

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

convenes the

MEETING 40

ADVISORY BOARD ON
RADIATION AND WORKER HEALTH

VOL. II
DAY TWO

The verbatim transcript of the 40th
Meeting of the Advisory Board on Radiation and
Worker Health held at the Westin Casuarina, Las
Vegas, Nevada, on Sept. 20, 2006.

C O N T E N T S

Sept. 20, 2006

WELCOME AND OPENING COMMENTS	9
DR. PAUL ZIEMER, CHAIR	
DR. LEWIS WADE, DESIGNATED FEDERAL OFFICIAL	
WORKING GROUP REPORTS:	9
SAVANNAH RIVER SITE PROFILE	11
NEVADA TEST SITE PROFILE	26
SEC PETITION ACTIVITY	39
WORKING GROUP CHAIRS	
SUBCOMMITTEE REPORTS AND BOARD ACTION	46
DR. PAUL ZIEMER, CHAIR, MR. MARK GRIFFON, ABRWH	
UPDATE ON ROCKY FLATS SEC	54
MR. MARK GRIFFON, ABRWH	
TASK III PROCEDURES REVIEW	113
DR. JOHN MAURO, SC&A	
OAK RIDGE INSTITUTE OF NUCLEAR STUDIES (ORINS)	
SEC PETITION	144
NIOSH PRESENTATION	145
MR. LAVON RUTHERFORD, NIOSH, OCAS	
PETITIONER PRESENTATION	157
BOARD DISCUSSION	159
BOARD DECISION	167
SC&A SITE PROFILES TASK	178
CHAPMAN VALVE	197
NIOSH PRESENTATION, DR. BRANT ULSH, NIOSH, OCAS	198
PETITIONER PRESENTATION	213
BOARD DISCUSSION	243
BOARD DECISION	264
BOARD WORKING TIME, DR. PAUL ZIEMER, CHAIR	276
PUBLIC COMMENT	283
COURT REPORTER'S CERTIFICATE	367

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

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

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

1 MELIUS, James Malcom, M.D., Ph.D.
2 Director
3 New York State Laborers' Health and Safety Trust Fund
4 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

STAFF

LASHAWN SHIELDS, Committee Management Specialist, NIOSH
STEVEN RAY GREEN, Certified Merit Court Reporter

SIGNED-IN AUDIENCE PARTICIPANTS

ANSPAUGH, LARISA
ANSPAUGH, LYNN, SC&A
ATKINSON, SUSAN, PETITIONER
BEATTY, EVERETT "RAY", SR., FERNALD ATOMIC CO.
BEHLING, HANS, SC&A
BEHLING, KATHY, SC&A
BLACKSTON, CYNTHIA, HOUSE JUDICIARY COMMITTEE
BOLLER, CAROLYN, CONG. MARK UDALL
BREEDEN, SHIRLEY
BROEHM, JASON, CDC WASHINGTON OFFICE
BUCHANAN, RON, SC&A
CALLAWAY, ALLEN
CARMOUCHE, ROBERT, NTS
CHANG, C, NIOSH
CHEW, MELTON, ORAU
CLAYTON, DOROTHY
COMBS-CROFTON, SYLVIA, OCHA NTS
COOK, PATRICIA
COOLEY, MARGARET MINSTER
CRAFTON, DEE
ELDRIDGE, GEORGE, PETITIONER
ELDRIDGE, PAUL, PETITIONER
ELLENBERGER, JIM, ORAU
ELLIOTT, LARRY, NIOSH
ELLISON, CHRIS, NIOSH
EVASKOVICH, ANDREW K., INTERNATIONAL GUARDS
FAVELA, CLAUDIA
FITZGERALD, JOSEPH, SC&A
FOGER, C. OSCAR, LABORERS 872
FUNK, JOHN R., AVV NEVADA
GAUNCE, JAN, NTS
GODOWN, ELDON
HANNA-RUDNICKI, DIANNE
HINNEFELD, STUART, NIOSH
HOMOKI-TITUS, LIZ, HHS
HOWELL, EMILY, HHS
HUNTON, LORI
HYATT, SALLY
JACQUEZ-ORTIZ, MICHELE, CONG. TOM UDALL
JENSEN, HARRY L.

KIMPAN, KATE, ORAU
KOTSCH, JEFF, DOL
KROMREI, ROBERT
LEWIS, MARK, ATL
LEWIS, MIKE
LIKOUNNOR, JUNE
LOPEMAN, JOAN MALLORY
LOPEMAN, PAT MARTINET
MADISON, ETHELYN, NTS
MAKHIJANI, ARJUN, SC&A
MARSHALL, KENNETH
MARTIN, DOROTHY
MAURO, JOHN, SC&A
MCFEE, MATTHEW, ORAUT
MCGOLERICK, ROBERT, HHS
MCLEMORE, ADDIE
MEDINA, SANDIE A., LABORERS 872
MILKE, JANET
MILLER, RICHARD, GAP
MINGUS, RICHARD, FSI-LLNL WSI
MORTON, WILLIAM G.
MOSLEY, ALMA L.
MOSLEY, LELAND B.
NIEMEIER, PATRICIA, EEOICPA
PAZ, DR. JACOB
POOLE-WHALEY, EVA
POWERS, WILLIAM, CONG. RICHARD NEAL
PRESLEY, LOUISE S., WIFE OF ROBERT PRESLEY
REALLE, MARY, PETITIONER
RINGEN, KNUT, CPWR
ROBERTSON-DEMERS, KATHY, SC&A
ROGERS, KEITH, LAS VEGAS REVIEW-JOURNAL
ROHRIG, NORMAN
ROLFES, MARK, NIOSH OCAS
ROZNER, KATHLEEN, SEN. REID
RUIZ, HARRIET
RUTHERFORD, LAVON, NIOSH
SBROCCHI, DIANE
SCHAEFFER, D. MICHAEL, SAIC
SCHUBERT, SANDRA, SEN. REID
SHELL, LULA, AVV NEVADA
SMITH, BILLY P., MH CHEW AND ASSOCS.
STAUDT, DAVID, CDC

ULSH, BRANT, NIOSH
WILKES, CYNTHIA
WILLIAMS-LENZ, JANE ANN
WILSON, AARON
WU, PORTIA, SEN. KENNEDY
ZACCHERS, MARY JO, ORAU
ZIEMER, MARILYN

P R O C E E D I N G S

(8:45 a.m.)

WELCOME AND OPENING COMMENTS**DR. PAUL ZIEMER, CHAIR**

1 **DR. ZIEMER:** Good morning, everyone. I'd like to
2 call the meeting to order, the second day of
3 this meeting of the Advisory Board on Radiation
4 and Worker Health.

5 I'll begin with my usual reminder to register
6 your attendance in the book in the foyer. In
7 fact, it's a good thing I gave you that
8 reminder because I forgot to register myself,
9 so let's all do that as you have an opportunity
10 during the morning.

11 Again, copies of the agenda and other documents
12 -- and there are some new documents this
13 morning on the table, so avail yourselves of
14 those as -- as necessary.

WORKING GROUP REPORTS:

15
16 As we look ahead on today's agenda, we have a
17 number of reports from our working groups on
18 various site profiles. Also we have a fair
19 amount of activity dealing with SEC petitions,
20 so we have a full day, and also an evening

1 session devoted to public comment period. And
2 those of you -- members of the public -- who
3 wish to comment, please sign up for that
4 activity, as well.

