18 over the place on parts. You walk by them, you  
19 just reach out. There's no big deal you got a  
20 bomb sitting there. You got whole aisle-ways  
21 full of them. They're all over the place, but  
22 I got one millirem exposure for that.  
23 So in my usual way, I wrote a letter to Bob  
24 Bistline -- you might know -- and I told him,  
25 hey, these are not right. I sent him this

1 letter showing my concerns. I'm still waiting  
2 for the response.

3 I also -- I suspect that the dosimetry record  
4 readings are grossly inaccurate for many  
5 reasons. They missed exposures the dropped  
6 cobalt-60 sources. I actually had a cobalt-60  
7 source drop out on -- out of a pig, it rolled  
8 down the floor (unintelligible) and nobody --  
9 it was never on the exposure. Somebody left  
10 the shielding off electron beam welder. They  
11 generate X-rays. Nothing there, didn't show up  
12 in the readings. This is -- no nuclear  
13 workers' dosimetry records should be relied on  
14 to determine the true radiation exposure at  
15 Rocky Flats. For many reasons, dosimetry  
16 records for gamma nor neutron radiation should  
17 never be used to determine the negative health  
18 consequences of working at Rocky Flats. These  
19 radiation exposure records are very  
20 questionable in quality.

21 I -- later on I received a -- from ORISA (sic)  
22 an estimate of how much my external dose  
23 exposure was for the li-- my lifetime. It's  
24 like one -- 11.5 milli-- or rem. I meas-- I  
25 divided that by my days of expo-- work that I

1 was there. It comes out something like 1.4  
2 millirem per day exposure. Now mind you, I  
3 worked in an area where we made maybe 60,000  
4 bombs. I worked all these -- I knew these  
5 people on a first-name basis. I walked down  
6 the hall -- we had 14.22 tons of plutonium the  
7 day I left there. I worked in all kinds of  
8 projects. This gentleman mentioned about  
9 uranium-233, I was there on that project that -  
10 - machining that -- that part. He mentioned  
11 about the first time they did a criticality  
12 experiment in Building 886, I was there that  
13 evening. I have all kinds of records and  
14 stuff. On one of the areas when I was in the  
15 uranium area, we had an area where there was a  
16 tunnel 600 feet long and it had two vaults in  
17 it. The one at the far end had a stainless  
18 steel door like a bank vault. Well, this was  
19 after the '76 fire. They had to put their  
20 plutonium somewhere. They put it in that area,  
21 and they stacked it up in barrels and I went in  
22 there every day for five days a week to survey  
23 it and to take the air head -- that's 600 feet  
24 or so walking in and out with all this  
25 plutonium, so there must be some great exposure

1 to -- anyhow, going back to this -- these  
2 radiation readings I think are very  
3 questionable in -- in nature, all of them. It  
4 can't possibly ha-- come up with 1.44 millirem.  
5 I think the guy that sells hot dogs down on the  
6 16th Street mall would get a higher rating than  
7 that.

8 These workers deserve to be treated with  
9 respect, to be treated fairly in any claim for  
10 compensation for their work at Rocky Flats, and  
11 these radiation records should not be part of  
12 that consideration. Nuclear workers assigned  
13 any area in Rocky Flats containing nuclear  
14 materials were exposed to many different  
15 hazardous materials, including a lot of  
16 chemicals. The longer they worked in these  
17 areas, the greater the exposure and the greater  
18 chance for negative health consequences. It's  
19 time to be fair to these nuclear workers who  
20 did a very dangerous job for the security of  
21 this nation. Thank you.

22 **DR. ZIEMER:** Thank you, James. Next, Judy  
23 Padilla. Welcome, Judy.

24 **MS. PADILLA:** Hi, I'm Judy Padilla, and I wrote  
25 this poem on Memorial Day. I call it "The



1 Rocky Flats Legacy."

2 **DR. ZIEMER:** And I have copies for the Board  
3 here, I think.

4 **MS. PADILLA:** Yes, you have copies of -- of the  
5 poem and also my speech.

6 Just west of Denver where Golden's foothills  
7 slant stood the nuclear weapons site, Rocky  
8 Flats Plant. There loyal Americans toiled day  
9 and night to fight the Cold War at the Rocky  
10 Flats site. They followed procedures, these  
11 brave dads and moms, to manufacture triggers  
12 for America's atomic bombs. When working with  
13 dangerous nuclear radiation, the best defense  
14 available is time, distance and shielding.  
15 Time means long exposures to penetrating ray.  
16 Distance means how far it is away. Shielding,  
17 what's between you and the source, including  
18 the knowledge of the energy's force. Our  
19 dosimetry badging were tracking our dose, so we  
20 didn't worry about details like those.  
21 Penetrating beta, gamma, X-ran -- and neutron  
22 rays were just typical hazards in those  
23 manufacturing days. But now those records are  
24 lost, miscounted, or both, and we are sick with  
25 cancers and have lost all our hopes. Some of

1 us are bankrupt with medical bills. Others  
2 suffer from all kinds of physical ills. But  
3 NIOSH keeps saying we counted all that we got,  
4 and your dose reconstruction wasn't as least  
5 likely as not. You can't argue with science,  
6 even if it is bad. You can't live forever, so  
7 go home and be glad. At NIOSH we gave you our  
8 best estimations, so call up the morticians for  
9 burials and cremations. The President had no  
10 kind words to soften the sad realization, no  
11 flags on our coffins. Yes, we sick Cold War  
12 veterans did our patriotic duty. We even had Q  
13 clearances for national security. To protect  
14 America we laid our lives on the line and gave  
15 to the country the best of our time. We  
16 sacrificed our health, lives, families, and  
17 today you slap our faces with years of delay.  
18 Excuses and guesswork and pure false deduction,  
19 how much more of graft, greed and corruption.  
20 We are free to speak because of Americans who  
21 died, and now we are dying because of NIOSH,  
22 who tried to sidestep the issues of  
23 insufficient data and tell us that our lives  
24 just do not matter. Yes, we are just  
25 statistics to you smug, arrogant guys. But

1 from all this experience, at least we got wise.  
2 To all nuke worker we say beware; when you need  
3 your government's protection, guess what? It's  
4 not there.

5 My name is Judy Helen Padilla. I worked at  
6 Rocky Flats Plant for 22 years, from 1983 till  
7 it closed in 2005. This appointed panel, as I  
8 understand it, is responsible for preparation  
9 and fair presentation of information and  
10 consolidated statements, the reporting process  
11 and internal control over that reporting. I  
12 believe that far too many problems stem from  
13 efforts by overly-ambitious panel members who  
14 concentrate power on themselves. Such  
15 concentrations of power have not proven to be  
16 in the best interests of our sick Rocky Flats  
17 Plant individuals. What conflicts of interests  
18 can be more damaging to the interests of Rocky  
19 Flats Plant than those that occur when  
20 overseers are allowed to oversee and supervise  
21 themselves? The legends of mismanagement and  
22 corruption, Enron and Tyco, had chairmen who  
23 also served as CEOs. Their dual roles helped  
24 these individuals achieve virtual total  
25 control. Although advisory panels are charged

1           by law with protecting, some are far more  
2           interested in currying favor than with  
3           questioning their objectivity. You panel  
4           members are easy prey for persons who spend  
5           considerable time seeking to convince you to  
6           vote against the SEC proposal than to challenge  
7           what is becoming absolute power.

8           Do you realize that you 11 people are only an  
9           advisory panel? President Bush will be gone in  
10          less than 18 months, and Congress may not  
11          choose to maintain the same committee members,  
12          especially when 25,000 voters from Rocky Flats  
13          tell their stories. You panel members have  
14          collectively thumbed your noses at the Cold War  
15          veterans with cancer; Colorado's Governor, Bill  
16          Ritter; the entire Congressional delegation of  
17          Colorado; 15 Senators and seven  
18          Representatives; and candidates for President,  
19          the Honorable Senators Barack Obama and Hillary  
20          Clinton. Keep in mind the 2008 Democratic  
21          convention will be held in Denver, Colorado.

22          To maximize our impact nationally, we've  
23          focused our efforts on four important areas  
24          where we believe we can make most significant  
25          and measurable process -- progress. The

1 scientific tangible and intangible facts, the  
2 risk versus benefit analysis, a proposal to  
3 engage independent auditors, and most  
4 importantly, sufficient time standards. These  
5 things, combined with a valid rationale for  
6 evaluating based on a broader set of criteria  
7 than inaccurate dosimetry, impractical coworker  
8 dose and tweaked models, we feel should prove  
9 that the system is definitely broken.

10 The Honorable Senator Ken Salazar said, and I  
11 quote, The Board has totally lost focus on the  
12 essential purpose of the law of timely  
13 compensation. I'm on the side of Rocky Flats  
14 workers, and our government should be, too,  
15 close quotes.

16 The dichotomy. To quote the National Academy  
17 of Science, the probability that a cancer was  
18 caused by a particular dose of radiation was  
19 developed for entire populations, Nagasaki and  
20 Hiroshima, and never meant for use on  
21 individuals, close quotes.

22 On February 26th, 2006 Shelby Hallmark, a  
23 Department of Labor official, said, and I  
24 quote, If there is a justification for SEC  
25 anywhere, common sense suggests that it should

1           be at Rocky Flats. In this convoluted vortex  
2           of pretentiousness, where is your common sense?  
3           Eighteen of the nation's nuclear weapons  
4           facilities have already been granted Special  
5           Exposure Cohort status. Can NIOSH's evaluation  
6           of dose reconstructions stand up under  
7           scientific and public scrutiny, or is it proof  
8           that they cannot accurately reconstruct dose  
9           with this modified site profile, changes and  
10          adjustment factors? This fact alone should set  
11          a precedence for all claimants who were denied  
12          based on NIOSH's unfair and wrong 50 percentile  
13          parameter.

14          Rocky Flats Plant, demolition of the first  
15          nuclear weapons plant in American history, on  
16          budget and a year ahead of schedule. The money  
17          paid in subcontractor and executive bonus could  
18          have paid every single Cold War cancer victim  
19          three times.

20          Two, the money wasted by NIOSH could have paid  
21          all claimants four times.

22          Three, the Department of Labor has authorized  
23          benefits for only 289, and unfairly turned down  
24          629 in six and a half years.

25          NIOSH, a system that cannot do a timely and

1 accurate job, and won't admit it. [Name  
2 Redacted] -- [Name Redacted], a West Virginia  
3 genetics professor, condemned NIOSH's  
4 elaborate, expensive process of attempts to  
5 calculate dose by saying variables and error  
6 rate alone would make the counts incorrect.  
7 Larry Elliott, the Director (sic) of NIOSH,  
8 after the announcement of NIOSH's spent  
9 funding, stated it's not fun news to deliver.  
10 Well, to Mr. Elliott we say having job-induced  
11 cancer is not fun, either.  
12 NIOSH admits to estimations of contamination  
13 when records are lost or missing, and I for one  
14 would like to know how they can count what they  
15 cannot measure. I'm no scientist, but it would  
16 seem to be more logical that a person who  
17 worked hands-on, for example, in a glovebox  
18 with nuclear material, would be more likely to  
19 contract cancer than one who had casual  
20 contact, merely passing through a nuclear area.  
21 Considering this analogy, can you explain to me  
22 why all these hands-on people shouldn't have  
23 their claims reopened?  
24 The Government General Accounting Office has  
25 identified conflicts of interest. NIOSH now

1           has 88 scientists who also worked for  
2           contractors. A possible conflict of interest  
3           here? Perhaps. After the funding loss, only  
4           13 people will be left to do all the dose  
5           estimates and recounts. Will they be able to  
6           do provide the research and analysis  
7           information to derive dose in accordance with  
8           accuracy and integrity? I think not.  
9           Parameters and reference points within the  
10          data, professional knowledge, management  
11          expertise, industry background and experience,  
12          will they consider diversity and applicable  
13          requirements with these 13 under-qualified,  
14          semi-qualified and inexperienced personnel?  
15          Hypocrisy. In this country has Lady Justice  
16          stepped out the back door? The table is  
17          tilted. The game is rigged. NIOSH has used  
18          inexact science and imprecise judgment calls to  
19          deny nuclear workers their rightful  
20          compensations.

21          On May 31st, 2007 I read in the *Rocky Mountain*  
22          *News* that President Bush has asked Congress for  
23          \$30 billion -- that's billion, with a B --  
24          dollars for AIDS in Africa. He stated this --  
25          and I quote: This money will be spent wisely.



1           Are we sick veterans once again betrayed? We  
2           put our health and safety in the hands of our  
3           government by fighting the Cold War for  
4           America, and now we are forgotten. Is this a  
5           miscalculation, or indifference to human  
6           suffering on our own soil? I'm all for helping  
7           people who need help, but I feel that we should  
8           start in our own home first.

9           Mike Leavitt, Health and Human Service  
10          Secretary, must sign off on the decision of  
11          this Board, and the federal government is the  
12          law of the land, so therefore your vote is not  
13          irrevocable. We ask for neither sympathy nor  
14          charity. All we ask for is truth. Truth,  
15          logical, clear and honest. Truth that doesn't  
16          say one thing today and something different  
17          tomorrow. Our question for NIOSH is how do you  
18          plan to spin your strategy now? We have been  
19          patient for 40 -- for seven years. We have  
20          expected our government to do the right thing.  
21          This advisory panel, for the most part, has  
22          mocked those who trusted you, and we say bitter  
23          things out of helpless rage, desperation and  
24          disillusionment. Our dead people cannot defend  
25          themselves. But if they could, they might say

1 we were not maimed and killed by accident; we  
2 were stabbed in the back by governmental paper-  
3 pushing and delay.

4 We live in the land of the free and the home of  
5 the brave, but has this been reduced to the  
6 lowest common denominator? Has governmental  
7 accountability come down to ethics or financial  
8 liability?

9 We are all creatures of habit, and we're happy  
10 as bugs running down that rut. It takes great  
11 courage to break out. You people could make a  
12 profound difference. To stand up for what you  
13 truly believe is not an easy thing to do, but  
14 to take responsibility, with no compromise, can  
15 help correct this shameful obstruction of  
16 justice.

17 Rocky Flats Plant stands for decent and honest  
18 people. We are all well-informed and capable  
19 of critical thinking, the backbone of America.

20 We nuclear weapon workers all held Q  
21 clearances, the highest security clearance in  
22 the nation that a private citizen can hold.

23 That meant that we had access to the  
24 government's top secret documentation, formulas  
25 and processes. America trusted us to conduct

1           ourselves with honesty, integrity and  
2           patriotism. Can we expect any less from you?  
3           We have courteously talked and logically  
4           explained our reasons for expecting special  
5           cohort status, but this panel doesn't seem to  
6           be listening. It seems to me that you don't  
7           care how many people die, as long as you make  
8           your point. All America and the world are  
9           watching you now, and history will decide if  
10          you have made a life or death decision for our  
11          nuclear workers. You 11 panel members will  
12          have to account for that decision. We will  
13          respond to a compelling argument, but  
14          apparently we are not asking the right  
15          questions. We want the truth, and we can  
16          handle it. We don't like to see the system  
17          twist the facts, and we will not accept  
18          anything less than Special Exposure Cohort  
19          status for all Cold War veterans who willingly  
20          put their lives on the line for America.  
21          Now is the time for all good men to come to the  
22          aid to their party. Wake up and ask  
23          yourselves, what is my moral and ethical  
24          responsibility, and what are the  
25          vulnerabilities and weaknesses of the system?

1           In the end what will matter is not your  
2           competence, but your character. The Board has  
3           no legal or moral choice but to vote in favor  
4           of the special cohort status for all the sick  
5           Cold War veterans of Rocky Flats Plant.  
6           Remember that every act of integrity,  
7           compassion, courage and sacrifice empowers and  
8           encourages others to emulate your example. The  
9           challenge is to rise to the level of our  
10          forefathers, who said that the government of  
11          the people and by the people shall not perish  
12          from the earth. American history reflects the  
13          acknowledgement of this working class. We are  
14          the backbone of America. The whole world is  
15          watching to see how the United States of  
16          America will take care of her sick, dying and  
17          dead Cold War veterans. In the final analysis,  
18          the world will know the truth. We sick Cold  
19          War veterans will go away, but our children and  
20          our children's children will carry on for us.  
21          The Rocky Flats Plant nuclear workers  
22          exemplified the power of exceptional people  
23          committed to the protection of America.  
24          Please, do the honorable thing for us and for  
25          yourselves. Think about it.

1 Does anyone on this panel have a comment or a  
2 question for me?

3 **DR. ZIEMER:** Judy, thank you for a very  
4 articulate presentation.

5 **MS. PADILLA:** I have one more thing --

6 **DR. ZIEMER:** And you wish -- you wish to  
7 introduce your --

8 **MS. PADILLA:** In conclusion --

9 **DR. ZIEMER:** -- your helper here?

10 **MS. PADILLA:** In conclusion I would like to say  
11 a short comment.

12 **DR. ZIEMER:** Sure.

13 **MS. PADILLA:** In 2006, \$350 million was awarded  
14 to the landowners downwind of Rocky Flats  
15 Plant, and the Bush administration reduced the  
16 program for sick nuclear workers by 44 percent.  
17 That's \$686 million. Does the government take  
18 advantage of the sick and helpless and call it  
19 safeguarding the budget? Was dose evidence  
20 ignored, bypassed or incorrectly assigned as a  
21 defensible answer to meet budgetary (sic)  
22 constraints? Does NIOSH extrapolate incomplete  
23 data and call it objective analysis? Seventy  
24 percent of all claimants at Rocky Flats Plant  
25 have been denied; 1,145 claimants from 50,000

1 total Rocky Flats Plant workers. We deserve a  
2 decision free from error. How many more will  
3 die before their claims are acknowledged?  
4 NIOSH has said that we are trying to pull a  
5 fast one by claiming cancers which are not  
6 warranted. Ridiculous. By the exploitation of  
7 cancer victims, is this a condescending  
8 statement for the relative value of our lives?  
9 You measure the integrity of a society by how  
10 they treat the people who died for them.  
11 Greater love has no man than he would lay down  
12 his life. Rocky Flats Plant nuclear workers  
13 have been there and done that. Abraham Lincoln  
14 said no one is above the law. He also said,  
15 and I quote, I have always found that mercy  
16 bears greater fruit than strict justice, I  
17 close quote.  
18 Compare the radiation dose of process workers  
19 to that of the general population. Compare the  
20 number of cancers above the norm, rare cancers,  
21 and the number of total cancer incidence with  
22 the number of process workers versus non-  
23 process workers. The analysis is clouded, but  
24 creates clear patterns of deception and  
25 mismanagement. Working in a nuclear defense

1 plant can be a death penalty. One in ten die  
2 waiting for their cancer claim to be decided.  
3 We are like the dinosaur when the climate  
4 changed, with no reason to roam the earth. Or  
5 David versus Goliath, with no resources, no  
6 representation, no support from our government  
7 in a life and death situation. We need to pin  
8 NIOSH down on questions such as how much does  
9 it cost to process claims; how long does it  
10 take; exactly how accurate is it; real answers  
11 with no mumbo-jumbo. Two people can look at  
12 the exact same thing and see it totally  
13 different. A Ph.D. does not make you a decent  
14 human being. We Cold War veterans took a  
15 radioactive bullet for our country, and we are  
16 neglected. We rank after pork barrels, gas  
17 price gouging, lobbyists for big business,  
18 missile defense shields for Poland, and \$30  
19 billion for AIDS in Africa, our own tax  
20 dollars. Wouldn't it make more sense to take  
21 care of our sick citizens first? We need a  
22 representative to press this issue. Will some  
23 Congressman submit a bill, a Congressional  
24 inquiry or court order? Will a university  
25 journalism class take on our cause as a

1 project? Will a health physics expert  
2 investigate the speculations and guesswork of  
3 NIOSH? Will some hungry lawyer take on a huge  
4 class action suit? I guess we'll find out  
5 after the Presidential advisory panel votes.

6 **DR. ZIEMER:** Thank you.

7 **MS. PADILLA:** Thank you.

8 **DR. ZIEMER:** Thank you.

9 **MS. PADILLA:** *Que sera sera.*

10 **DR. ZIEMER:** Next we'll hear from Tom --  
11 Haverty, is it Haverty? Tom.

12 **UNIDENTIFIED:** (From the audience and off  
13 microphone) He should be on the phone.

14 **DR. ZIEMER:** Oh, is Tom on the phone?

15 **UNIDENTIFIED:** (From the audience and off  
16 microphone) Yes, Dr. Ziemer, he should be on  
17 the phone.

18 **DR. ZIEMER:** Tom, are you there?

19 (No response)

20 Hello? Tom Haverty?

21 **MR. HAVERTY:** Yes, can you hear me?

22 **DR. ZIEMER:** Yes, Tom. Please go ahead.

23 **MR. HAVERTY:** Okay. Hi, my name's Tom Haverty.  
24 Several of you there probably already know me.  
25 I was an employee of Rocky Flats from 1984



1           until 2000. I worked as a electrician  
2           technician and then as an electrical engineer,  
3           and I spent most of my time in the process  
4           areas. So that's kind of my background.  
5           Basically I'm a -- I've got -- I'm basically  
6           terminal cancer. The thing I'd like to point  
7           out to you folks on the Board is, first of all,  
8           in my own -- in my own case, it's not the  
9           money, it's the recognition. Just as much as a  
10          returning vet from Afghanistan or from Iraq  
11          took a bullet for his country, I just took a  
12          neutron for mine. To be told that no, you  
13          didn't really do that is kind of a slap in the  
14          face. No, it isn't kind of a slap in the face;  
15          it is, and that hurts a lot.  
16          But I do have some technical issues I'd like to  
17          -- I'd like to pose. I realize that this isn't  
18          a question/answer session, so I'd like to throw  
19          these out as open questions.  
20          First of all, we're centering right now on  
21          exposure reconstruction, which is difficult, at  
22          best, and impossible probably in reality. But  
23          it seems that one of the things would probably  
24          be more indicative of what actually happened is  
25          that -- I'd like to see the epidemiolog-- I

1           can't even speak, excuse me -- epidemiological  
2           studies of health effects on -- not only on  
3           Rocky Flats process workers, Rocky Flats  
4           administrative workers and the general  
5           population of Denver. These are  
6           (unintelligible) can be done and I suspect have  
7           been done, I just don't happen to have the  
8           results of them.

9           The other thing -- other question I'd like to  
10          pose is just exactly what are the costs to  
11          adjudicate each claim. Having dealt with the  
12          federal government for a number of years, I  
13          suspect that the cost to investigate each claim  
14          and adjudicate that claim and try and do dose  
15          reconstruction are probably orders of magnitude  
16          higher than it would just to pay the claim.

17          The things that I'm concerned about are, as Mr.  
18          Horan had indicated, is dose reconstruction is  
19          very difficult, at best, especially where  
20          there's no data. And one of the other things  
21          that he had only slightly alluded to were the  
22          tremendous doses that were received from the  
23          electron beam welders. They developed  
24          tremendous amount of X-ray, and many times the  
25          shielding on those things were in poor

1           condition.

2           Which kind of leads to another point I wanted

3           to make, first of all concerning the recent

4           fire in 371, which was -- went unreported for

5           several hours. Another issue that I had worked

6           on were what's called single -- single detector

7           drops on the crit\* system. That was one of my

8           responsibilities, was to move crit detectors

9           because they kept going off, so I was

10          instructed to move those things into an area

11          which would not cause the crit detectors to go

12          off so often because of the neutron flux of

13          material which was stored in these storage

14          areas, particularly in 371. And I think what

15          that shows is that a basic pattern of

16          misinformation and mishandling of information

17          which placed workers at significant risk.

18          Now there's a lot of money that went out of

19          Rocky Flats to folks who were what I term non-

20          participants -- they were participants, but

21          they were way up on the top. I don't want to

22          mention any names, but everybody can probably

23          take a shot at who they were.

24          The things that took place were -- everybody

25          knows what purple paint is for, and stainless

1 steel floors, and this is how things were  
2 handled out there. I was a little naive. I  
3 thought no, these folks are really going to  
4 watch out for us. Yeah, right. So I think  
5 there was a tremendous -- just -- a tremendous  
6 pattern of misinformation and mishandling of  
7 people's lives. The respect for us as workers  
8 just wasn't there.

9 With that, I'm going to end my comments. The  
10 only thing I would like to say is -- to you  
11 folks on the Board is that we actually  
12 (unintelligible) out there and did it. I -- I  
13 understand that some of you folks also did,  
14 too. But please remember that it isn't -- at  
15 least in my case, it's not the money. I'd like  
16 somebody to actually say yeah, we know that you  
17 took a -- took a shot for your country and  
18 here's your Purple Heart.

19 Thank you. Good evening, folks.

20 **DR. ZIEMER:** Okay, thank you, Tom. Next we  
21 have Kay Barker.

22 **MS. BARKER:** Good evening, Dr. Ziemer and  
23 members of the Board. I promise to be very  
24 brief tonight. I'd like to thank you for  
25 allowing me to present my public comments.

1 I would like to talk about everything entirely  
2 different tonight. I know you're very tired of  
3 me -- having me talk about the major conflicts  
4 of interest that the NDRP is, also about data  
5 reliability and all the zeroes, as I am in  
6 telling it.

7 So I want to thank Board member Lockey, who  
8 stood up at the last Board meeting and told all  
9 of us Rocky Flats claimants that your hands are  
10 tied by the law and the only thing -- way  
11 things can be changed is if Congress changes  
12 them. I don't know if you're aware of this or  
13 not, but I would imagine after David Hiller  
14 from Senator Salazar spoke tonight, you are.  
15 But on Monday, June 4th, 15 senators, including  
16 our own Senator Salazar, called for  
17 Congressional hearings into why sick nuclear  
18 weapons workers are facing delays and other  
19 problems in getting federal compensation. In  
20 their letter the senators stated Congress knew  
21 when it created the program that finding a  
22 scientific link between some workers' radiation  
23 exposure and the illnesses would be difficult.  
24 That's become some records were missing,  
25 inadequate, lost or destroyed, end of quote.

1           In such cases the law allows workers for  
2           certain radiation-related cancers to receive a  
3           Special Exposure Cohort status and streamlined  
4           help. I have checked the law and your  
5           operational guidelines, and I have found  
6           nothing that shows that you have to agree with  
7           NIOSH, especially when your own auditor's  
8           contractor say otherwise. There are no rules,  
9           no procedures and nothing in the law that ties  
10          your hands and would prevent you from voting  
11          for the whole petition. Like Congress said,  
12          they knew records were missing, inadequate,  
13          lost or destroyed, and that it would be  
14          difficult to find scientific links for workers'  
15          radiation exposure. That is why they set up  
16          the Special Exposure Cohort. They said nothing  
17          about allowing NIOSH over 800 days to come up  
18          with some unknown type of scientific unproven  
19          beliefs that they can play God and do all the  
20          dose reconstructions they claim. Has the CDC  
21          lawyers or DOL lawyers given you an opinion on  
22          how to interpret the law? If so, we Rocky  
23          Flats claimants want a copy of it.  
24          Dr. Ziemer, I urge you and the other Board  
25          members to seriously consider what I've said

1           tonight before deciding on the Rocky Flats  
2           petition tomorrow. Your hands are only tied if  
3           you want them to be tied in order to appease  
4           your conscience. The meaning of conscience,  
5           per Webster Dictionary, is a knowledge or sense  
6           of right and wrong, with urge to do right,  
7           moral judgment that opposes the violation of a  
8           previously-recognized, ethical principle and  
9           that leads to feelings of guilt if one violates  
10          such a principle.

11          Make Congress proud and vote yes for the whole  
12          petition tomorrow, per Congress's beliefs.

13          Thank you.

14          **DR. ZIEMER:** And thank you, Kay, for your  
15          comments.

16          Terrie Barrie I think is on the telephone line.  
17          Terrie, are you there?

18          **MS. BARRIE:** I'm here.

19          **DR. ZIEMER:** Oh, you're here, okay. I -- I was  
20          told you might be here by phone, but welcome.

21          **MS. BARRIE:** Good evening, Dr. Ziemer, members  
22          of the Board. And Dr. Ziemer, I -- we really  
23          appreciate being allowed to call in our  
24          comments. That is -- that is such a big help  
25          to, you know, the advocates and some of the

1 workers, as Mr. Harvaty (sic), who can't  
2 participate.

3 My name is Terrie Barrie. I'm with the  
4 Alliance of Nuclear Worker Advocacy Groups.  
5 And I, too, will be brief, but I will discuss  
6 the NDRP and the zeroes that Kay Barker decided  
7 not to.