5 We're going to begin this morning with a report
6 from the working group for the Savannah River
7 site profile. Mike Gibson chairs that group.
8 The members are Mark Griffon, Jim Lockey and
9 Brad Clawson, and we believe Mike is on the
10 line. Mike, if you're there, I should tell
11 you, Mike, that we have distributed I think the
12 most recent copy of the site profile technical
13 basis document finding matrix. It's a matrix
14 dated actually this week. It's 9/20, so I
15 think it's the -- the current version of the
16 matrix. So Mike, are you there? And if you
17 are, we'll ask you to proceed.

18 **DR. WADE:** Maybe -- this is Lew Wade. Maybe I
19 could just --

20 **DR. ZIEMER:** Oh, a few comments from our
21 Federal --

22 **DR. WADE:** Nothing official, just -- it relates
23 to just the logistics of what we're going to be
24 doing here. First of all, I trust that people
25 on the line can hear me clearly. If anyone has

1 a problem, shout it out.

2 Because of the sound system here, when someone
3 like Mike speaks what we'll do is we'll adjust
4 the setting so that we can hear Mike clearly,
5 but that will make it difficult for us to --
6 for us to -- for -- what happens when --

7 **AUDIO-VISUAL TECHNICIAN:** I have to unplug you
8 guys so that he won't be able to hear you.

9 **DR. WADE:** -- you won't be able to hear us when
10 Mike is speaking. So if there is an
11 interchange between the Board and Mike, we'll
12 have to just leave a pause for the settings to
13 be adjusted.

14 So with that as a very confusing introduction,
15 I would ask that, Mike, you ascend the podium
16 and begin to speak and we'll make the
17 adjustment so that we can hear you clearly.
18 Thank you.

19 **SAVANNAH RIVER SITE PROFILE**

20 **MR. GIBSON:** Okay. Thank you, Lew. As you
21 guys -- you know, I'm sorry for the delay on
22 the -- this matrix. This is much more of a
23 daunting task trying to chair a committee than
24 I thought it would be, but I'd also --
25 introductory remarks, like to thank Larry

1 Elliott for making Sam Glover available to me
2 and for John Mauro for making Joe Fitzgerald
3 available to me. They were instrumental in
4 putting this together.

5 We had a meeting several weeks ago in
6 Cincinnati with SC&A and NIOSH, and we resolved
7 several issues. There are several that are
8 still open, as you can read, and there are some
9 that I think the working group -- well, it --
10 at least I didn't get any negative comments
11 back from the working group when I sent this
12 draft out to them over the weekend -- that we
13 believe are more site-wide issues than
14 specifically related to Savannah River Site.
15 Rather than go through the matrix, I guess
16 people could just read through it and if you
17 have any questions I'll try to entertain them
18 or if Joe Fitzgerald or Sam Glover's there,
19 maybe they could, you know, tell us where we're
20 at. And I think as time allows here in a
21 couple more weeks, maybe we can have another
22 meeting and hopefully resolve these issues.
23 It's just -- this process, as you know, is
24 iterative. There was a couple of revs out
25 there from NIOSH, some responses from SC&A, and

1 so it's -- it's kind of a back-and-forth thing
2 that is still in the works, but I believe we're
3 making good progress on resolving the issues.
4 So if there's any questions or discussions...

5 **DR. ZIEMER:** Okay, thank you for that summary,
6 Mike. This is Ziemer and I want to ask a
7 preliminary question here. There are -- I'm
8 having a little trouble talking this morning,
9 but there are a number of -- of open items
10 still. Can you identify for us, or maybe one
11 of the workgroup members can identify on those
12 open items, which of those would you classify
13 as being the most difficult issues that have to
14 be dealt with? Are there -- some of these may
15 be open simply because you just haven't gotten
16 around to addressing some detail. Others may
17 be open because they are very thorny types of
18 issues where either additional information is
19 needed, additional records or something. So if
20 you can -- can you help us sort out, are there
21 any here that are either very difficult or
22 potential showstoppers?

23 **MR. GIBSON:** I really can't tell at this point.
24 I mean there's -- all of them that are open are
25 open for some -- some -- some sort of

1 disagreement, whether it's minor or severe.
2 But you know, I -- perhaps NIOSH or SC&A could
3 -- could give you more -- a better, more
4 precise indication of which ones may be the
5 more -- issues that are -- they're further
6 apart on.

7 **DR. ZIEMER:** Okay. Here's Joe Fitzgerald from
8 SC&A, and then we'll hear from Brad and perhaps
9 Mark. Okay, Joe.

10 (Pause for sound problems.)

11 **MR. FITZGERALD:** How's that? Okay, that's
12 better. Good morning, Joe Fitzgerald.
13 Certainly working on the Savannah River follow-
14 up, in answer to the question, I guess your
15 issue, you know, in terms of relative
16 significance, this is one of the earlier site
17 profiles that NIOSH compiled. It was one of
18 the earlier reviews that we actually performed.
19 And what you'll see in the review is the -- I
20 guess the request for clarification and
21 expansion -- because, again, I think there was
22 a lot of subject areas that I would believe
23 would be addressed -- we would believe would be
24 addressed more thoroughly perhaps in the later
25 site profiles, but in this very first one I

1 think there was some certainly areas that were
2 a little weak, perhaps not as expanded.
3 The most significant issue, the one that we
4 felt probably strongest about, were the tank
5 farms in terms of characterization as provided
6 in the site profile. You know, the tank farms
7 were a special situation. We were dealing with
8 a large range of radionuclides, certainly a lot
9 of internal 'mitters that would be significant,
10 and we felt that the characterization in the
11 previous edition of the site profile wasn't
12 sufficient to give us certainly some assurance
13 that, you know, the key nuclides were addressed
14 and that the exposure pathways were identified
15 and that there was a good approach to
16 accommodate those. And I think what you see in
17 the actions are I think agreements that yes, we
18 can expand that somewhat. There are databases
19 that we haven't looked at necessarily as
20 thoroughly as we could have, and I think what
21 we're asking for NIOSH to do is to go back and
22 look at those databases and perhaps give us a
23 little bit more thorough characterization for
24 the Board on the tank farms.
25 The other issues -- we looked at high five,

1 which is an approach for looking at the
2 internal exposures. I think we've gone a long
3 ways. I don't think there's any -- any
4 showstoppers, any key issues that would present
5 the Board a particular problem. I think a lot
6 of these are ones where we just need more
7 information so that, you know, I would
8 characterize a lot of the issues as more
9 information, more clarity, a clear idea of how
10 dose estimation's going to be done. And I
11 think with that feedback to the Board, I think
12 that puts everybody in a better position, so
13 that's -- that's kind of our synopsis of most
14 of these.

15 We did close out, by the way, five or six
16 issues of the -- I think there were 16 total, a
17 number of which were really generic issues.
18 The oro-nasal breathing, for example, was
19 raised. We've dealt with that issue -- right,
20 right, we're not going to raise it again. We
21 just reassure you on that one. And certainly
22 we're concerned about the construction workers
23 at Savannah River. And as you heard, OTIB-52
24 is now out, so I think the -- certainly the
25 review and the site profile, that particular

1 edition, was -- has been overtaken by
2 developments since then. This is going back in
3 time about two years, so...

4 **DR. ZIEMER:** Thank you, Joe. And Brad Clawson,
5 do you want to add to that?

6 **MR. CLAWSON:** Yeah. My understanding is -- one
7 of the things we were going to kind of revise
8 the original site profile was one thing. But
9 two, we were trying to get information, data,
10 on an accident reports that another company had
11 and that we were being denied access to, and
12 that I feel is very important that we are able
13 to review.

14 **DR. ZIEMER:** When you say another company, you
15 mean, for example, DuPont in the early days or
16 what are -- what are you talking about here?

17 **MR. CLAWSON:** Yeah, I believe it was DuPont
18 that has this information. They've got a very
19 specific accident reports of everything that
20 went on and a lot of information in there and
21 we haven't been able to see that yet.

22 **DR. ZIEMER:** Well, do we have acce-- I mean
23 DuPont ran the plant for most of -- or the site
24 for most of its operational years. Do we not
25 have access to the DuPont data?

1 **MR. FITZGERALD:** Yeah, there was a -- there was
2 a question raised -- there's a data bank that's
3 particularly valuable as a res-- as a source of
4 information for the tank farm review which we
5 understood to have been done by a contractor to
6 DuPont, and that has since somehow gone into,
7 quote, the commercial domain. And the issue
8 that was raised, since this was paid for by
9 federal government funds, certainly the
10 admonition is that we shouldn't certainly have
11 access while having to pay for it again, as it
12 were. And that's the issue I think that NIOSH
13 was going to check on and with the notion of
14 trying to resolve that -- that question. One,
15 access; and certainly the second one not
16 necessarily paying for something that was paid
17 for in the first place by the government.

18 **DR. ZIEMER:** Thank you. Okay, Wanda Munn.

19 **MS. MUNN:** These are questions -- simple ones,
20 I think -- based primarily on my lack of
21 knowledge of the Savannah site, which makes me
22 question some of the -- the issues that are
23 raised here. One of them, in number one,
24 references high flux programs. Can someone
25 tell me what the high flux programs were that

1 are of issue and approximately the time frame
2 that was involved for those programs? It's
3 item 1F, Joe, if you're looking at it.

4 **MR. FITZGERALD:** I'm trying to find which --
5 are you on issue --

6 **MS. MUNN:** 1F.

7 **MR. FITZGERALD:** Comment number one?

8 **MS. MUNN:** Uh-huh.

9 **DR. ROESSLER:** Page 2, right at the --

10 **MR. FITZGERALD:** Oh, I'll have to get back to
11 you on --

12 **DR. ZIEMER:** That's --

13 **MR. FITZGERALD:** -- the specifics --

14 **DR. ZIEMER:** -- that's one of the items that
15 NIOSH --

16 **MR. FITZGERALD:** Right.

17 **DR. ZIEMER:** -- included in their reply.

18 **MR. FITZGERALD:** Right.

19 **DR. ZIEMER:** Who had the lead on this for
20 NIOSH?

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

22 **DR. ZIEMER:** Not here, okay. So we'll have to
23 --

24 **MS. MUNN:** Yeah, I'd appreciate just knowing a
25 little bit more --

1 **MR. FITZGERALD:** Right, we'll give you a little
2 background --

3 **MS. MUNN:** -- what that is.

4 **MR. FITZGERALD:** -- I don't want to misstate it
5 by, you know, my recollection, but we can get
6 down some specifics.

7 **MS. MUNN:** There was also a reference to
8 concern about organically-bound tritium.

9 **MR. FITZGERALD:** Yes.

10 **MS. MUNN:** And the question in my mind was what
11 was -- what was the activity that was involved
12 that was of concern; what was the organic
13 compound that's of concern?

14 **MR. FITZGERALD:** Well, some of this gets into
15 class-- classified information, but really the
16 process was a compounding of the metal tritides
17 for use in nuclear weapons fabrication. That's
18 about as far as I can go on that.

19 **MS. MUNN:** That's okay. It was a fabrication
20 process then you're talking about.

21 **MR. FITZGERALD:** Yeah, it was an application
22 process for the nuclear weapons program, but
23 you know, the implication there -- the most
24 important implication is the lack of solubility
25 when you deal with metal tritides.

1 **MS. MUNN:** Right.

2 **MR. FITZGERALD:** And the other implication is
3 the generic -- generic nature of that
4 particular issue. We certainly see that issue
5 at Los Alamos, Mound, other locations, so I
6 think this is sort of a -- a discussion in
7 process. Our -- our question is is there an
8 approach to dealing with those that would, one,
9 encompass all these different sites but also be
10 a sound way to deal with the question of, you
11 know, how do we actually measure those to
12 workers who, for security reasons and other
13 reasons, did not know they were being exposed
14 to these compounds. And you don't have
15 monitoring, per se, for these compounds, so
16 you're sort of in this realm where you don't
17 have monitoring. You don't even have
18 necessarily knowledge on the workers' part, or
19 even their supervisors' parts, you know, where
20 the exposure was taking place. Some places you
21 do, but some of the-- some places you don't and
22 how would one approach that and then come up
23 with an estimation scheme that would in fact be
24 conservative. And I think NIOSH has proposed
25 in its response -- and this is, again,

1 informal. It's not yet reflected in a site
2 profile, but a response which I think is headed
3 in the right direction. It's using surface
4 contamination as a surrogate and trying to go
5 from there as far as a conservative approach.
6 But that still is a work in progress right now,
7 but the implications are I think important. It
8 -- whatever model is developed would clearly be
9 applicable across the different DOE sites, and
10 we certainly need that model to answer
11 questions -- similar questions at places like
12 Mound and the national laboratories, so -- but
13 the key issue there is a lack -- certainly lack
14 of solubility and the identification of the
15 material in terms of where it was used, how it
16 was used and when it was used I think are --
17 are clearly problems that may, you know,
18 clearly challenge dose estimation in the
19 future.

20 **MS. MUNN:** Well, thank you.

21 **DR. ZIEMER:** Wanda, where on the matrix was
22 that, just for our reference here so we can
23 track together on that?

24 **MR. FITZGERALD:** I think you'll find it in
25 comment eight, the nature of exposure to metal

1 tritides in organically-bound tritium.

2 **DR. ZIEMER:** Oh, I see it.

3 **MS. MUNN:** Right.

4 **DR. ZIEMER:** Uh-huh.

5 **MS. MUNN:** Right, and dealing with low energy
6 beta is always a problem for --

7 **MR. FITZGERALD:** Yeah, now to balance that, the
8 proportion of metal tritides to total tritium
9 in a particular workplace like Savannah River
10 apparently was relatively small. So you have
11 that as a sort of a counterpoint, so certainly
12 in terms of magnitude it may be a problem from
13 dose estimation, but in the bigger picture it
14 may not be as much of a problem in terms of
15 total dose, so that's what we're trying to
16 resolve right there.

17 **MS. MUNN:** I didn't expect it to be --

18 **MR. FITZGERALD:** Yeah.

19 **MS. MUNN:** -- that significant in terms of
20 actual dose, but in terms of identifying,
21 probably something else.

22 And the third question that came to mind -- I'm
23 really sorry I didn't have an opportunity to
24 look at these before just this morning, so this
25 is kind of off the top of the head and I'm

1 sorry about that. Item number 14, neutron log
2 books. You mentioned earlier that you had a
3 problem with access to some of the records.
4 I'm hoping the neutron log books don't fall in
5 that category. They're easily accessible to
6 you, just haven't been thoroughly identified
7 yet?

8 **MR. FITZGERALD:** Yeah, I don't -- I don't think
9 this is a -- is a problem in terms of access.
10 I think this is just a follow-up to that
11 particular item that we raised.

12 **MS. MUNN:** Just a problem of time to get to it.

13 **MR. FITZGERALD:** Yeah.

14 **MS. MUNN:** Okay, good. Thank you.

15 **DR. ZIEMER:** Okay.