8 I do not understand why you are even  
9 considering using the NDRP in any way, shape or  
10 form. The conflict of interest involved with  
11 that document is overwhelming. There's a  
12 conflict with the authors. There's a conflict  
13 with ORAU, who assigned these authors to do it.  
14 It -- it makes no sense to me that you would  
15 even consider using one page of this document.  
16 The other question I have is -- or more of a  
17 concern, is I understand that NIOSH is deleting  
18 any zero records and doing the average of the  
19 actual doses. Is that correct? I believe I'm  
20 -- I understand that. We un-- NIOSH has also  
21 testified that there are a couple of different  
22 reasons why there are zeroes, or could explain  
23 the zeroes. One of them is they didn't turn in  
24 the badge. But one major one is -- is the zero  
25 was because the badge was contaminated, too



1 contaminated to read, so they assigned a zero.  
2 How, by throwing out zeroes, will that be  
3 claimant friendly if that worker had a badge  
4 that was too contaminated? That -- that's a  
5 big, big issue with me.

6 I also do not really care for -- and I just  
7 read this last night. In the evaluation report  
8 it says that -- NIOSH states that they have  
9 access to sufficient information to estimate  
10 the maximum do-- radiation dose incurred by any  
11 member of the class under plausible  
12 circumstances during a specified period. Who  
13 determines what's plausible? Okay? You'll --  
14 you'll be hearing from workers all night  
15 tonight telling about their experiences. Is  
16 NIOSH going to just ignore that and -- and --  
17 and just say well, that's not plausible to us.  
18 That makes no sense to me, either.

19 And the other thing that bothers me is NIOSH  
20 said they interviewed five Rocky Flats workers  
21 to determine whatever they determined today. I  
22 did not have time to really evaluate the recent  
23 reports. Five workers. How many's here, 100  
24 workers? Why did they just stick with five?  
25 Was it those five who had the answers that

1 NIOSH was looking for? These workers here,  
2 you'll hear from them tonight, I ask you -- I  
3 beg you, if that's what it takes, to consider  
4 the oral history before making your decision.  
5 That history is just as important as any  
6 scientific calculation.

7 Thank you for your time.

8 **DR. ZIEMER:** Thank you, Terrie. And this looks  
9 like maybe a relative, George Barrie. George,  
10 are you here?

11 **MR. BARRIE:** Good evening, Dr. Zimmer (sic) and  
12 members --

13 **DR. ZIEMER:** Use the mike, George.

14 **MR. BARRIE:** Sorry. Good evening, Dr. Zimmer  
15 (sic) and members of the Board. My name's  
16 George Barrie. I worked at Flats in the early  
17 '80s as a machinist and what Mr. (sic) Brant  
18 Ulsh said today, that NIOSH is -- bases the  
19 coworker's model on plausibility, God forbid  
20 that I ever get cancer, but if I do, is NIOSH  
21 going to -- going to think it's plausible that  
22 a returned pit in 777 leaked? I got dosed. It  
23 happened to me.

24 I had no protection other than a half-mask that  
25 was donned after the incident happened from a

1 down-draft table. This pit wasn't even in the  
2 glovebox. It should have been in a plenum  
3 system to begin with, and you know, are they  
4 just going to blow that away because oh, you  
5 don't have any proof? Well, I can't find no--  
6 nose -- nasal smears. I can't find anything to  
7 do with the -- the incident, and I directly  
8 talked to many DOE worker, I don't even know  
9 who they were at the time, you know, why can't  
10 I find this.

11 And -- and -- you know, what about a former  
12 coworker that I worked with in another  
13 building, [Name Redacted], whose experience  
14 during the '69 fire was totally ignored. It's  
15 like who are you? This man was there for 20-  
16 plus years, and it's like who are you. It's  
17 like hello, you know.

18 What -- why are we being treated like children?  
19 We built weapons for this country that might --  
20 I might bring up that they happened to be out  
21 there protecting us right now from Iraqis  
22 trying to come over here and terrorize us, and  
23 you're treating us like kids and that we were  
24 just bimbos and monkeys on a -- on a tree?  
25 Please don't do that to us. Bring back the

1 human factor. Bring back the least as likely  
2 as not. We weren't there doing popcorn. We  
3 weren't there doing -- we were there protecting  
4 our country. Remember that in the back of your  
5 head.  
6 We're going by what all these other entities  
7 and sources were telling us. I -- I could go  
8 on and on about that but I won't because we  
9 have -- we have issues here.  
10 NIOSH didn't take -- that -- didn't think it  
11 was plausible that he was made to -- oh, I'm  
12 sorry. See -- give me a second here. Oh, and  
13 -- and with the incident that I -- I mentioned  
14 with [Name Redacted] was he had went to the  
15 down-draft four times before he was clean  
16 enough to go to the on-site hospital, and  
17 doesn't plausibility -- doesn't that -- oh, I  
18 got my notes mixed up here. Plausibility  
19 doesn't seem to be very claimant friendly --  
20 friendly, basically. And it -- it should be  
21 strictly claimant friendly. We're -- we're at  
22 an ends reach right now and we come up with --  
23 with justifiable anger and we come up with all  
24 kinds of other human factors that get in there  
25 and you -- and then you guys just blow it --

1           blow it off or think that oh, we're just  
2           wimping out or something. No, it's just very,  
3           very critical to us and very emotional to us,  
4           and it's hard not to get that emotional human  
5           factor in there without getting it out of  
6           control. And I don't know, I -- I guess in  
7           closing that all I ask is just keep this in the  
8           human factor and just give us the benefit of  
9           the doubt and keep that least as likely as not  
10          factor in there because we're human, we're all  
11          fallible. I know you -- you people have a lot  
12          to think about and a lot to worry about and lot  
13          to decide, but decide for the people. We, the  
14          people. Don't decide because you think that  
15          some other entity is waiting for your answers  
16          to be answered the way they want it to. Answer  
17          it right. Answer it for the people, not  
18          against the people. Thank you very much.

19          **DR. ZIEMER:** Thank you, George. Robert  
20          Carlson?

21          **MR. CARLSON:** Board members, my name is Robert  
22          Carlson, and did you ever take in consideration  
23          the data from the University of Fort -- out --  
24          Fort Collins, the injected plutonium in  
25          beagles? I gave you some paperwork over there

1           that you can look it over. And they also  
2           injected some prisoners with plutonium, and  
3           they were suffering and some of them died from  
4           plutonium injections. I have a summary of the  
5           testing for Fort Collins, and if you'd like to  
6           -- want it, I gave it to you already. It shows  
7           that to eliminate the problem with the  
8           injections, you just kill the dogs and you  
9           don't have a problem.

10          A new article in the October 19th, 1999 *Denver*  
11          *Rocky Mountain News* by Lee (sic) Ackland stated  
12          from 1969 to 1996 the fire department responded  
13          to 164 fires, 31 were plutonium fires, 22 in  
14          Building 771 and nine in Building 776 and 777.  
15          Countless other plutonium fires had broken out  
16          but were extinguished by the workers and the  
17          fire department was not called. In reality,  
18          however, managers and scientists in late 1960s  
19          knew little about the plutonium's strange  
20          characteristics and behavior than they had  
21          known before the 1957 fire. The rest of the  
22          article is about the 776 fire and how it nearly  
23          got away and could have contaminated Denver.  
24          At monitor training, [Names Redacted] were in  
25          health physicists. They stated many times it's

1 far more dangerous to have internal  
2 contamination. You can put a value on the  
3 types of radiation as follows: The higher the  
4 number, the more dangerous it is. Alpha  
5 particles is ten to 20. Beta is one to two.  
6 Gamma is one. Neutrons, slow, is four to five.  
7 Neutrons, fast, is ten. Protons are five. If  
8 a beta radiation is two, then we mean it is  
9 twice as dangerous as gamma. When you evaluate  
10 doses you practically try to eliminate the  
11 alpha and only consider the neutrons and gamma.  
12 Alpha is one of the most dangerous radiations.  
13 I have 50 alpha particles in my system, along  
14 with five alpha particles from americium  
15 emitting every second in my body. That's 3,300  
16 alpha particles a minute. On a Charlie Rose,  
17 he had four specialists, cancer specialists, on  
18 his program and they agreed that cancer caused  
19 -- is caused by the body that kills -- when  
20 cells are killed. I have 3,300 body cells that  
21 are killed every minute, so I can expect  
22 cancer. I had colon cancer where they took out  
23 two feet of colon and two feet of intestine.  
24 My life has changed since then. Why? 'Cause I  
25 need to go to the bathroom very often. There's

1 a straight shot, like the nurse told me. Now,  
2 I have prostate cancer that I know I would get  
3 because the half-life of plutonium in the body  
4 is around 100 years.

5 I will ask any of you if you would get an  
6 injection of plutonium to equal what I have in  
7 my body and let me see what your answer is.  
8 Yeah, I know all what you'd say. You'd say no,  
9 I don't want to do that.

10 Monitors were involved in every accident,  
11 incident and every -- including fire alarms,  
12 saam alarms, neutron alarms, gamma alarms and  
13 intercon -- intercom instructions.

14 I talked to David Shetto from NIOSH at June  
15 6th, 2007, and he said the probability of  
16 causation of Aden carcinoma was determined to  
17 be 41.29 percent, but on January 8th, 2007 the  
18 Department of Labor said it was 44.64 percent.  
19 This shows a lack of consistency. It should be  
20 increasing every year because I still have the  
21 plutonium and americium in my body releasing  
22 alpha particles every second.

23 I worked in 865 building for the last ten years  
24 as an experimental operator, and the following  
25 were in the met lab. We analyzed all kinds of



1 metals, including beryllium, uranium, stainless  
2 steel, titanium, vanadium and other exotic  
3 metals.

4 The name is Robert I. Carlson, that's me, my  
5 man number is [Identifying Information  
6 Redacted]. I had colon cancer and prostate  
7 cancer. [Name Redacted], his man number is  
8 [Identifying Information Redacted], he's  
9 deceased because he had cancer. [Name  
10 Redacted], these are just the people that  
11 worked in the met lab -- [Name Redacted],  
12 [Identifying Information Redacted], he's  
13 deceased; he had cancer. [Name Redacted], he's  
14 deceased, his man number is [Identifying  
15 Information Redacted]; he's deceased, cancer.  
16 And [Name Redacted], he's okay but he has some  
17 memory loss he said. And then there's [Name  
18 Redacted], I don't know what he died from but  
19 he's deceased; his man number is [Identifying  
20 Information Redacted]. [Name Redacted], his  
21 man number is [Identifying Information  
22 Redacted]; he has skin cancer. And [Name  
23 Redacted], his man number if [Identifying  
24 Information Redacted]; he's deceased because he  
25 had cancer. [Name Redacted], [Identifying

1 Information Redacted]; he's deceased be-- he  
2 has plutonium and Be in his heart. [Name  
3 Redacted], his man number is [Identifying  
4 Information Redacted], asbe-- he has asbestos  
5 and skin cancer. [Name Redacted], his man  
6 number is [Identifying Information Redacted];  
7 he has skin cancer. [Name Redacted], his man  
8 number's [Identifying Information Redacted]; he  
9 has Parkinson's (sic) disease. [Name  
10 Redacted], I don't know what has, but his man  
11 number is [Identifying Information Redacted].  
12 [Name Redacted], his man number's [Identifying  
13 Information Redacted]; he's deceased, he has  
14 beryllium -- had beryllium disease. [Name  
15 Redacted], his man number is [Identifying  
16 Information Redacted]; he's deceased, he had  
17 beryllium disease.

18 Out of 15 people in the met lab, 12 had some  
19 kind of disease by working at Rocky Flats.  
20 That's 80 percent of the people working in the  
21 met lab that had died or had cancer or some  
22 other illness from working at Rocky Flats. It  
23 could be higher if I knew what [Name Redacted]  
24 died of and what [Name Redacted] had, if he had  
25 cancer. All these people worked in 771

1 building at times.

2 I have a photo I give you of the supplied air  
3 that they had after the fire in 76 -- 776 fire.  
4 They cut a dry box apart to see if they could  
5 find what -- what started the fire. Notice the  
6 color of the ceiling and the walls. Originally  
7 they were white. You can see how much  
8 contamination there was in 776 building. In  
9 size reduction they put five or six people in  
10 supplied air in the morning and in the  
11 afternoon. That's ten going into supplied air  
12 every day. That's 50 a week, and 200 supplied  
13 air in a month, just in size reduction. This  
14 was like a dry box, highly contaminated.  
15 Monitors were the people who undressed these  
16 people and got them out of supplied air and  
17 checked them out.

18 They had a compressor for supplied air, and a  
19 person got burned, then they put some  
20 insulation around this area. This is the wrong  
21 thing to do 'cause it started the filters on  
22 fire and caused supplied air to be contaminated  
23 and the in supplied air passed out. I happened  
24 to be on vacation that day. Supplied air was  
25 going on in size reduction and in the filter

1 plenums in 776 building. A man named [Name  
2 Redacted] passed out in the plenum, and [Name  
3 Redacted] ripped his supplied air helmet off in  
4 a contaminated area and carried him out of the  
5 plenum, up the stairs. A few months later he  
6 died, [Name Redacted] died. In size reduction  
7 they had to drag people out of there.

8 So I'm telling you we worked in some of the  
9 worst places there is. Thank you very much.

10 **DR. ZIEMER:** And Board members, the picture  
11 that Robert just referred to is passed around,  
12 I think we can bring it back to this side of  
13 the table here, as well. Thank you.

14 Then we'll hear from -- let's see if I read the  
15 last -- R-o -- is it Rohern, Depois Rohern?  
16 Looks like R-o-h-e-r-n. Little trouble reading  
17 the writing here. R-o-n-e-n? Let's start with  
18 R-o, anybody --

19 **DR. WADE:** Romero? Romero?

20 **UNIDENTIFIED:** (From the audience and off  
21 microphone) Dennis?

22 **DR. WADE:** Yes.

23 **UNIDENTIFIED:** It's not that bad.

24 **DR. ZIEMER:** Well, I don't know, he should have  
25 -- it looks like my prescription.

1           **MR. ROMERO:** Should know me by now.

2           **DR. ZIEMER:** It looks like my prescription,  
3           Dennis. Okay, thank -- go ahead.