16 **DR. WADE:** Just for the record -- and Joe,
17 thank you very much, very much. I think Joe's
18 done a masterful job of answering two of your
19 questions. The first question with regard to
20 what are the high flux programs as referenced
21 in item 1F, the NIOSH response, we'll get you -
22 - we'll get the Board an answer to that.

23 **MS. MUNN:** Thank you.

24 **DR. ZIEMER:** Okay, other comments or questions
25 for the subcommittee or -- subcommittee -- and

1 of the subcommittee members have additional
2 comments?

3 (No responses)

4 Let's see if -- let's go back to Mike Gibson
5 for a moment if we could switch back and, Mike,
6 I'm just going to ask if you had any additional
7 comments and can give us a timetable on what --
8 what the working group plans to do as we move
9 forward.

10 **MR. GIBSON:** Dr. Ziemer, just -- again, you
11 know, I'll have to see what's convenient for
12 SC&A and the -- the working group members and
13 NIOSH and see if we can't set up another
14 meeting, either a conference call or a face-to-
15 face meeting, you know, perhaps in Cincinnati
16 again and -- here in the next couple of weeks
17 and -- but all the information of course is
18 available and up-to-date and see if we can't
19 move toward closing these issues.

20 **DR. ZIEMER:** Thank you, Mike. Thank you, Mike.
21 And I note that a large number of the open
22 items are ones that specify a response either
23 from NIOSH or SC&A, so I -- I assume that
24 before a face-to-face meeting is held, there'll
25 probably be some additional staff work in both

1 groups that will have to take place, and Mike
2 can coordinate that with the -- with the
3 appropriate folks as we move forward.
4 Any other comments on this site profile then --
5 review?

6 (No responses)

7 **NEVADA TEST SITE PROFILE**

8 Okay, so that gives us a status report on
9 Savannah River. Let's move on to the Nevada
10 Test Site. Robert Presley's been the chair of
11 that workgroup and the members are Wanda Munn,
12 Genevieve Roessler and Brad Clawson, and Mr.
13 Presley will give us a summary of their
14 activities. And Board members, you should have
15 a handout I think at your place this morning.
16 It says Nevada Test Site site profile working
17 group report.

18 **DR. WADE:** And there are copies on the table.

19 **MR. PRESLEY:** Can everybody hear me?

20 **DR. ZIEMER:** Yes.

21 **MR. PRESLEY:** Good morning. My name is Robert
22 Presley. I'm the chair of the group. I want
23 to do this just a little bit different. Since
24 there are -- we are Nevada and there are quite
25 a few people here interested in the site

1 profile for the Test Site, I want to tell you
2 just a little bit about the people that are
3 working on this.

4 We have Brad Clawson. Brad is from INL. He
5 has 18 years experience as senior operator in
6 the nuclear fuels handling division out there.
7 Wanda Munn has 20 years at Hanford in advanced
8 radia-- advanced reactor division.

9 Dr. Gen Roessler has 40 years experience.

10 She's a industr-- or an HP -- I 'bout messed up
11 -- an HP, has been involved all over the United
12 States and overseas in industrial hygiene
13 activities --

14 **DR. ZIEMER:** Health physics.

15 **DR. ROESSLER:** Health physics.

16 **MR. PRESLEY:** Or health physics, I'm --

17 **DR. ROESSLER:** You're going to make me an
18 industrial --

19 **MR. PRESLEY:** I'm going to make you an
20 industrial hygienist yet.

21 And I'm Bob Presley. I worked 37 years at Y-
22 12, 26 of those years was involved in dealing
23 with device work for Livermore and Los Alamos
24 and coming out here to Nevada, putting devices
25 together and putting them down a hole and

1 shooting them. So we have quite a bit of
2 experience on the team of what went on at
3 Nevada.

4 I'd like to thank Dr. John Mauro of SC&A and
5 his group, Dr. Makhijani and Joe Fitzgerald,
6 for helping out and Mark Rolf (sic) from NIOSH
7 has been real, real good to work with us on
8 this thing.

9 A little bit about what we've done. We -- the
10 site profile -- the Technical Basis Document
11 was released in February of 2004. December
12 2005 Sanford Cohen & Associate completed the
13 draft review. June of this year NIOSH comments
14 on the Sanford and Cohen (sic) review were
15 released.

16 July the 25th, 2006 we had our first meeting as
17 a working group to talk about this. It was
18 held up in Cincinnati. The comments from that
19 meeting were sent to -- the working group sent
20 their comments back to NIOSH and SC&A
21 officially on August the 15th. September the
22 1st, 2006 NIOSH sends their comments back to
23 the working group and the 5th of September this
24 year the working group met with SC&A and NIOSH
25 on a teleconference to discuss our issues.

1 There was 25 total comments from the reviewer,
2 SC&A; 42 total issues detailed in the
3 subsections of these 25 comments; 14 of the
4 comments NIOSH agreed to accept, along with
5 SC&A, and they have been worked. There was 12
6 subsets or four comments that are not closed on
7 this --

8 **DR. ZIEMER:** Not closed or are --

9 **MR. PRESLEY:** -- or have been closed now. I'm
10 sorry.

11 The major issues that were covered in this --
12 and we've talked about -- some of this stuff
13 will be talked about in every site profile, was
14 dose reconstruction covers significant
15 radionuclides, and that's being worked. Hot
16 particle, internal and external; oro-nasal
17 breathing and ingestion; dosimetry limitations,
18 the reliability of the dosimeters, missed
19 doses, missed dosimeters and extremities to the
20 body. We -- we are talking about badging
21 geometry, the badge's angle on the body, and
22 assumptions for non-monitored workers. And
23 yesterday we heard a lot of issues on this.
24 Site-specific issues were the Technical Basis
25 Document, the accuracy of it; air values for

1 suspension and resuspension of particles;
2 neutron/photon ratios; time-dependent
3 beta/gamma ratios; Gravel Gertie/tunnel/re-
4 entry assumptions; high-fired solubility
5 criteria.

6 And the current status of the complex-wide
7 issues are that they will be added to the TBD
8 or TIB; all radionuclides of consequence -- and
9 we've agreed to add quite a few of those back
10 to it; job type correction factors; revised
11 guidance for maximum dose estimates.

12 Policy or guidance being assessed or redefined
13 for breathing and ingestion, badge geometry,
14 employee misuse of dosimetry, extremity dose
15 interpretation, and high-fired super S methods.
16 Current status of the NTS issues are Naval
17 Reactor (sic) Defense Laboratory methods being
18 reassessed for appropriate dose reconstruction
19 use from hot particles, re-entry and beta/gamma
20 ratios.

21 Current status of NTS issues are draft
22 documentation in review for a bonding (sic)
23 suspension intake; for coworker data used in
24 external doses; photon energies and neutron
25 ratios; missing data approach; radon and other

1 gas potential; sensitivity study for internal
2 doses; and ambient internal dose approach.
3 Also we're going to add site expert interviews,
4 and since then the site expert has been brought
5 on board by SC&A and right now we're waiting on
6 some declassification of some of the paperwork
7 we've been able to get.
8 I don't have a conclusion slide, and I'll tell
9 you why I don't. This is not concluded.
10 There's a tremendous amount of work that needs
11 to be done on this site profile, as you can
12 see. We would have loved to brought this thing
13 to you all here and been able to -- to say
14 okay, it's complete and it's ready to go. But
15 with all the work and as big as it is, that's
16 not going to happen. The working group and
17 SC&A and NIOSH are doing all they can to get
18 this thing done to where we can get it
19 completed and voted on and start down the road.
20 But we all know that these are working
21 documents and just as soon as we vote on it and
22 say okay, we've got a site profile, there may
23 be some more records that come up down the road
24 and we have to change this thing. And I thank
25 everybody that's working on it to try to get it

1 done as soon as possible.