4           **MR. ROMERO:** You guys pretty much know me and  
5           everybody else knows me. I was -- been at  
6           Rocky Flats for 18 years, production welder for  
7           five years, 707, 776, 77, 44, 460 and now as a  
8           RCT in Building 771 for about 14 years. I've  
9           seen about everything out there from production  
10          days, D&D days. I don't know how naive people  
11          seem to think -- or you people or the public --  
12          I mean how many different contractors have come  
13          and gone from that place for numerous reasons?  
14          Mismanagement, ill dealings. How can you think  
15          that the record-keeping's going to be any  
16          different? You think they're going to tell DOE  
17          everything that went on out there?  
18          We did things out there during production days  
19          that wasn't allowed, but they wanted production  
20          done so DOE would not get somebody else to do  
21          it. So they would tell us if you don't do it,  
22          we'll find somebody we would -- that will.  
23          We'd leave our TLDs in the lockers, back  
24          pocket, under our apron. We did things that  
25          maybe weren't quite the right thing to do, but

1 management said it's okay, go ahead and do it;  
2 we'll back you up on it. We trusted management  
3 out there, different contractors over the  
4 years, during production times and D&D times  
5 and when the plant was dormant.  
6 Granted, they have -- NIOSH has their TLDs.  
7 They say they have all the information. They  
8 have bioassay. They have everything. But my  
9 theory is I don't believe they do because when  
10 we used to work in the back areas in the old  
11 days, we wore our whites. Get surveyed out, go  
12 to the locker room, go to the cafeteria, go to  
13 the credit union, payroll, you name it, in our  
14 whites.  
15 And then times went on, cafeteria would get  
16 contaminated, payroll be contaminated, lockers  
17 be contaminated, workers that don't even go in  
18 the back area, didn't even have TLDs, are  
19 exposed. They're eating at these places.  
20 They're working in these places. They're  
21 sitting side by side with this person in his  
22 whites that are probably contaminated and they  
23 don't even know it. What dose is NIOSH going  
24 to give these people? They didn't even have  
25 TLDs.

1           You can check the records. This happened on  
2           plant site. People's cars got contaminated.  
3           Homes got contaminated. The stuff left the  
4           back area. One way or another, it left the  
5           back area -- on their whites, on their shoes,  
6           you name it, it left the back area. It exposed  
7           everybody, including their family members. How  
8           do you do dose reconstruction on these people?  
9           They didn't even have TLDs.  
10          D&D days, they wanted the plant shut down in a  
11          hurry. Something had to give. Safety had to  
12          give. DOE wanted that place shut down. In the  
13          old days when we was wearing PAPRs, protection  
14          factors, 50 DAC, one DAC equates to 2.5  
15          millirem. Respirators -- negative pressure  
16          respirators were deemed -- 50 DAC, you shut the  
17          job done (sic), you upgrade to better PPE,  
18          better respirators or better engineering  
19          controls. Fifty DAC was the number we shut the  
20          job down on.  
21          We'd go to PAPRs, air purifying -- power air  
22          purifying respirators, 1,000 DAC -- 1,000 DAC  
23          we couldn't get the job done, supplied air, put  
24          the people in the safer equipment to get the  
25          job done. It takes too long to get the job

1 done in supplied air.

2 As you go on during D&D, the DAC values didn't

3 matter. We'd have people in respirators,

4 PAPRs, you name it, 10,000 DAC, 100,000 DAC,

5 maybe even a million DAC. You tell me, NIOSH,

6 what's the protection factor of that respirator

7 now? How much is in that respirator? We was

8 told at rad con training that for every 1,000

9 DAC you exceeded a PAPRs value, one DAC in the

10 respirator. I'm talking about a respirator you

11 wore for a day, a week, two weeks -- because

12 respirators were short-handed out there. How

13 long was that respirator contaminated, and it

14 was in an environment where we was using water

15 or spray to knock the contamination out of the

16 air. What happens to a canister respirator

17 when it gets wet? It degrades. Its efficiency

18 is no longer any good. What's the protection

19 factor of that respirator now?

20 The only protection we had out there to do our

21 job were negative respirators, PAPRs or

22 supplied air. That's all we had. We didn't

23 have nothing else to use.

24 Coveralls, Tyveks, the environments we were in

25 were so lethal, I don't care what that TLD did



1 for external dose. It's not going to measure  
2 internal dose, and that's what I think happened  
3 out there over the years, being in the back  
4 areas, saams go off, wearing a respirator or  
5 whatever doing decon jobs, you're wearing a  
6 respirator that's not necessarily 100 percent  
7 working all the time. It's not perfect.  
8 People did their jobs. They trusted management  
9 to keep adequate records. They didn't do that.  
10 We had DAC-hour tracking records, we had  
11 logbooks, we had PI factor worksheets, we had  
12 nasal/mouth, we had bioassays and stuff. It  
13 got to the point on bioassays -- 'cause I know  
14 'cause I was on the step-out pad when this was  
15 going on -- they have to do bioassay on a  
16 person, Price Anderson fines from the  
17 government, if you know what Price Anderson is.  
18 They would get fined. Skin cons, \$27,000. How  
19 much can a company do when that's happening on  
20 a daily basis constantly? Decon that person,  
21 send them on their way. The documentation  
22 didn't get done. I don't care if NIOSH says  
23 they got it, they didn't -- they don't have it.  
24 They didn't do bioassay all the time. They  
25 didn't do urinalysis, they didn't do

1 nasal/mouth, they didn't do body counts because  
2 they didn't want Washington to know exactly  
3 what was going on to get that plant cleaned up  
4 and done. The information's not there.  
5 The workers -- you can talk to any of these  
6 worker and tell them the jobs they were done  
7 how things got done out there. It was not  
8 safe. A plant that was supposed to be shut  
9 down by 2050 is done by 2006? Come on, how  
10 naive can people be to think something had to  
11 give? Safety had to go out the window.  
12 Where's the documentation to prove it?  
13 Company's not going to say nothing. They got  
14 their money. They got their bonus. Everything  
15 was good, according to them. How come there's  
16 so many people sick nowadays? Workers are sick  
17 right now for what reason? Management or  
18 contractor or even DOE did not make things be  
19 done the right way. DOE turned their head to  
20 get that site done and cleaned up, and it's  
21 still there waiting to go off again 'cause it's  
22 not cleaned up to this day.

23 **DR. ZIEMER:** All right. I'm having trouble  
24 reading the next one --

25 **MR. ROMERO:** Not me.

1           **DR. ZIEMER:** It looks like Doboica -- I'm --  
2           the last name appears to be M-i-c --

3           **UNIDENTIFIED:** (From the audience and off  
4           microphone) She's right here.

5           **UNIDENTIFIED:** (From the audience and off  
6           microphone) That's Michelle.

7           **DR. ZIEMER:** Michelle, okay.

8           **UNIDENTIFIED:** (From the audience and off  
9           microphone) You want my glasses?

10          **DR. ZIEMER:** I may need help here.

11          **MS. DOBROVOLNY:** Actually no, my last name's  
12          Dobrovolny, so --

13          **DR. ZIEMER:** Okay.

14          **MS. DOBROVOLNY:** -- I can understand why you're  
15          having trouble.

16          I just want to thank you tonight for giving me  
17          this opportunity and most -- know that most of  
18          you have heard from me many times before. And  
19          I think the thing that I find the most  
20          astonishing is that I have to stand up here and  
21          beg for you to do what's right.

22          I'm here once again in front of this panel.

23          The problem I see here is I've been watching  
24          most of you in body language, and it seems as  
25          though when people are speaking some of you are

1 very attentative (sic) and some of you seem --  
2 it just doesn't matter. It makes me feel like  
3 some of you have already made up your minds,  
4 and that hurts.

5 I've been denied six times. I watched my  
6 father-in-law die a horrible death, retired,  
7 nine months after he left there. I watched two  
8 cousins die horrible deaths. I've watched  
9 another cousin die. I have -- I'm sick. My  
10 brother has berylliosis and I have other family  
11 members sick. The only common denominator  
12 here? We all worked at Rocky Flats. The rest  
13 of my family, they don't have cancer. They're  
14 not sick. Those statistics -- that's 100  
15 percent. How can you argue with that?

16 I'm tired of being denied. I'm on disability.  
17 I'm a parent of three children. I ask you, if  
18 I was your sister or your mother, would you be  
19 looking at this decision differently? I  
20 believe that you would, but because I'm just  
21 somebody you see on a regular basis --  
22 hopefully you don't have to see me again;  
23 you'll vote the right way and I won't have to  
24 come and petition and fight for my right again.  
25 I truly believe if I was your sister or your

1 mother, you would be looking at this petition a  
2 different way.

3 Please, vote with your hearts this time, not  
4 with the politics of what people are asking you  
5 to do. Vote for us. Thank you.

6 **DR. ZIEMER:** Raymundo -- Raymundo? S-a-l --

7 **UNIDENTIFIED:** (From the audience and off  
8 microphone) Salazar.

9 **DR. ZIEMER:** That could be it. Hey, there you  
10 go.

11 **MR. SALAZAR:** I'm Raymundo Salazar, and I  
12 worked at the Flats for 15 years as a sheet  
13 metal, and I got blood poison, which is called  
14 nickel -- you want me to wait for him?

15 **DR. WADE:** Go ahead.

16 **MR. SALAZAR:** And I got that nickel in my -- in  
17 my system, in my fingers, and then it went back  
18 to my back and then now to my legs and  
19 sometimes I feel like having them chopped off,  
20 but the doctor said if I have them cut, it's  
21 going to come out someplace else. And it's --  
22 it's like a syrup comes out of my system when  
23 it bleeds, and I been suffering since '93. And  
24 I been okayed that -- by Washington, and they  
25 said that I -- I'm going to get something, but

1 I haven't received it. And now they -- about  
2 two weeks ago they said that they're going to  
3 send my records back to Denver to see if they  
4 would help me, but I haven't heard nothing.  
5 And sometimes I feel like having my legs  
6 chopped off. That's how bad they itch. And my  
7 insurance does not want to pay for my Medicare  
8 -- medication or whatever you call it, 'cause  
9 it's too expensive, they said. So that's my  
10 problem. Thank you.

11 **DR. ZIEMER:** Thank you. Jerry Mobley. Here  
12 comes Jerry. Let's see, I think I have a  
13 handout from you, Jerry, as well -- yes.

14 (Pause)

15 **MR. MOBLEY:** My name's Jerry Mobley. I was a  
16 stationary operating engineer, or an SOE, in  
17 Building 371 for 13 years. The handout is a  
18 copy of a letter that I gave to the U.S.  
19 Department of Labor on May 21st of this year.  
20 It kind of explains where I'm at as far as  
21 what's going on with my exposures.  
22 One of the problems I've had with NIOSH is they  
23 say it's all from the dosimeter. Now as a  
24 stationary operating engineer -- I want you to  
25 think about that thermostat on the back wall.

1           Think of it as a highly radioactive source,  
2           with your back to it.  If you were wearing a  
3           dosimeter all the time, the dosimeter would not  
4           see any radiation.  It has to go through you.  
5           They -- you're water, you're about what, 95  
6           percent water?  The plastic around the  
7           dosimeter was made to read from one direction  
8           only -- the front.  Okay?  Please forgive me if  
9           I sound a little harsh, but I am a little bit  
10          worked up.  Nobody seems to be listening.  
11          My cancer is not on this list.  They say skin  
12          cancer doesn't -- isn't caused by radiation.  
13          I'll address that in the last paragraph when I  
14          get to it.  If you'll look at drawing A -- did  
15          everyone get one?  I hope I had enough copies.  
16          **DR. ZIEMER:**  We may have been short a copy or  
17          two, but we can (unintelligible) --  
18          **MR. MOBLEY:**  In the SOE control room where I  
19          was at for the 13 years, we sat with our back  
20          to the MAA, monitoring six computers in the  
21          whole building operation as far as the  
22          environment was concerned.  The drums were  
23          stored on the opposite side of a wall.  They  
24          had a TLD for the room facing into the room,  
25          looking for room contamination.  Right?  At one

1 point when then -- and I may have to ask for  
2 some help out here. There was a problem and  
3 they started issuing these little yellow  
4 dosimeters that were real time, that had a  
5 digital readout.

6 **UNIDENTIFIED:** (From the audience and off  
7 microphone) (Unintelligible)

8 **MR. MOBLEY:** APDs?

9 **UNIDENTIFIED:** (From the audience and off  
10 microphone) Electronic dosimeters.

11 **MR. MOBLEY:** The APDs, when they were turned in  
12 at night in the RCT office, the numbers would  
13 increase at night when nobody was using them.  
14 And it took a while for them to figure out why  
15 -- yeah, the defective? Why are these  
16 increasing in number. To make a long story  
17 short, it was determined the radiation coming  
18 from the back area into areas that were not  
19 supposed to be hot. The TLDs weren't picking  
20 it up, but the -- what did they call them  
21 again?

22 **UNIDENTIFIED:** (From the audience and off  
23 microphone) APDs.

24 **MR. MOBLEY:** -- APDs. So they came down and in  
25 our control room they -- if you look at drawing



1           B -- and please forgive my drawings; I'm not an  
2           artist. But on drawing B, when they took the  
3           TLD and put it on the back side of the -- of  
4           the alarm panel facing the MAA, when they took  
5           their readings, all of a sudden the control  
6           room was a radiologically-controlled area  
7           requiring dosimetry. They came in there and  
8           they -- it's hot. They did some real quick  
9           maneuvering, and then if you look at C -- and  
10          oh, on -- on drawing B, notice my back is still  
11          to the hot area. That's the way the room was  
12          set up. We were always to the back. 99  
13          percent of the time in this room we were not  
14          required to wear dosimeters, and we didn't  
15          because it's supposed to be cold. Right?  
16          So if you look on C, their solution was they  
17          moved the drums away from the wall that was  
18          getting us so hot and got the level down just  
19          low enough to take the room off of -- what do  
20          they call it?

21          **UNIDENTIFIED:** (From the audience and off  
22          microphone) Take off dosimeter monitor.

23          **MR. MOBLEY:** Yeah, take it off dosimetry, but  
24          it's radio -- radiologically-controlled area.  
25          Now if we go back to the first page again, to

1           make a long story short -- 'cause you can read  
2           these if you want -- but that bottom paragraph,  
3           it should be noted -- and I brought this up  
4           last time. Five of the 12 SOEs, at least five,  
5           'cause some of the other guys moved out of  
6           state and the Kaiser-Hill people will not give  
7           you where they moved to, confidentiality. We  
8           can't tell you where their addresses are. So I  
9           have no way of contacting them. Medical  
10          records -- and when I've asked the Department  
11          of Labor for numbers, oh, we can't give you any  
12          information like that; that's confidential  
13          information. But of the five that we know,  
14          five of us in 371 have melanoma cancers. The  
15          general population for Colorado -- and there's  
16          a document on the back page there says that the  
17          population has a 0.1134 percent of having  
18          melanoma cancer. In other words, one in  
19          4,237.228 people of the general male population  
20          can expect to have melanoma cancer. But the  
21          SOEs in 371, 41.5 percent, at least.  
22          Now, you've heard a lot of challenges, and I  
23          don't want to get personal about challenging  
24          anybody that you're not paying attention or  
25          you're letting politics get in the way of

1 making rational decisions. To me, sometimes  
2 numbers -- I don't -- NIOSH, they can work  
3 these numbers all they want. But real numbers  
4 of the incidence of cancer in Rocky Flats  
5 workers, compared to the Colorado -- not  
6 necessarily the nation, because they already  
7 say that Colorado has a higher incidence of  
8 cancers because of our elevation and the less -  
9 - all kinds of reasons about the elevation and  
10 the less --

11 **UNIDENTIFIED:** (From the audience and off  
12 microphone) Closer to the sun.

13 **MR. MOBLEY:** Closer to the sun and the -- the  
14 ozone.

15 **UNIDENTIFIED:** (From the audience and off  
16 microphone) (Unintelligible) less shielding.

17 **MR. MOBLEY:** Yeah. Not counting that, Colorado  
18 -- we're way above -- not a little above, to me  
19 it's -- I don't want to say a no-brainer, but  
20 that's what my grandchildren would call it --  
21 Grandpa, it's a no-brainer. Thank you.

22 **DR. ZIEMER:** Okay. Thank you. Thank you,  
23 Jerry.

24 Next, Laura Schultz. Laura? Or -- how about  
25 Jeff Schultz?

1           **MR. SCHULTZ:** She wants me to go first.

2           **DR. ZIEMER:** Oh, okay, Jeff goes first. I'm  
3 not going to get into that one. You guys work  
4 it out.

5           **MR. SCHULTZ:** I've been asked by the daughter  
6 of a -- okay. I've been asked to read a  
7 statement from a -- the daughter of a former  
8 Rocky Flats employee, and she's chosen to keep  
9 her name anonymous at this time, for some  
10 personal reasons.

11           (Reading) I am the daughter of a Rocky Flats  
12 employee. Like so many others, was diagnosed  
13 with cancer in his 40s. He is not here to tell  
14 you about the devastating effect of being  
15 struck with deadly cancers at such a young age  
16 had on him and on his wife and seven children  
17 because the cancer killed him in the prime of  
18 his life.

19           The reason the EEOICPA was passed by the  
20 Congress in 2000 in the first place was  
21 supposedly to ensure fairness and equity for  
22 the nuclear weapons workers who were exposed to  
23 radiation and other toxic materials during the  
24 performance of their jobs. However, at Rocky  
25 Flats the combination of inadequate exposure

1 records and the detailed administrative process  
2 to which the employees have been subjected make  
3 it unlikely that even employees who had worked  
4 in hot areas for many years, were exposed daily  
5 and subsequently got ill and died can qualify  
6 for compensation.

7 While, generally speaking, the process  
8 established for administering this program  
9 undermines the spirit and intent of the EEOICPA  
10 at Rocky Flats, there is overwhelming evidence  
11 that the doses cannot be reconstructed. For  
12 example, in my father's case NIOSH stated that  
13 most of his exposures occurred within the last  
14 five years of his employment, too close to the  
15 death to have caused it. Looking at his  
16 exposure records throughout his employment,  
17 including during the first six years, the  
18 records are conspicuously incomplete. NIOSH  
19 calculated that the gaps he was -- excuse me.  
20 NIOSH calculated that during the gaps he was  
21 not exposed. My father did not -- did the same  
22 type of work throughout his employment at Rocky  
23 Flats, so we are to conclude from this that the  
24 safety practices were better in the early 1960s  
25 than they were in the later 1960s. The

1 resulting gaps between exposures and the lower  
2 calculated dose exposures in the early '60s.  
3 The exposure records for one year are almost  
4 non-existent. Several other quarters are  
5 missing one or more categories of exposure.  
6 Are we to conclude that the monitoring was  
7 either faulty in early 1960s, resulting in gaps  
8 and missing categories of exposures? Either  
9 way, the workers who worked in the hot areas  
10 were exposed regularly. The records are not  
11 too reliable -- let me read this again. The  
12 workers -- the records are too unreliable and  
13 sketchy to show how much exposure employees  
14 like my father and his coworkers had. These  
15 records certainly don't prove that their  
16 cancers were not caused by their work.  
17 So what do we do now? We have established  
18 throughout his employment history that my  
19 father worked at Rocky Flats from 1961 to 1973  
20 in a hands-on job that exposed him to  
21 radioactivity and other carcinogenic toxins  
22 daily. We also know that he was diagnosed with  
23 brain cancer in his 40s. We know that when he  
24 died an autopsy conducted by Rocky Flats  
25 revealed plutonium and americium throughout his

1 system. We know that the concentrations were  
2 high in his liver and his lungs, and we know  
3 that before he died he was diagnosed with  
4 cancer in his brain, bones and skin. It is  
5 important to note that my father had been given  
6 a physical prior to his employment at Rocky  
7 Flats Plant, and it was documented that there  
8 were no prior radiation exposures.

9 During his employment at Rocky Flats he worked  
10 daily with these dangerous carcinogens as a  
11 requirement of his job. NIOSH acknowledged  
12 that his radiation exposures were received  
13 during his work at Rocky Flats. In response to  
14 a question posed by Congressman Spratt, NIOSH  
15 stated that maximum risk for brain cancer is  
16 attained at approximately 11 years post-  
17 exposure. However, even using their claimant-  
18 favorable process, the Department of Labor  
19 concluded that after 11 years of chronic and  
20 acute exposure, his illness and death were,  
21 quote, not related to his employment at the  
22 Rocky Flats Plant, unquote. When NIOSH  
23 reconsidered taking his skin cancer into  
24 consideration, they calculated the probability  
25 of causation and the numbers dropped

1 significantly.

2 Back in 1973 when my father was diagnosed with  
3 bone cancer, Rocky Flats terminated his  
4 employment immediately for reasons of permanent  
5 disability, yet it is a very slow process to  
6 get his bone cancer considered for his case.  
7 The adversarial relationship created by this  
8 claims process pits the government against the  
9 employees and the families of the deceased  
10 Rocky Flats workers. These sick workers are  
11 forced to try to prove that it is more likely  
12 that their exposures did cause their illness  
13 and they're deaths, when the government has  
14 already concluded that it did not. It is  
15 difficult and frustrating process, and pretty  
16 much an insurmountable burden.

17 Without the Special Exposure Cohort, the result  
18 for the Rocky Flats employees is worse than had  
19 the EEOICP not been passed at all. The reason  
20 is that processing these claims is extremely  
21 expensive for the taxpayers, it's extremely  
22 time-consuming for the government and the  
23 claimants, with little chance of relief for  
24 these sick or deceased Cold War heroes. It's  
25 imperative that Rocky Flats Special Exposure



1 Cohort be passed so that the Rocky Flats  
2 workers can receive the medical care and the  
3 survivor benefits that they were promised to  
4 them by the Congress when they passed the  
5 EEOICPA. And thank you for your time.

6 **DR. ZIEMER:** Thank you. Let's see, then we'll  
7 hear from Laura then.

8 **MS. SCHULTZ:** He hears from me too much.

9 (Pause)

10 Good afternoon. My name is Laura Schultz. I  
11 spoke to this Board last month in Westminster  
12 and a year ago at Cherry Creek on how important  
13 it is to pass the SEC for Rocky Flats.

14 I felt that my coworkers have done an amazing  
15 job at presenting their cases and stating that  
16 their cancers were caused by exposures while  
17 working at Rocky Flats.

18 After a passionate plea for your help, you  
19 matter-of-factly denied our petition, letting  
20 only approximately 250 workers that might be  
21 still alive between the ages of 70 to 95 have  
22 the SEC status.

23 The only thing considered in your deliberations  
24 were a few findings by the SEC (sic) that NIOSH  
25 could not disprove with their claimant-friendly

1 data and 55 (sic) percentile mumbo-jumbo.  
2 It is clear that you really don't care about  
3 anything that we have to say.  
4 I am here to remind you that the compensation  
5 bill came into existence because people like us  
6 complained to our government about a major  
7 health problem. Now the program has  
8 bastardized into a giant research project.  
9 That is what happens when you let Ph.D.s manage  
10 a project.  
11 We're not laboratory rats for you to study. We  
12 have families. We have lives. We fought for  
13 the Cold War of our country. The Congress  
14 promised us compensation if we completed the  
15 paperwork and had one of the listed cancers.  
16 We have absolutely no monitoring for exposure  
17 to heavy metals and toxic chemicals mixed with  
18 the radioactives while at Rocky Flats, yet you  
19 have denied almost all our claims. You people  
20 have continued to raise the bar to prevent us  
21 from receiving our compensation. I'm asking  
22 you today that the members of our Congressional  
23 delegation and news press -- media put pressure  
24 on these people to provide their -- the  
25 statistical data on the cancer rates of Rocky

1 Flats people versus Denver population. We must  
2 now go back to our Congressmen and push them to  
3 cut the administrative cost of this program to  
4 a minimum and concentrate on paying claims with  
5 the money NIOSH and DOE has mismanaged.  
6 Most of us are sick, and some may die from  
7 horrible death because we worked at Rocky  
8 Flats. I may die the same way. Don't expect  
9 me to go away. I'm going to be a real pain in  
10 the ass. You can count on it.

11 **DR. ZIEMER:** Thank you very much, Laura. Nila  
12 Adkins. Nila?

13 **UNIDENTIFIED:** Nila.

14 **DR. ZIEMER:** Nila, thank you.

15 **MS. ADKINS:** Good evening. My name is Nila  
16 Adkins. My husband name is Denny Adkins. He  
17 was 45 years old when he was diagnosed with  
18 pancreatic cancer. March, 2001 -- thing --  
19 which is -- pancreatic cancer is -- is an old  
20 man disease. Before he got sick he was very  
21 healthy -- a healthy man. He played a lot of  
22 golf and spent time with his children. When  
23 the girls are young, he liked to take them to  
24 this -- to their sport at school and spend time  
25 with them. But on October 2nd, 2003 would have

1           been our 27th wedding anniversary, but he  
2           passed away September 10, 2003 and never -- at  
3           age 47 and we never celebrated our -- our 27th  
4           wedding anniversary.

5           After he lingers for the two years, going in  
6           and out of the hospital -- hospital for  
7           surgery, radiation and chemotherapy, until he  
8           give up and don't want to do it anymore and  
9           want -- just want spend quality ti-- quality  
10          time with his family.

11          It -- it affected our life very hard,  
12          especially our children. It affected me mo--  
13          me most because he's not only my husband but he  
14          was my best friend and confidant, too. But  
15          most of all, he will never see our youngest  
16          daughter get married, nor her children, and  
17          never play with his grandchildren.

18          He and I had planned that when our children are  
19          grown up would enjoy ourself traveling and  
20          staying all together, but we can never do that  
21          now. We miss him so much that no amount can  
22          replace him. Danny is proud of his family and  
23          we are proud of him.

24          My only question is why did he die. During 21  
25          years of working at Rocky -- Rocky Flats, he

1           only received 44.1 percent of the cost (sic)  
2           and my claim has been denied twice. And also,  
3           a week before he died he told me that when his  
4           dosimeter badge reads zero, that means he got  
5           burnt out. He was an NDT -- NDT lab tech  
6           (unintelligible) and worked in all the --  
7           worked in all the hot area, especially 771. He  
8           died of a horrible disease. One thing he told  
9           me is not to never give up because he know what  
10          happened to him at Rocky Flats. I just want  
11          justice to be done for me and my family and all  
12          the Rocky Flat wor-- workers and a closure for  
13          all of us. Thank you.

14          **DR. ZIEMER:** Thank you, Nila, and I know that's  
15          very difficult for you to share that with us.  
16          We appreciate it.

17          Donna Quinlan?

18          **MS. QUINLAN:** My name is Donna Quinlan. My  
19          husband, Richard, commonly called Dick, was --  
20          worked out at Rocky Flats for 27 years. I  
21          spoke to you before. He died of a glioblastoma  
22          multiforme, a rare, very malignant, very  
23          aggressive cancer at the last. He -- a  
24          neurologist said when it was discovered that he  
25          had probably had that for up to 26 years. He

1           worked out there 27, and he just lasted a few  
2           months after it was diagnosed -- and surgery.  
3           And the neurolog-- the neurosurgeon said he was  
4           just buying him a little time.  
5           He was an extremely healthy man before that,  
6           before it hit. It was on a silent part of his  
7           brain, the part that affected coordination and  
8           balance, and he said that's why it wasn't  
9           discovered until it was at the nth degree of  
10          development. He -- hospice said he -- they did  
11          not expect him to see Christmas. He died  
12          January 1st, 1998. It was diagnosed August 5th  
13          of '97 and had surgery August 12th of '97, and  
14          then was dead by the first of the year -- kept  
15          him alive those last few weeks strictly by  
16          liquid Jell-o or soft Jell-o. That's what kept  
17          him going. Of course he was bedfast.  
18          My plea is to strongly consider this man, who  
19          worked for so many years and always supported  
20          Rocky Flats. I never knew what he did. He was  
21          sent so many places, different places, and I  
22          just talked with a former coworker today who  
23          also has cancer, he lives in Texas, and he told  
24          me of incidents that happened out at Rocky  
25          Flats that I never knew of before. I asked him

1 first of all, why I called him today, I said I  
2 never asked -- I didn't know anything and Dick  
3 -- even through his illness and -- and near  
4 death, he never talked about what he did or  
5 anything. All of this I've learned what he did  
6 -- he was doing. In his early years he did  
7 time studies in all the hot spots. He and this  
8 fellow worker, [Name Redacted], traveled to  
9 Hanford. They were there right after the  
10 nuclear excursion that killed six people. And  
11 they traveled to other plants right after  
12 incidents. And then in later years Dick was  
13 sent to several plants, Lawrence Livermore, Los  
14 Alamos, Las Vegas, Oak Ridge and -- oh, and  
15 [Name Redacted] said he -- they were at Bendix,  
16 too, they went together there. And these  
17 places don't have any record of his being  
18 there. They don't have any records. And the  
19 records that were kept at Rocky Flats,  
20 obviously, but what I am objecting to is I was  
21 denied on Part E. I was paid with Workmen  
22 Compensation and it was quite a surprise to be  
23 paid for that. But then to be denied and say -  
24 - for Part E and say it couldn't have happened,  
25 there's something wrong someplace, and this

1 needs to be further evaluated or something.  
2 Something needs to be done, and as I have been  
3 to many meetings and listened to all these  
4 people that have so many problems, it's just so  
5 obvious that it's far beyond the -- the norm  
6 for these things to be happening to people that  
7 it had to be caused out there. Perhaps they  
8 didn't know all of this at first, and we  
9 depended -- all of -- information we got  
10 through DOE was everything was hunky-dory. My  
11 daughter and another daughter of the -- of a  
12 man who was -- first came to Rocky Flats as PR  
13 man, and then later came -- then was  
14 transferred to -- well, anyway, he was  
15 transferred and then he was brought back as  
16 plant manager, all the information from DOE was  
17 everything is hunky-dory. Everything is fine,  
18 it's perfectly safe, there are no problems, and  
19 we believed it. And my daughter and the  
20 daughter of this man did papers in high school  
21 at Arvada West on the safety of Rocky Flats  
22 because that was the information that they were  
23 fed and that we believed, and -- and -- and  
24 even championed it. But it was wrong. So  
25 thank you.