2 Are there any questions?

3 **DR. ZIEMER:** Thank you.

4 **AUDIO-VISUAL TECHNICIAN:** Somebody on the
5 phone.

6 **DR. WADE:** Yes? Yes, could you identify
7 yourself, please?

8 **MS. SCHUBERT:** This is Sandra Schubert in
9 Senator Reid's office. I just want to clarify
10 a couple of things to make sure I understood.
11 You said 12 comments had been closed. Are
12 these comments that are resolved and completed
13 or are these some of the comments that applied
14 to the pre-'62 years?

15 **MR. PRESLEY:** I did not hear the last portion
16 of your comments.

17 **MS. SCHUBERT:** I said are these comments that
18 evolve -- that have been resolved and done,
19 closed out, or are we talking about comments
20 that were relative to the pre-1962 -- 1962 and
21 before?

22 **MR. PRESLEY:** Mostly before 1962. These --
23 these comments have been agreed-to and closed
24 out. Most of the comments are -- are of
25 matters that pertain to pre-1962 issues.

1 **MS. SCHUBERT:** Okay, thank you. And then I
2 have one other question. Do you keep a list of
3 draft documents in review? And I'd love if you
4 could clarify what that means. I haven't seen
5 your summary; they're trying to fax it to me.
6 I'm not actually at the meeting, as you know.
7 But I have seen some of the recent tasks --
8 task matrices for the auditor, and I'm
9 wondering if "in review" means the documents
10 have already been drafted and written or that
11 the work is already being done on them.

12 **MR. PRESLEY:** The documents have already been
13 completed, and these documents are in review.

14 **MS. SCHUBERT:** Okay.

15 **DR. ZIEMER:** Okay, thank you for those
16 questions. Robert, while you're at the podium,
17 I note that in the copy of the matrix that was
18 distributed on I believe August the 30th, the
19 recent copy, some -- some items were
20 highlighted in yellow. What was the
21 significance of that, or was that just
22 somebody's copy that was --

23 **MR. PRESLEY:** Okay, what we did --

24 **DR. ZIEMER:** -- copy there.

25 **MR. PRESLEY:** What we did was I highlighted --

1 if I remember correctly, I highlighted Arjun's
2 comments in yellow and Wanda or Gen's comments
3 are in blue, and that's why that those comments
4 were highlighted. We used the colors in the
5 things that we sent to the working group and
6 SC&A so we'd know whose comments those were.

7 **DR. ZIEMER:** I gotcha, okay.

8 **MR. PRESLEY:** That's why the colors are there.

9 **DR. ZIEMER:** Arjun, I guess I was looking at
10 your comments.

11 **DR. MAKHIJANI:** Okay. No, I just -- I just --

12 **DR. ZIEMER:** Are you okay with the yellow?

13 **DR. MAKHIJANI:** Yeah, I'm fine with yellow --
14 sunshine. I just wanted to clarify the term
15 "documents in review". I presume that these
16 are documents in review inside NIOSH, because
17 we have not seen them and we haven't been
18 charged by the Board to review any.

19 **DR. ZIEMER:** Understand. That's correct.

20 **DR. MAKHIJANI:** Thank you.

21 **DR. ZIEMER:** Okay.

22 **MR. PRESLEY:** Board members, do we have any
23 more comments?

24 **DR. ZIEMER:** So Robert, you've kind of already
25 summarized that there's a lot of work to be

1 done yet, and you'll keep us apprised of the --
2 **MR. PRESLEY:** There is -- there is a lot of
3 work to be done. We have not scheduled -- as
4 Mike talked about, we have not scheduled our
5 next meeting. Everybody's been trying to get
6 ready for this meeting. It takes a lot to try
7 to get ready to come out for -- have a -- to
8 have a meeting outside. We will be meeting in
9 the near future on some of the related issues.
10 One of the problems, as the Board can see and
11 people in the audience, we have a lot of issues
12 that cross sites. It's not just an issue for
13 one site, but it's an issue for all sites. And
14 what we'd like to do is maybe get together and
15 see if we can't close out some of those site
16 issues that -- to try to get this thing on the
17 road and get it done.

18 **DR. ZIEMER:** I do note that every issue has
19 been assigned to a specific person or --

20 **MR. PRESLEY:** That's correct.

21 **DR. ZIEMER:** -- group of individuals. I -- I
22 also note that none of them have deadlines on
23 the due date. Perhaps it's too early to assign
24 the deadlines, but at some point these cannot
25 carry on indefinitely, so --

1 **MR. PRESLEY:** Dr. --

2 **DR. ZIEMER:** -- we expect to --

3 **MR. PRESLEY:** Dr. Melius?

4 **DR. MELIUS:** Yeah, I have a -- I have a
5 question. It's probably more for Larry than it
6 is for you, Bob. I'm just trying to understand
7 some of our -- what we're going to talk about
8 later in terms of site profile reviews. This
9 says to draft documents. These would be
10 modifications to the site profile or -- can you
11 -- I'm just trying to understand where -- where
12 we would -- would these be something that --
13 items that would be reviewed by SC&A as part of
14 this site profile review or would they be
15 issued as a revision to the site profile.

16 **MR. HINNEFELD:** This -- Stu Hinnefeld from
17 OCAS. I think I can answer it. These topics
18 will be addressed in revisions to the site
19 profile document. The question of the
20 resolution, approved resolution. Is this a
21 good resolution to the comment I guess is sort
22 of the Board's -- you know, how -- how does the
23 Board want to interact with the contractor. Do
24 you want that kind of evaluation of the
25 resolution as part of this review or some other

1 subsequently. You know, I don't know the --
2 but we will do whatever we're asked to do.

3 **DR. MELIUS:** Yeah. Well, I'm just trying to
4 figure out what's the most efficient way of
5 doing that, getting closure, but you know, we
6 don't want this sort of initial review to go
7 on, you know, for years while --

8 **MR. HINNEFELD:** I understand.

9 **DR. MELIUS:** -- things like that. And we also
10 have to make some decisions about how to assign
11 SC&A's work under that task, so...

12 **MR. ELLIOTT:** It seems to me that -- that these
13 issues that cut across several sites, these are
14 generic issues, if we address the issue in that
15 sense and then apply it and introduce it in
16 each of the site profiles, that's going to be
17 most expeditious. I would encourage us to come
18 to grips with these generic issues in that --
19 in that mindset, let's deal with them as
20 generic issues and apply them in site-specific
21 situations.

22 **DR. MELIUS:** Yeah, okay.

23 **DR. ZIEMER:** Other questions or comments? And
24 Mike, again, let me afford you the opportunity,
25 if you have comments or questions, to do so.

1 Mike Gibson?

2 **MR. GIBSON:** No, I'm okay with this.

3 **DR. WADE:** I don't know, Paul, since Arjun is
4 here and Mark is here, if they would have any
5 additional comments they would like to make to
6 inform the discussion, or are you comfortable
7 with the discussion as it's taken place?

8 (No responses)

9 **MR. PRESLEY:** Okay, anybody else?

10 (No responses)

11 **DR. ZIEMER:** Okay. Well, thank you very much,
12 Bob.

13 **MR. PRESLEY:** I'd be remiss if I didn't thank
14 Wanda and Gen for helping on this presentation.
15 I don't have PowerPoint so they did the
16 presentation. Thank y'all very, very much.

17 **MS. MUNN:** You were on vacation. That doesn't
18 count.

19 **DR. WADE:** If I could follow up on Dr. Melius's
20 point just, again, to set a stage for this
21 discussion. This process is evolving, and I
22 think it's an extremely healthy process. I
23 applaud its transparency. But sort of as it
24 evolves, there are things we have to learn how
25 to do.

1 For example, NIOSH and SC&A will close on an
2 issue intellectually, everyone will agree and
3 the working group will bless that and the
4 decision will be to modify a site profile as
5 the result downstream. How do we maintain
6 touch with that issue and how do we ensure that
7 the work that NIOSH actually does is reviewed
8 as part of this process once we break contact
9 with the workgroup. These are issues we have
10 on the agenda for tomorrow, but we're starting
11 to face them as this program becomes more
12 mature and we -- we wind up with this sort of
13 break. But we don't want to lose the ability
14 for the Board to pass judgment, and I don't
15 think it's a trivial issue, although it's one
16 I'm very pleased we're facing because our
17 process is moving forward.

18 **SEC PETITION ACTIVITY**

19 **DR. ZIEMER:** Thank you, Lew. Next, a report on
20 the working group dealing with SEC petitions,
21 and that's Dr. Melius.

22 **DR. MELIUS:** Yep. I'll give you a brief
23 update. That working group includes Mark
24 Griffon, Paul Ziemer, and I did mention
25 Roessler's taken Roy DeHart's place. Okay,

1 just double-checking, get confused with Wanda
2 coming and going, so...

3 The -- our work on the -- this is the issue
4 that came up with three of the SEC reviews
5 we've done recently in Nevada Test Site,
6 Pacific Proving Ground and then we -- the Ames
7 Laboratory. And we -- and the issue it says to
8 what to do about people who may have had say
9 high exposures to radiation and difficult to
10 evaluate the doses but at the same time could
11 have experienced those doses under very -- very
12 short time periods.

13 The workgroup -- our working group has been
14 somewhat delayed. We had to deal with the
15 firewall issues, the other issues with the
16 contract and with SC&A, so those weren't really
17 dealt with until the end of August, sometime
18 middle, end of August, and so SC&A's -- we got
19 a task order out for them to do some work on
20 this issue I believe sometime in early
21 September, if I'm correct on that. And so
22 they've been really working on this for only a
23 couple of weeks. I -- the -- we've conference
24 called with them to discuss the issue. We've
25 sort of laid out a general plan to approach

1 this initially, which will be in the form of
2 some basically data-gathering.

3 To remind the Board that this issue is not an
4 issue of -- as much of can we reconstruct doses
5 with sufficient accuracy, but it -- but refers
6 to the endangerment part of the SEC
7 regulations. And let me just read from those
8 so I'm clear on this.

9 It says -- the relevant part says that for
10 classes of employees that have been exposed to
11 radiation during discrete incidents likely to
12 involved exceptionally high exposures such as
13 nuclear criticality incidents or other events
14 involving similarly high level exposures
15 resulting from failure of radiation protection
16 controls, NIOSH will assume and go on that
17 those -- that is equivalent of endangerment.
18 So rather than the 250-day requirement that's
19 in this rule, this would have this other --
20 other test of health endangerment.

21 So what we've done in terms of the work of this
22 working group, we've asked SC&A to do, is to
23 sort of focus on some initial fact-finding in
24 this area. One is get a better understanding
25 of the type of exposures that would occur in

1 criticality incidents and can we come up with
2 some parameters on that that would then -- then
3 can say that exposures that may have occurred
4 in the Pacific Proving Ground, Nevada Test Site
5 or Ames Laboratory were, you know, equivalent
6 or similar to those in their nature.
7 Secondly is to also evaluate those -- the
8 exposures at Nevada Test Site, Pacific Proving
9 Grounds -- Ames really already have -- have
10 done and so -- as part of the review of the SEC
11 evaluation for Ames. But then can we make a --
12 what's the comparison there.
13 And then I think the third part of the task at
14 the present time is to try to get a better
15 handle on how do we classify employees that may
16 have been fitted into this -- these categories,
17 whose health may have been endangered, may have
18 had relatively short term of exposures,
19 difficult to reconstruct their doses but how --
20 how do we, given -- given the nature of these
21 work sites and so forth, how -- is there some
22 way of looking at different groups of employees
23 and having a better understanding of there to
24 see how this SEC class would fit together.
25 So SC&A has just started working on that, I

1 believe within the last couple of weeks now,
2 and I expect we'll have a meeting of our
3 workgroup to sort of update our -- update on
4 where they are in terms of fact-gathering and
5 so forth. I hope the workgroup can meet
6 sometime in the next month or so and hopefully
7 we can try to resolve these issues by our
8 December Board meeting.

9 **DR. ZIEMER:** Thank you, Jim. Let me open the
10 floor for questions or comments. And Arjun,
11 you have a comment on this --

12 **DR. MAKHIJANI:** I didn't have a chance to talk
13 to Dr. Melius about this, but we have done some
14 work and I just want to give you an update. We
15 have -- just before I came to this meeting I
16 got a -- we commissioned Dr. Mike Thorne, who
17 has been on our team for quite a long time, to
18 do work on the critica-- to do a paper on the
19 criticality doses, criticality events, how long
20 those -- how -- how to define the question of
21 discrete, how long a criticality event might
22 last and so on. And happily, as it turned out,
23 he had already studied this question at some
24 length, and so we had all the documents at
25 hand. And he just sent me -- just before the

1 weekend -- a paper that's in internal review,
2 but we have a pretty good handle on the
3 criticality question, so a very basic task has
4 been done.

5 Dr. Anspaugh's done some work on -- on the
6 Nevada Test Site resuspension, which has some
7 implications for the less than 250-day issue,
8 but that still has to be elaborated and
9 probably will be done in the next -- coming
10 weeks.

11 We've also gathered some data on external dose
12 on each test series in Pacific Proving Ground
13 and Nevada Test Site, but all of that is under
14 internal review, especially if the data-
15 gathering involved, you know, some -- some
16 conflict of interest questions. And we need to
17 go through a more intensive internal review
18 before we can give that document to you.

19 **DR. ZIEMER:** Okay. Thank you, Arjun, for that
20 --

21 **DR. MAKHIJANI:** And the Ames thing is done, as
22 you know. You have seen that already.

23 **DR. ZIEMER:** Okay. Other questions? Comments?

24 (No responses)

25 Okay.

1 **DR. MELIUS:** And I think I also need to report
2 on the next part of this, which is the reviewed
3 but not qualified petitions. And we had a
4 little e-mail miscommunication and -- which I
5 won't go into, but I -- we didn't -- I was
6 unaware that petitions were ready to review and
7 wasn't communicated to me through a mishap, and
8 so we will be having a meeting of the workgroup
9 also to review all the -- these would be the
10 petitions that were submitted but were not
11 qualified by NIOSH. If you remember, at the
12 last meeting we were asked to review that and
13 we are -- be moving forward.

14 **DR. WADE:** Now is it your understanding, Dr.
15 Melius, that that is the same workgroup that
16 you had just mentioned?

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

18 **DR. ZIEMER:** I think -- I think we had a
19 discussion at the last meeting as to whether it
20 would be a separate workgroup, and I think we
21 ended up agreeing that there was a lot of
22 overlap in activity and perhaps the same folks
23 --

24 **DR. MELIUS:** I was not there for that
25 discussion so it's a little... what happens

1 when you get assigned to -- you know.

2 **MS. MUNN:** You should have known better.

3 **DR. MELIUS:** I know.

4 **DR. ZIEMER:** Okay, any -- anything else on that
5 topic?

6 **DR. MELIUS:** No.