1           **DR. ZIEMER:** Thank you. Carmen Blackmon?  
2 Carmen? Or is -- is -- oh, there's Carmen.  
3 Okay, thank you.

4           **MS. BLACKMON:** My name is Carmen Blackmon and  
5 my husband wanted to be here tonight to speak  
6 for himself, but unfortunately death got in the  
7 way of that and he cannot be here. He worked  
8 at Rocky Flats and he traveled throughout all  
9 sites on Rocky Flats. He had a Q clearance.  
10 And I have to be his voice. I am an advocate  
11 for the Special Exposure Cohort program, and I  
12 think that's the only ethical and moral thing  
13 to do.  
14 And my husband died a very, very rapid death.  
15 He weighed 160 pounds one month, and six weeks  
16 later he weighed 80 pounds. He had colorectal  
17 cancer and, as I said, I am his voice. He was  
18 downsized in September and I buried him the  
19 following September.  
20 The data that I've received from Rocky Flats is  
21 sterile data. I'm a certified quality manager.  
22 I'm also a registered nurse that worked in  
23 oncology. I know that when you receive sterile  
24 data -- 100 percent outcome, 100 percent  
25 outcome, 100 percent outcome -- there's

1 something wrong with that. There is never any  
2 100 percent outcome. And the data that I  
3 received from Rocky Flats equals 100 percent  
4 outcome. It's very, very clean data.  
5 What I found unusual was that I did not receive  
6 the occurrence reports that I called and asked  
7 for personally when my husband was exposed to  
8 some -- some sort of injury or criticality, and  
9 they told me that an occurrence report was  
10 completed. Of course I never got it because of  
11 the security aspect of it, but I found that  
12 quite odd that I did not receive that in the  
13 records that I received from Rocky Flats.  
14 That's sterile data. You don't make this type  
15 of a decision based on sterile data. There's  
16 insufficient data and there's sterile data, and  
17 the data that I have is of no substance. It  
18 tells you nothing.  
19 I know that you're all very, very tired.  
20 You've had a long day. But those were my days  
21 every day until my husband died. I say again  
22 that I have -- this is the first time I have  
23 ever spoken publicly about my husband. I have  
24 been numb and in pain with his loss, and what I  
25 have heard today I'm just shocked that there

1 still is a question today. I am shocked. This  
2 government is thinking more highly of the Iraqi  
3 people, the African people, when we put our  
4 blood and tears into this country. I hope that  
5 each one of you can sleep with your decision if  
6 you choose to go against this petition. Thank  
7 you very much.

8 **DR. ZIEMER:** Thank you. Charlie Wolf.  
9 Charlie?

10 **MR. WOLF:** I talked to this group and a lot of  
11 you guys last year on my -- I've got a brain  
12 tumor, so I'm slow. It was a glioblastoma  
13 multiform, and if you look at the average, we  
14 had -- I asked all my records to be received  
15 from Colorado Center with -- I don't know if  
16 he's here, Mr. -- it's probably pretty late --

17 **UNIDENTIFIED:** (Off microphone)  
18 (Unintelligible)

19 **MR. WOLF:** -- Ruttenber -- Ruttenber, who  
20 worked for a number of these people on the job  
21 for quite a while and has come up with records  
22 that brain tumors, just looking at one, there's  
23 clusters of brain tumors, the same ones we just  
24 talked to here with the previous letter with a  
25 lot of other people, and there's a couple of

1 other ones that, you know, I won't put their --  
2 their names on the list, but I'm -- I'm up to  
3 at least five for the ones that got it within  
4 the last few years at Rocky Flats.

5 What I would like you to find out and --  
6 because I asked your group or -- I'm sorry, the  
7 -- NIOSH many times on how many people got  
8 brain tumors at each one of these facilities  
9 and how many of them turned out to be glios and  
10 what that number turns out to be. And guess  
11 what? I never got an answer from anybody on  
12 that answer.

13 Every time I've sent that in, 12 times, and I  
14 can go grabbing all my lists, and they ever  
15 answered that question. And I think if you  
16 find that answer, you'll find out that you  
17 cannot just look at some of these numbers and  
18 decide that somebody has been exposed to a  
19 small amount of radiation. It may just take a  
20 small amount of radiation to give a brain  
21 cancer, or some of the other cancers.

22 And we talked to Brent (sic) a few times and I  
23 asked you guys last year, every one of these  
24 people has gone into one of the facilities,  
25 dressed out and everything else, and Rocky

1 Flats was still here the first time we told  
2 him. They have never dressed out. Has anybody  
3 in here dressed out and put a mask -- a mask on  
4 --

5 **DR. ZIEMER:** Oh, yes.

6 **MR. WOLF:** -- and gone through?

7 **DR. ZIEMER:** Yes.

8 **MR. WOLF:** There, good. I'm glad to see we got  
9 -- that's more than we had last time. Brent --  
10 Brent hasn't done it. And I think that's the  
11 way, in order for people to make that kind of  
12 decision, they have to dress out and go into  
13 these facilities and see how things are really  
14 done. You can't sit behind a desk and figure  
15 out the numbers. I'm -- I'm sorry, you know.  
16 I listened over here as Brett (sic) was  
17 talking, you know, 15 times on how I measured  
18 this and how he did that and, you know, you  
19 can't even do that. You heard all these guys  
20 talking in here, every one of them, you know,  
21 what they went through and what the difference  
22 is, so it's the same thing. How -- he talked  
23 about three different people that gave him an  
24 answer on this. How come there was what, a  
25 hundred people in here with different answers

1           on doing that that really wanted to make sure  
2           that people understood what's going on? That's  
3           what I think. We need your Board to help us  
4           with that and to understand -- I'm a chemical  
5           engineer. My wife's a chemical engineer.  
6           Trying to prove our stuff -- I got boxes that  
7           are this deep, and with two chemical engineers  
8           can't prove this, how can a normal person who  
9           is sick try and prove that he needs to get  
10          compensation? And you guys need to help them.  
11          You need to be able to prove the cohort --  
12          shoot, I -- petition, thank you, because that  
13          will help these people do that. There's the  
14          list of people that can do that. Otherwise,  
15          what Laura was talking about here, you're going  
16          to see a lot more people die because they won't  
17          get through it. And we please to ask you guys  
18          to help us and like if nothing else, have Brett  
19          (sic) dress out and go through there, and then  
20          come back and tell you guys that no, this piece  
21          of paper, it's all -- it's all safe for these  
22          guys.

23          And the other thing that I had was on the  
24          neutrons, and please, if you would talk -- I'll  
25          give you his name -- on neutrons, because he

1           has found out that the area that they're  
2           following that does not have the right answers  
3           on doing that, and it's about three to four  
4           times higher, depending on that, because when I  
5           went through those areas and I went back 'cause  
6           I -- I was a project manager, so I've got some  
7           of my records and pictures and stuff that I did  
8           that, and when you look at your TLD and where  
9           you stood next to the TLD where you were,  
10          there's shielding here, there's shielding all  
11          over there. For your brain tumor, there's not.  
12          You can't. And so it's not -- you don't have  
13          as many things covered that way.  
14          The Navy, I've heard -- I may be incorrect --  
15          that the Navy now puts TLDs toward the head of  
16          people that don't get brain tumors from that  
17          standpoint. And that's another question I want  
18          to ask. If you guys can resolve that answer  
19          that getting a brain tumor by not having your  
20          TLD in that area, you're going to save a lot of  
21          mother -- of -- lot of other people from  
22          getting a brain tumor by adjusting where  
23          they're wearing their protection. So that's  
24          all I want to ask today and make sure that we  
25          follow up on that and not just listen to it.

1           And if it is found out that you're getting all  
2           these brain tumors and other stuff that's above  
3           the protection areas, then we may need to make  
4           some changes, you know, in everything we do to  
5           be more like the Navy is and keep people from  
6           getting brain tumors and other stuff. The  
7           reason I'm more on brain tumors is because  
8           that's what I have, and I know a lot of these  
9           other people that have it, too, and that's one  
10          of the areas that I'm looking for. Thank you  
11          very much for your...

12          **DR. ZIEMER:** Thank you, Charlie. And next  
13          we'll hear from Elena Ramer.

14          **MS. RAMER:** Thank you very much for allowing me  
15          this time. This is my first time speaking to  
16          any of the boards that have been in town. I am  
17          Elena Ramer. My husband was William Ramer. He  
18          was a Rocky Flats employee for 29 years.  
19          He filed a claim with NIOSH in August of '02  
20          and the claim was denied in December of '04.  
21          And in with the packet of the denial was a page  
22          that offered a appeal for the claim, but at  
23          that time I was the sole caregiver of my  
24          husband, who had Alzheimer's, and he was in the  
25          extreme late stages of Alzheimer's. If you're



1 a caregiver for a late stage Alzheimer's  
2 patient, your entire day is consumed with  
3 Alzheimer's care for the patient. I did not  
4 file a claim -- an appeals claim at that time  
5 for that reason.

6 I do intend to write and try to get the claim  
7 brought back to an active status because I do  
8 firmly believe that my husband's claim is a  
9 valid claim and I have new -- new evidence to  
10 present for it. My husband died three months  
11 after the claim was denied.

12 He was hired in Rocky Flats in 1963 as a  
13 mechanical engineer and he was a project  
14 manager out there. He worked in many  
15 buildings, a lot of it in 771, but for twenty--  
16 he worked for 29 years there.

17 In 1969 when there was a major fire in Building  
18 776 and 777, which were I believe glovebox  
19 buildings, my husband was immediately recruited  
20 to go in and clean up the fire in those  
21 buildings. He had a crew that worked with him,  
22 and they suited up, went into the buildings and  
23 the buildings were rated as having infinity  
24 radiation. That meant you couldn't go any  
25 higher in the exposure to radioactive materials

1 and things that a body could take on. It was  
2 infinity. He worked at that cleanup for two  
3 years.

4 Now you can't tell me that two years of working  
5 in a cleanup situation in an infinity situation  
6 that radiation was not going to become part of  
7 his body. He had to shower down many, many  
8 times after each day's work in order to get the  
9 radiation level back down to where it was safe.  
10 He never -- and his workers, and I believe none  
11 of the other workers in the cleanup, ever  
12 received additional monetary compensation or a  
13 thank you certificate for this extra hazardous  
14 work.

15 In August of '93 my husband was diagnosed with  
16 prostate cancer. He had surgery that year and  
17 the cancer came back in 1998, at which time he  
18 had radiation treatment. I cannot prove that  
19 my husband had major exposure to radioactivity,  
20 but then neither can the Department of Labor  
21 prove that my husband's claims are not true or  
22 valid. Can NIOSH prove without a doubt, with  
23 what Rocky Flats records it has available, that  
24 my husband, William Ramer, did not withstand  
25 the radiation exposure claimed? I doubt it.

1           How many incidents of overexposure went  
2           unrecorded at Rocky Flats in those very early  
3           years, in the '60s? How many medical records,  
4           that should have been kept, were not kept? I  
5           understand that records were not kept very  
6           regularly in those early years.

7           Two years were spent cleaning up rooms that had  
8           this infinity count. My husband told me that  
9           the special clothing that they wore during the  
10          cleanup was not 100 percent secure. He knew  
11          that. And some of his workers on his crew were  
12          reassigned because of excess radiation  
13          exposure.

14          My husband was exposed to many different  
15          radioactive matters during his 29 years there,  
16          not just in the cleanup of the fire. He worked  
17          in other building where he was also exposed to  
18          many other elements. I know of twice that my  
19          husband had to stay on a table for four or five  
20          hours, laying down, so -- as his radiation  
21          exposure was high. He had to stay there until  
22          the count came down to acceptable levels.

23          Twice -- and this is unusual. Twice my husband  
24          came home from work with a different shirt and  
25          a different undershirt, different from what he

1           went to work with. They had -- his original  
2           clothing that he went to work with had been  
3           taken from him because of excess radiation  
4           exposure. This did happen. I am not making  
5           this up. His clothes were taken from him.  
6           I respectfully -- I am going to respectfully  
7           ask NIOSH to reopen my husband's claim. I  
8           think this long delay in settling the claims  
9           and paying the Rocky Flats workers is a gross  
10          injustice to those people who did the hazardous  
11          work at Rocky Flats. It would seem we have a  
12          nation that is ungrateful for the work these  
13          men and women did, that rendered them quite ill  
14          in their later years. This needs to be  
15          rectified and I hope this current Board will  
16          make the right decision when you make your  
17          decision, and that you'll make it in favor of  
18          the employees.