7 **DR. ZIEMER:** Just a time-out for a minute.

8 (Pause)

9 We're simply having a little discussion here on
10 moving something up on the agenda since we're a
11 little bit ahead of the schedule -- which is
12 unusual. But the update on Rocky Flats is --
13 is pretty much of a time-certain because we
14 have some individuals who will be on the phone
15 for that, so we want to keep that at 10:30.

16 **SUBCOMMITTEE REPORTS AND BOARD ACTION**

17 But we can easily move up the next item, which
18 is subcommittee reports and Board action. This
19 is action that comes out of the subcommittee
20 meeting from yesterday. So -- and I think we
21 can -- we can handle that easily before the
22 10:00 o'clock break period.

23 There are two items particularly that we want
24 to deal with. The first of these has to do
25 with the subcommittee charter. Currently we

1 have a subcommittee -- we have a single
2 subcommittee called the Subcommittee on Dose
3 Reconstruction and Site Profile Reviews. Since
4 we are now handling most of the site profile
5 activities through working groups, as we have
6 just heard from a moment ago, it's the intent
7 and the recommendation of that subcommittee
8 that its focus be narrowed to simply include
9 dose reconstruction reviews. And the
10 subcommittee is proposing, and this comes as a
11 recommendation from the subcommittee to the
12 full Board, that the site profile -- or that
13 the charter be modified as is shown in Tab 1 of
14 your Board report. And --

15 **DR. WADE:** You can read the changes.

16 **DR. ZIEMER:** Hang on just a moment.

17 (Pause)

18 I -- I'm just -- you know, it's easy to start
19 to feel like this is deja vu all over again. I
20 want to make sure -- most of the -- most of the
21 group were here yesterday for that session,
22 with the exception I guess of Dr. Melius, so
23 let us -- let us review those proposed changes.
24 And Lew, if you would do those -- that for us.

25 **DR. WADE:** Okay. Just by way of introduction,

1 and I've just been reminded to remind you all
2 by counsel that what we're doing is we're
3 chartering -- we're recommending the charter of
4 a new subcommittee. By a separate action we
5 are abolishing the old subcommittee. So what
6 I'm reading you now is the changes to the
7 charter for the new subcommittee. You'll find
8 the material I'm going to be speaking from
9 under the tab marked "Subcommittee" in your
10 book.

11 The first change comes in the first section of
12 "Purpose" on the third line. The word "very"
13 should be changed to "verify".

14 **DR. ZIEMER:** That's why I said I had the deja
15 vu all over again feeling. I said didn't we
16 already do this yesterday; yes, we did.

17 (Whereupon, multiple Board members commented
18 simultaneously.)

19 **DR. ZIEMER:** In the full Board meeting we -- we
20 did it. We got ahead of ourselves.

21 **MS. MUNN:** When Jim finally got here.

22 **DR. ZIEMER:** We're so happy with the outcome we
23 want to repeat it. That's why I was looking at
24 this. I said it seemed like we did it already.
25 I know those in this group who are teachers,

1 such as Dr. Roessler, if you teach multiple
2 sections of a course you're never quite sure if
3 the joke you're about to tell has already been
4 told in that -- in that section or not.

5 **DR. ROESSLER:** So don't tell jokes.

6 **DR. ZIEMER:** Okay. So -- so we have completed
7 that activity. And then the other one, Mark
8 Griffon -- your -- your report, we did that
9 also then, did we, or not?

10 **MR. GRIFFON:** No.

11 **DR. ZIEMER:** No, okay. Okay. We -- we
12 squeezed that -- this one in but not the second
13 part of this. Okay, good. That's right.
14 Okay, so this is the report on the second and
15 third sets of dose reconstructions. So -- and
16 again, this comes as a recommendation from the
17 subcommittee. Mark, if you will give us that
18 recommendation.

19 **MR. GRIFFON:** Yeah, I -- I think we -- that
20 this report was drafted for the second and
21 third set of case reviews, which were cases 21
22 through 60, and this -- the -- the letter
23 summarizes the findings. And then there's
24 multiple attachments, and I think part of why
25 we didn't vote on it yesterday, we -- people

1 wanted time to look at all the -- the pieces of
2 it. As attachments we have the methodology by
3 which we did the case selection. Also the
4 methodology that describes how we ranked the
5 cases. There's the two matrices, which are
6 cases 21 through 40, I think, and 41 through 60
7 or roughly -- roughly that breakout. There's
8 the table describing the parameters --
9 describing the cases without identifying the
10 cases. In other words, site, POC, information
11 like that so that you have a sense of what kind
12 of cases we -- we looked at. And I think I'm
13 missing one -- that might be all.

14 **DR. ZIEMER:** The SC&A table.

15 **MR. GRIFFON:** Oh, yeah, and the SC&A executive
16 summary of their -- from their full report on
17 all the cases. So there's four attachments
18 plus a summary letter. And as a package, I
19 guess we're putting that before the Board as a
20 recommendation to submit to the Secretary as a
21 report on -- on cases 21 through 60.

22 **DR. ZIEMER:** Well, there was a request I think
23 -- perhaps from Dr. Poston -- that we make sure
24 that we have all the pieces available prior to
25 voting, and I'm not sure we actually have done

1 that yet. So we need -- let me see if I can
2 identify what we need, and I'm quite agreeable
3 that we postpone the vote -- for example, till
4 tomorrow -- but we need to make sure that we
5 have the following documents.

6 We need a copy of the SC&A summary. That's --
7 that's an attachment. That's -- and that would
8 come out of their executive summaries. We need
9 a copy of the methodology for categorizing and
10 ranking dose reconstructions.

11 **MR. GRIFFON:** Which is the same as --

12 **DR. ZIEMER:** It's the same as was in the
13 original package for the first 20 cases. We
14 need the matrix itself.

15 **MR. GRIFFON:** Which -- yeah. Which were e-
16 mailed around to the Board a couple of weeks
17 ago.

18 **DR. ZIEMER:** Right, but --

19 **MR. GRIFFON:** That was the final version. We
20 can get print-offs made.

21 **DR. ZIEMER:** Right. And then the -- the other
22 attachment was the list of the cases, their
23 characteristics -- year of -- years of work,
24 the type of cancer and so on. Those pieces --

25 **MR. GRIFFON:** And that's in the -- that's in

1 the notebook.

2 **DR. ZIEMER:** And that's -- well, that was
3 provided in the notebook, so it's the other
4 three attachments that we need copies, so --
5 and Lew, I have the electronic copies of those
6 so we can -- we can get those -- and let me
7 ask, how many copies do we need for the Board?
8 Some of you already have copies perhaps on your
9 hard drives -- or do you all want hard copies
10 of all of those?

11 **MR. GRIFFON:** I think the matrices were put on
12 the table yesterday. Did people get the
13 matrices?

14 **UNIDENTIFIED:** Yeah.

15 **DR. ZIEMER:** The matrices --

16 **UNIDENTIFIED:** Yeah.

17 **MR. GRIFFON:** So 21 through 38 I'm assuming --

18 **DR. ZIEMER:** So we only need -- we only need
19 two attachments and that's the SC&A summary
20 table --

21 **MR. GRIFFON:** Right.

22 **DR. ZIEMER:** -- and the methodology document,
23 so we'll get those two and postpone the vote on
24 this. The motion will be to adopt the -- the
25 letter -- the summary letter, which is a report

1 to the Secretary, with those attachments. But
2 I'll take it by consent that we'll postpone the
3 vote till all the members have copies of the
4 attachments.