19          I would like -- I will not be here tomorrow. I  
20          would like to have the opportunity, if I may,  
21          to ask the Board a couple of questions. How  
22          many of the Board members have ever been in the  
23          manufacturing process of radioactive materials,  
24          hands on?

25          **DR. ZIEMER:** Hands on.

1           **MS. RAMER:** Well, that's commendable. The  
2           second question would be how many of the Board  
3           members have ever spent two years cleaning up a  
4           fire in a glovebox building that was at  
5           infinity for two years. None?

6           **DR. ZIEMER:** I think that's an isolated case,  
7           so probably none of these have been --

8           **MS. RAMER:** No.

9           **DR. ZIEMER:** -- yeah, good question.

10          **MS. RAMER:** There are thousands of workers from  
11          Rocky Flats who did all of those things.

12          **DR. ZIEMER:** Right.

13          **MS. RAMER:** They didn't get recompensed when  
14          they did the hazardous work that was involved  
15          in that cleanup. I think it's time for the  
16          Board to think about that when you're making  
17          your decision, and that hopefully you'll make  
18          the right decision to give the compensation to  
19          these workers who went above and beyond the  
20          call of duty. They did. They worked hard.  
21          They did hazardous work, and probably were  
22          never told they were doing hazardous work.  
23          It's time for the Board to make the right  
24          decision. I beg you to do it. I thank you.

25          **DR. ZIEMER:** Thank you. Is it Jennie Haymes --

1 Jennie or Jeanie? Jeanie?

2 **MS. HAYNES:** I need my reading glasses, also.

3 Hi, my name is Genie Haynes and I worked at

4 Rocky Flats for 32 years, from 1963 to 1995.

5 With all due respect, everyone that I've talked

6 to believes that this advisory committee is

7 totally biased and there's no way they're going

8 to vote in support of the Rocky Flats employees

9 who are currently ill, never mind the ones who

10 are undoubtedly going to become ill in the

11 future. It is also felt this committee has

12 received their marching orders from the current

13 administration, an administration who is on

14 record with their e-mails as opposing payments

15 to the sick and dying nuclear workers, workers

16 that I might add who not only fought but won

17 the Cold War.

18 These continuing meetings that have gone on and

19 on, and whose negative outcomes are considered

20 foregone conclusions, is just another example

21 of wasting the money that Congress allocated to

22 pay this country's workers for their pain and

23 suffering, not to mention in many cases the

24 financial ruin that many of the former workers

25 have had to experience. This whole mess breaks

1 my heart, and it should break the heart of  
2 every caring human being in this room.  
3 These Rocky Flats employees, and for that  
4 matter all of the people who worked in the  
5 nuclear weapons production facilities, devoted  
6 their lives to fighting the Cold War for their  
7 country. And now that they're old and now that  
8 they're dying as a result from being exposed to  
9 all of the various cancer-causing chemicals and  
10 medic-- metals, their country and their  
11 government has forgotten them, and it can't be  
12 bothered to help them in their time of need. I  
13 find this terribly, terribly sad.  
14 I have read, and I understand that granting the  
15 Special Exposure Cohort status to each nuclear  
16 weapon -- or nuclear worker would cost  
17 approximately \$7 billion. Congress just  
18 approved another \$90 million to continue the  
19 war in Iraq until September. What, people, is  
20 wrong with this picture?  
21 As I said, the intent of Congress when they  
22 passed the bill for the nuclear worker  
23 compensation was to help the worker. It wasn't  
24 designed to create a bureaucratic and  
25 administrative nightmare that continuously

1 wastes unbelievable amount of money in an  
2 effort to prevent any of the deserving nuclear  
3 workers from getting one red cent. I think  
4 Congress's thinking was made quite clear when  
5 they pulled the compensation program from --  
6 out from under the Department of Energy and  
7 reassigned it to the Department of Labor due to  
8 the waste and inefficiency of the Department of  
9 Energy.

10 Our futures are being determined by people with  
11 impressive resumés and impressive educational  
12 degrees. The bottom line is these people  
13 haven't a clue of what it was like at Rocky  
14 Flats during the production days. They weren't  
15 there and they don't know what was going on.  
16 Trying -- and I emphasize the word "trying" --  
17 to construct missing dose and accident records  
18 isn't a game and there is no way anyone can  
19 assure that these guesses of theirs are  
20 accurate, regardless of their educational  
21 degree or experience. There were simply too  
22 many contamination incidents and accidents that  
23 occurred on a daily basis in the production  
24 areas. No one had time to take -- to write a  
25 report.



1 Rocky Flats never missed a schedule, something  
2 that most of the workers were very proud of.  
3 And if you were going to continue to make the  
4 schedule, there wasn't a lot of time for a lot  
5 of detailed paperwork. You simply took care of  
6 the problem and you moved on. And the thanks  
7 for each of the workers' dedication is nothing.  
8 They received nothing.

9 Now that the Cold War is over, it's looking  
10 like no one cares what so many of these people  
11 gave up in exchange for their service to their  
12 country, and what they gave up was their  
13 health. The current administration doesn't  
14 care, and it's starting to appear that our  
15 country and our government as a whole doesn't  
16 care, either. How sad. Once again, how  
17 incredibly sad that it has gotten to this  
18 point. Someone somewhere needs to step up and  
19 help these sick people, and someone has to take  
20 the first step, regardless of what the  
21 political repercussions will be. We need to  
22 give these people their medical assistance and  
23 their compensation, if nothing else as a thank  
24 you for their contribution. They earned it,  
25 they need it, and it's only fair.

1           These people helped our country when our  
2           country needed them to fight the Cold War. And  
3           now all they're asking is help from their  
4           country in their time of need. It's not an  
5           unreasonable request and each and every one of  
6           them deserve it.

7           I say to all of you people who have the power  
8           to make these decisions to help these people  
9           and to approve an SEC status for Rocky Flats,  
10          please, please, please help these people.  
11          Let's stop all of this unbelievable, time-  
12          consuming, get-nothing-done, money-wasting  
13          garbage that has been the norm since this  
14          program's inception. Please help these nuclear  
15          workers get what they deserve before it's too  
16          late for them. Let's change the perception of  
17          the workers who believe no one cares and no one  
18          will ever help them, in spite of all they did  
19          for us as a free nation. Thank you.

20          **DR. ZIEMER:** Thank you very much. Next, LeRoy  
21          Moor. Is LeRo-- okay, here comes LeRoy.

22          **MR. MOOR:** Greetings. My name is LeRoy Moor.  
23          I'm with the Rocky Mountain Peace and Justice  
24          Center located in Boulder, Colorado. I have  
25          followed the Rocky Flats issue from the

1 outside, from the other side of the fence, very  
2 closely since I learned about Rocky Flats in  
3 1979 when I was teaching at the University of  
4 Denver.

5 We were invited, our organization, to come  
6 today by Terrie Barrie, who spoke earlier, by  
7 the Steelworker's Union, because they know that  
8 whatever positions we may have taken on the  
9 other side of the fence about making bombs  
10 years ago when production was happening at  
11 Rocky Flats, we always supported the workers on  
12 the health issue. We supported the workers on  
13 the health issue. We wanted them to have a  
14 safe workplace, and when we knew that they  
15 didn't have a safe workplace, we wanted them to  
16 have adequate health coverage, and we still  
17 want that.

18 I want to tell you a little story about Rocky  
19 Flats. In 1987 a physicist named -- an  
20 epidemiologist named Greg Wilkinson\*, who was  
21 on the staff of the Los Alamos lab, completed  
22 and published what was probably the very first  
23 epidemiological study ever made focused  
24 specifically on plutonium health effects. And  
25 it was a study of Rocky Flats workers. The

1 study itself was published in the *American*  
2 *Journal of Epidemiology* in 1987. Wilkinson  
3 studied 5,413 workers at Rocky Flats. He and  
4 his team tried to determine the body burden of  
5 plutonium in each one of those workers, and  
6 they divided the workers into those that had  
7 more exposure, those that had less exposure and  
8 those that they thought were not exposed at  
9 all.

10 They found, as a result of their study, excess  
11 cancers of many sorts, surprising cancers. In  
12 particular they found a high level -- higher  
13 level than they had expected of brain cancers  
14 among Rocky Flats workers exposed to plutonium  
15 in the workplace. And this was true not only  
16 of those that had the higher exposure, but it  
17 was true of those that had the lowest  
18 exposures. And when I say the lowest  
19 exposures, the instruments that Wilkinson and  
20 his colleagues at Los Alamos lab used to study  
21 the -- to determine the plutonium body burden  
22 could only measure down to as low as five  
23 percent of the amount that the Department of  
24 Energy had established as the safe level for  
25 plutonium body burden, lifetime plutonium

1 exposure among workers like those at Rocky  
2 Flats.

3 So Wilkinson even thought that there were  
4 probably some that had been exposed to amounts  
5 at levels that he could not measure with the  
6 instrumentation that he had that also had  
7 excess levels of cancer, but they found these  
8 excess cancers, including brain cancers, at the  
9 lowest level their instruments could measure.  
10 That was 1987.

11 What happened at Los Alamos when he came up  
12 with those kinds of results? Los Alamos of  
13 course is a Department of Energy facility. He  
14 was studying workers at another Department of  
15 Energy facility. His supervisor at Rocky Flats  
16 told him don't publish that article unless you  
17 change the results. Don't publish that article  
18 until you change the results. He later  
19 testified to a government committee that he was  
20 told -- in the exact words -- don't publish the  
21 article unless you please the customer. The  
22 customer, of course, was the Department of  
23 Energy.

24 Wilkinson, a man of integrity, published the  
25 article without modifying the results at all.

1           And as I said, it's probably the first  
2           epidemiological study done on plutonium-exposed  
3           workers in the workplace, certainly --  
4           certainly in a DOE workplace.

5           After this, Wilkinson lost his research team,  
6           was removed from his leadership position, found  
7           it difficult to get funding at the lab to do  
8           the work that he wanted to do, and he finally  
9           quit and now teaches at a university in Texas.  
10          Wilkinson is a very gentle and polite man. I  
11          asked him if he was forced out of his job, and  
12          he would not agree to use that language about  
13          himself, but I think he was forced out of his  
14          job for telling the truth. And there may be  
15          some Rocky Flats workers in this room here that  
16          remember -- it was a kind of scandal that went  
17          through Rocky Flats at the time that that  
18          article was published and the levels of denial  
19          were pretty strong among the health physicists  
20          at Rocky Flats. They didn't want the workers  
21          to believe what Wilkinson had discovered and  
22          then had published.

23          Now that's a story from the way the government,  
24          and the Department of Energy in particular, has  
25          dealt with health effects at a facility -- a

1 very particular facility, the one you're here  
2 in town to pay attention to for a couple of  
3 days -- Rocky Flats.

4 In 2000 when Secretary of Energy, then  
5 Richardson -- is that his name? -- Bill  
6 Richardson, when -- now Governor of New Mexico,  
7 when he issued his public statement, for the  
8 very first time a Secretary of Energy admitting  
9 publicly, that workers in the nuclear weapons  
10 industry had in fact been harmed in the  
11 workplace because of exposures on the job. And  
12 then soon after that, Congress passed the bill  
13 that was supposed to give compensation to these  
14 workers. And in fact we were being told -- I -  
15 - I thought at the time that bill is not nearly  
16 good enough; the compensation is not very good.  
17 It ought to be a lot better than -- than they  
18 were proposing, and the health care ought to be  
19 stronger than the bill was providing. But the  
20 bill was passed and that's the bill we have and  
21 that you're being asked to deal with even now,  
22 seven years later. But I thought back in 2000  
23 when that happened, well, this is an amazing  
24 turning point. Things are really shifting for  
25 the nuclear workers.

1 Here we are, seven years later, and it's not  
2 clear to me that things have shifted. It's not  
3 clear to me that the burden of proof has been  
4 taken off of the workers and put on the  
5 industry. We've heard lots of testimony here -  
6 - if you want evidence, goodness, the evidence  
7 -- the room is full of evidence. And other  
8 places that you can visit, at other DOE sites  
9 around the country, the room will be full of  
10 evidence.

11 You're members of an advisory body. I've been  
12 on several advisory bodies focused on Rocky  
13 Flats and Department of Energy facilities, and  
14 I know that you've got a responsibility. I  
15 think you know what your responsibility is, and  
16 I hope you'll fulfill it in faithfulness to the  
17 people of this country and to the workers that  
18 are in this room and those that have already  
19 passed on and those that can't be here tonight  
20 because they're not well enough to be here.

21 Thank you.

22 **DR. ZIEMER:** Thank you. Thank you, LeRoy.  
23 Randall -- I think it's Weiner -- Weiner.

24 **MR. WEINER:** It was the best of times, it was  
25 the worst of times. This is a tale of two



1 statutes, the Radiation Exposure Compensation  
2 Act and EEOICPA. I'm Randall Weiner. I'm an  
3 environmental attorney in Boulder, Colorado, up  
4 the road.

5 And I just represent individuals and groups  
6 who've been harmed by the impacts of pollution.  
7 And coincidentally, over the past six months  
8 I've had two different clients, one who applied  
9 for compensation under RECA, the Radiation  
10 Exposure Compensation Act, and the other whose  
11 -- who applied for compensation under EEOICPA.  
12 My RECA client, his records weren't great.  
13 He's an old miner. In fact, Kerr-McGee refused  
14 to turn over his -- his employment history  
15 records, so it was very difficult for him to  
16 show that he had worked for a mine for -- for  
17 over a year. His Social Security records  
18 weren't great. What he had was an affidavit  
19 from a coworker from 40 years previously. It  
20 was handwritten. The -- the affidavit was  
21 wrinkled, it was on dirty paper, and -- and --  
22 and yet the Department of Justice accepted his  
23 dirty, wrinkled, handwritten affidavit to  
24 demonstrate that he had worked in the industry  
25 for a year.

1           So now let's shift over to EEOICPA. My other  
2           client is a surviving spouse. Despite her  
3           deceased husband's litany of diseases, she  
4           can't make the link that the -- under the  
5           Department of Labor's criteria. She can't  
6           demonstrate that her husband's work at a  
7           covered facility aggravated or contributed to  
8           or caused the specific illness.

9           The roadblocks we've heard from other folks  
10          today, the litany of roadblocks, is truly  
11          astounding. And -- and the -- and the two  
12          questions that I have to ask are, one, why is  
13          it that we have such a strict causal connection  
14          requirement under the EEOICPA regimen that  
15          doesn't exist under RECA, our parallel statute  
16          for protecting nuclear employees? Why should  
17          my private uranium clients, working for private  
18          companies, have it so much easier than my  
19          clients who worked at places like Rocky Flats  
20          as part of our country's war effort?

21          If we establish an expanded SEC status for  
22          Rocky Flats workers, we're plugging a loophole  
23          in EEOICPA, and keeping the promise fulfilled  
24          under the RECA regimen of facilitating  
25          compensation for ill nuclear workers.

1           It was the best of times, it was the worst of  
2           times. Let's make our two radiation statutes  
3           equivalent and effective.

4           **DR. ZIEMER:** Thank you, Randall. Elliott  
5           Stokes?

6           **MR. STOKES:** I'm Elliott Stokes and I worked at  
7           Rocky Flats about 22 years, and I want to thank  
8           the Presidential Advisory Board for coming to  
9           hear what we have to say again.

10          I was a chemical operator, process operator,  
11          D&D worker, helped basically close the plant  
12          down for it to go away. Worked in 771, 776,  
13          707, 371, 374, 881, one of the place I did work  
14          that had a great effect that nobody really  
15          talked about here is called Pond Creek 231.  
16          Down at Pond Creek 231 what was down there is  
17          the effluent that comes off of solid waste. It  
18          was effluent, was turned into a liquid, it's  
19          pumped down there through pipes right to the  
20          ponds, like a big storage pond. And in this  
21          pond it has not only low-level radiation, it  
22          has mixed chemical waste. And if you see on  
23          this (off microphone) survey here, ladies and  
24          gentlemen, see some of the things we were  
25          exposed to -- plutonium, americium,

1 (unintelligible), cadmium, even cyanide. A lot  
2 of these things came in low-level waste. Yes,  
3 we took (on microphone) samples, things like  
4 that. But there was one serious incident in  
5 1994 where was -- it was some more liquids  
6 pumped from underground -- underground is the  
7 (unintelligible) where all your transfer lines  
8 come and they're pumped at different buildings.  
9 One of the specific buildings was 374, and  
10 through that building's where we sort of took  
11 the waste from high level to low level by  
12 processing through different processes. But  
13 during this time we had a over-storage of  
14 waste, so this liquid was pumped from the  
15 bottom underground into a storage tank.  
16 Well, during this time, while this liquid was  
17 being pumped, one of the hoses came aloose  
18 (sic) and what happened, it sprayed into one of  
19 my coworker's face, which is here right now,  
20 his name is Charles White. Now this gentleman  
21 here, I worked with this person almost 15  
22 years. What happened is he almost died. When  
23 he went home he got blood clots between his  
24 kidneys and his lungs. If he didn't have the -  
25 - the willpower to call 911, he probably would

1           have been dead. And ladies and gentlemen, at  
2           this present time he has been going through all  
3           kind of medical conditions and he just lost a  
4           kidney, and he will be on kidney dialysis in  
5           about a week.

6           So what I'm telling you, ladies and gentlemen,  
7           it's not only radiation. It's chemicals out  
8           there that people have been exposed to. And  
9           what I don't understand is this dose rate  
10          calculations of -- no disrespect to scientists,  
11          but most of that stuff about scientists is on  
12          theory and id-- ideological stuff. We're not  
13          what you call actors in a reality show. We're  
14          real people in a real life show. That's what  
15          we are right here. This is real. You see  
16          people right here, we didn't make this up. We  
17          didn't make this up, these illnesses you see  
18          people talking about. And yes, it might be a  
19          low percentage of people. But I'm talking,  
20          ladies and gentlemen, about the past -- the  
21          past people that are gone that filed claims.  
22          I'm talking about the present people that are  
23          sick right now that are filing claims that you  
24          have turned down. And I'm talking about the  
25          future people that may get sick, such as

1           myself. A lot of people that are still sort of  
2           healthy, they might not be here. For the  
3           moment we're all healthy. Do we know what  
4           tomorrow brings? No. But the bottom line is,  
5           I'm talking about the past, present and the  
6           future and you, ladies and gentlemen, need to  
7           take that under consideration and stop going  
8           with all these theories and go with reality of  
9           these ladies and gentlemen that are telling you  
10          their stories.

11          I read the paper today about eight of you are  
12          scientists, four of you are basic workers and  
13          one lady mentioned well, it's the law. Well,  
14          right now you're the Presidential Advisory  
15          Board. You have the ability and the power to  
16          say yea or nay, so don't cop back on that law.  
17          You have the power. Why you think President  
18          Bush sent you here? You can make a decision on  
19          our lives. And power for you the future lives  
20          if we're here.

21          What I'm asking you is this -- this special  
22          status -- Special Exposure Cohort status need  
23          to be okayed. I mean you got some workers here  
24          -- former workers here that can't even work,  
25          they're facing financial problems. They got

1 bankruptcies. A lot of them didn't even make  
2 it to get their retirement. I mean we cleaned  
3 up this plant almost 50 years ahead of time,  
4 and we saved over a billion dollars, well more.  
5 So many people was given bonuses, all kind of  
6 things. I mean nothing was left for the  
7 workers, basically.

8 I mean what about the people that's been here  
9 to -- to -- that's, like you say, served during  
10 the Cold War? Are we going to start taking  
11 care of our Americans here? All we care about  
12 is what's happening overseas. What about right  
13 here? What about the people that did their  
14 time, that were here during the struggle, do --  
15 is it anything about compassion or care  
16 anymore?

17 What I say is this right here: This special  
18 status need to be approved because of the  
19 dedication, the commitment of the people that  
20 was there that helped take this plant -- this  
21 former nuclear weapons plant away. Let me tell  
22 you something. I guess -- I could be right or  
23 wrong, but I believe this is the only time this  
24 has happened, that a former nuclear weapons  
25 plant has been erased, gone. I mean does the

1 government care about what we've done for them,  
2 all the money that we have saved them?  
3 What about the loyalty? A lot of us -- we  
4 could have went other places and done other  
5 things, but a lot of us stayed there because we  
6 liked what we did, we -- we liked the job, and  
7 a lot of us just liked being loyal to the  
8 government. You do have people that's still  
9 loyal to the government.

10 And how about the job well done? How about the  
11 -- the basic pat on the back? I mean the pat  
12 on the back would be for you to say yea to this  
13 special status that we all should get. We're  
14 talking about the future of people that might  
15 get sick.

16 And I'm basically going to close this and say  
17 hey, somebody mentioned a long time before, do  
18 the right thing. Why waste all this money and  
19 time coming back here? I don't like to go in  
20 the past, the \$90-something billion they gave  
21 all these scientists -- I mean to -- to  
22 calculate our futures, nothing came out of  
23 there, basically. I mean vote for the  
24 streamlined medical financial compensation and  
25 use your power in the right way. I mean help



1           us out. I mean you done approved about -- I  
2           can't think and I don't really know all the  
3           technical stuff, 18, 17 or 19 other plants and  
4           we're the only one that basically took our  
5           plant away. It's gone. And you approved '52  
6           to '58. A lot of them people, 'cause I was out  
7           there a long time, I went to a lot of their  
8           funerals. A lot of them aren't here. I say I  
9           understand why they approved them, because  
10          they're not here no more. We ain't got to  
11          worry about their -- paying their money, '58 to  
12          -- '52 to '58. Most of them born in the '20s  
13          or '30s. They might be here, they might not.  
14          A lot of us are still in the young age, 50, 40,  
15          maybe 60. That's some money that probably  
16          could be paid to us. Are y'all looking at  
17          that, the money that you might pay out in the  
18          future?

19          So I ask just please, you know, listen to all  
20          these people. These are real people. We are  
21          real people. We're all real people, and you  
22          need to take that under consideration and stop  
23          going by this do-- dose rate calculations,  
24          making us numbers. What about real stories?  
25          Thank you very much.



1           was as a contractor. And at the time I had  
2           been working for the federal government for  
3           five years and I was going out to Rocky Flats  
4           for some experience in their data center. They  
5           had equipment and software that I felt would  
6           open up opportunities for me.

7           I was assured by my contracting agency that I  
8           was not in a hot building and I was perfectly  
9           safe. And after giving those -- putting  
10          together facts, I felt like I was going to a  
11          safe environment, even if I was going to be  
12          working out at Rocky Flats. I was not going to  
13          be in the hot zone. I was going to be in  
14          another building that would be safe.

15          After starting there I took some employee  
16          orientations. This included radiation safety  
17          classes that actually last for three days, and  
18          we were told -- ma-- many factors. There was -  
19          - they were trying to rate what the average  
20          Rocky Flats worker received compared to your  
21          average citizen. And just what I can recall, I  
22          -- I wrote this whole thing down as I was  
23          sitting back here listening to other people  
24          speak, but some of what I can recall is that  
25          people who ate a lot of peanuts, people who ate

1 a lot of bananas, people who flew across the  
2 continental United States were exposed to more  
3 radiation than the Rocky Flats worker was  
4 allowed to receive in one year. This sort of  
5 reinforced my feeling of confidence in the  
6 government, that they were watching out for us  
7 and would not let us be exposed to more than we  
8 could handle.

9 So -- excuse me, I'm sort of losing my place  
10 here.

11 [Information Redacted]

12 And it was pretty ironic because when I went  
13 for -- I was in a restaurant eating, and when I  
14 picked up the paper a couple of weeks ago and  
15 saw that the Board was meeting again. And it  
16 was like I -- this is it, I -- I'm off of work  
17 right now. I have the time, I'm going. I have  
18 a voice to say of how I feel about this.

19 And especially -- I was somebody who always  
20 felt safe there. And little by little, time  
21 after time, I did start seeing little things  
22 that I sort of denied out there, just a state  
23 of denial. One was that we were told not to  
24 leave the data center when the elevator was  
25 being worked on. The elevator was hot. We

1           were told to hur-- use the restroom, because  
2           for the next hour and a half they would be  
3           working on the elevator approximately 20 feet  
4           down the hall from our doorway and we were not  
5           to leave our room while the elevator was being  
6           worked on. After I found that out, at no cost  
7           would I take that elevator. I took the stairs,  
8           three floors down to the data center, just to  
9           avoid that area for my own safety, feeling like  
10          I had control over my own safety.  
11          And then there was another area. There was two  
12          ways to get to the data center. One was  
13          through a sheet metal shop. The -- the floor  
14          also, at some point in my ten years there -- I  
15          think it was about after five years -- they  
16          started covering the floor in sheet metal in  
17          the sheet metal shop, and they said it was  
18          because the floor was contaminated. And I was  
19          like I thought I was in a building that -- this  
20          isn't the zone. I was supposedly in a safe  
21          building. And they said well, we-- we're not  
22          sure how this got contaminated, but the -- the  
23          sheet metal takes away the exposure. So I used  
24          the other staircase on the other side of the  
25          building. No matter how inconvenient that was,



1 give us your name for the court reporter.

2 **MR. MCCABE:** My name's Jim McCabe. I worked --  
3 this is a short mike, guys. I worked at Rocky  
4 Flats from 1981 through 2004. My [Identifying  
5 Information Redacted] is [Name Redacted]. She  
6 also worked out there for most of that time. A  
7 year and a half ago we discovered a brain tumor  
8 in [Identifying Information Redacted]. She had  
9 the surgery. They -- we caught it basically  
10 before it turned full cancer, but she'll be  
11 monitored every six months through MRIs for the  
12 rest of her life and we don't know if it'll  
13 come back or not.

14 We know that, you know, she wasn't exactly in  
15 the operating areas all the time, but she was  
16 assigned to hot buildings like other people  
17 were.

18 And about 1990 EG&G came in and they took our  
19 dosimeter badge away from our security badge,  
20 so when you were in offices that were in the  
21 hot buildings and you weren't actually going  
22 through the hot area, they wanted your badges  
23 left separate. So your badge is set out into a  
24 cold area where you were still sitting there  
25 taking exposure, so your exposure plans that

1           you guys have that show our records are not  
2           going to be accurate. You know, you've got to  
3           understand that even though with your best of  
4           efforts, there's huge holes out there.  
5           You know, when I retired I was able to get my  
6           retiree insurance. Well, soon as the plant  
7           actually closed, they declared us a retiree  
8           community. My insurance went up to 500-and-  
9           something a month. I had to drop the Rocky  
10          Flats insurance. Okay? I couldn't afford to  
11          keep that insurance.  
12          But I still have [Identifying Information  
13          Redacted] out ill. I've had to go to work at  
14          another place so I could have insurance to  
15          cover -- and they're really covering the work  
16          that was left behind by Rocky Flats. Okay?  
17          Think about that when you take that vote. It's  
18          -- I don't care what data you've got, it's not  
19          complete and never will be complete. People  
20          went there -- we were told we were coming to a  
21          safe place to work, that they had their  
22          documentation there said you stay under this  
23          many millirem or this many rem a year, you can  
24          work here your entire life. It's not true.  
25          Some people are more sensitive than others, and



1 we've just got things coming down the road.  
2 You've got to go the -- got to go back. You've  
3 got to step up to the plate and tell them --  
4 guys, I don't care what your stats show, this  
5 is reality. Take a shot and believe in us. We  
6 believed in the government when we went to work  
7 out there. Short and sweet, but that's it.  
8 Okay? Thank you.

9 **DR. ZIEMER:** Thank all of you for coming, and  
10 particularly those who were able to stay  
11 through the evening. I do want to let you know  
12 that we will be reconvening tomorrow morning at  
13 8:00 o'clock, and the main thing on the morning  
14 agenda will be the Rocky Flats SEC, so we'll  
15 welcome all of you back then tomorrow morning.  
16 Thank you very much. Good night, everyone.  
17 (Whereupon, the meeting was concluded at 8:35  
18 p.m.)

19  
20

1

**CERTIFICATE OF COURT REPORTER****STATE OF GEORGIA****COUNTY OF FULTON**

I, Steven Ray Green, Certified Merit Court Reporter, do hereby certify that I reported the above and foregoing on the day of June 11, 2007; and it is a true and accurate transcript of the testimony captioned herein.

I further certify that I am neither kin nor counsel to any of the parties herein, nor have any interest in the cause named herein.

WITNESS my hand and official seal this the 14th day of July, 2007.

---

**STEVEN RAY GREEN, CCR****CERTIFIED MERIT COURT REPORTER****CERTIFICATE NUMBER: A-2102**