5 **MR. GRIFFON:** I was -- I was just going to say,
6 I can also edit the letter based on Wanda's
7 friendly amendment yesterday --

8 **DR. ZIEMER:** And have an updated copy.

9 **MR. GRIFFON:** -- today so we can -- it's only a
10 couple of lines difference, but we might as
11 well get the final --

12 **DR. ZIEMER:** Thank you. That would be good.
13 We will defer the vote till the Board's working
14 session tomorrow.

15 Then I'm going to go ahead and -- let's go
16 ahead and take our break. Try to reconvene at
17 10:25 so that we can be ready to go at 10:30
18 when the others are on the phone with the Rocky
19 Flats update.

20 (Whereupon, a recess was taken from 9:50 a.m.
21 to 10:30 a.m.)

22 **DR. ZIEMER:** Okay, we'd like to reconvene our
23 session. Let me check to make sure that Mike
24 Gibson is still on the line. Mike, are you
25 there?

1 **MR. GIBSON:** Yes, I'm here.

2 **DR. WADE:** Yes.

3 **DR. ZIEMER:** Yes?

4 **MR. GIBSON:** Yes.

5 **DR. ZIEMER:** Also I want to check to see if
6 both Terrie Barrie and Kay Barker from Rocky
7 Flats -- Terrie, are you on the line?

8 **MS. BARRIE:** Yes, Dr. Ziemer, I am.

9 **DR. ZIEMER:** Yes. And Kay Barker?

10 **MS. BARKER:** Yes, Dr. Ziemer, I am.

11 **UPDATE ON ROCKY FLATS SEC**

12 **DR. ZIEMER:** Okay, thank you very much. Then
13 we're going to proceed with the subcommittee
14 report -- or the working group report,
15 actually, on Rocky Flats -- Rocky Flats SEC,
16 and Mark Griffon has the lead on that so Mark,
17 we'll turn it over to you.

18 **DR. WADE:** Maybe I could make just two very
19 brief comments. Some members of the audience
20 have mentioned that they have some difficulty
21 hearing certain Board members at certain times.
22 I think the solution is just real good
23 discipline when we speak, by speaking into the
24 microphone and keeping it close. They hear the
25 people on the telephone fine, but some of us

1 they're having difficulty.

2 Just by way of background of this working
3 group, it's a working group that originally was
4 tasked to look at the site profile at Rocky
5 Flats. When the Board was in receipt of a
6 petition evaluation report -- an SEC petition
7 evaluation report, this group began to focus
8 its efforts on those issues in the site profile
9 that were most pertinent to the debate
10 concerning the SEC petition, and that's why
11 it's so listed.

12 **DR. ZIEMER:** And Lew, would you also remind us
13 and the assembly here of our ground rules with
14 respect to conflict of interest.

15 **DR. WADE:** The Board really has three rules
16 that it has been using to police itself
17 relative to conflict of interest. If a Board
18 member has a conflict for a particular site,
19 that Board member cannot participate in a vote
20 or a motion as it relates to a site profile.
21 They can be involved in discussion of that
22 issue. They can remain at the table, but not
23 vote or make motion on an issue related to a
24 site profile for a site they're conflicted.
25 If they're conflicted for a site and there's a

1 discussion related to an SEC petition, then
2 they have to remove themselves from the table.

3 **DR. ZIEMER:** Do we have any members that are
4 conflicted on Rocky Flats?

5 **DR. WADE:** My answer is no.

6 **DR. ZIEMER:** Thank you. Now, Mark.

7 **MR. GRIFFON:** All right. I want to give an
8 update on the workgroup process on reviewing
9 the SEC petition for Rocky Flats. I'm trying
10 to remember the dates. We've had a couple of
11 meetings since the last face-to-face Board
12 meeting. The last one I believe was -- help me
13 out here -- early September; am I right on
14 that?

15 **DR. WADE:** August 31st.

16 **MR. GRIFFON:** August 31st, okay. August 31st,
17 thank you. August 31st was our last meeting,
18 in Cincinnati. And I think really -- I -- I
19 want to mention the -- I have seven priority
20 items. We -- we have a lengthy matrix, which I
21 believe -- is that available, Lew, on the side
22 or we can certainly make copies of the matrix
23 available -- a lengthy matrix tracking several
24 of the issues. Several of them can be rolled
25 up into certain items, so I'm going to give

1 seven of the -- of the main items that I think
2 we have still in the works that were -- we're
3 trying to do final resolution on with regard to
4 reviewing the petition. These are not -- some
5 -- some issues, as we've gone through the
6 process, we've sort of self-identified -- SC&A
7 and the workgroup, along with NIOSH, have come
8 to the conclusion that certain issues -- while
9 there might still be an issue there, it's
10 probably likely that it's a site profile issue,
11 that it would not affect the decision-making
12 process with regard to an SEC. So some of
13 those -- I think Lew just mentioned this. Some
14 of those are sort of not on -- on the -- the
15 top of our agenda as a workgroup right now.
16 We're focusing on the ones that could affect
17 the decision-making process.
18 The seven primary items I have still remaining
19 -- and if you've followed these meetings for
20 any length of time, they're going to sound
21 familiar. Item one is the super class S
22 plutonium question. And item two -- I'll go
23 down all the items, then I'll come back and
24 give you an update on each one. Item two is
25 the other radionuclides, what we're calling

1 other radionuclides other than plutonium and
2 uranium at the site. Number three is neutron
3 dose calculation or -- or method for dose
4 reconstruction. Number four is the internal
5 dose coworker model. Number five -- and I
6 would say by far the most extensive item -- is
7 data reliability. Number six -- which may be a
8 subset of number five as far as data
9 reliability, but it's a separate item -- 1969
10 fire, questions related to 1969 dosimetry and
11 the -- the fire. And the seventh item is
12 issues related to D&D workers.

13 So going back to the top of the list there,
14 super S -- where we stand on that is that NIOSH
15 put out a model for a method to reconstruct
16 those doses if it -- it -- it is apparent that
17 people were involved in exposures to super S
18 materials. They based this on several design
19 cases that they used, and SC&A has reviewed --
20 reviewed the procedure, pretty comfortable with
21 the entire methodology. The final item we had
22 as far as an action was to compare -- the
23 design cases included I think five or six, I
24 may not have the number exact there,
25 individuals from the plutonium 1965 fire and

1 there were -- there were 25 that clearly had
2 large lung burdens, according to all reports of
3 that fire. And we asked as a follow-up can we
4 see the other 25 cases with identifiers. We
5 want to make sure that -- or at least spot-
6 check those other 25 to see that the design
7 cases in fact do bound the situation, they are
8 boun-- a bounding approach and all -- you know
9 -- so SC&A is -- is in process on that.
10 They've -- we've got the identifiers and we're
11 -- and we're working on getting the dosimetry
12 records for those. We've had a little hiccup
13 in that process, but we're working on that.
14 The second item, other radionuclides, really
15 where -- where this stands is -- is NIOSH went
16 back to the raw records. Many of these are
17 classified. These are the -- the sort of mass
18 balance reports or ledgers of -- of receipts of
19 different materials, different -- and it
20 includes information by year on all these other
21 radioisotopes that we were -- that -- that were
22 of concern. We actually had a mee-- a
23 classified briefing yesterday on some of the --
24 on -- on this topic. And the concern from the
25 workgroup's standpoint is, you know, what --

1 how much is there, was it a significant source
2 term. Secondly, was there an exposure
3 potential. Due to the nature of some of these
4 source terms, they might not -- there may be a
5 minimal exposure potential. They may be sealed
6 sources or things like that, so was there an
7 exposure potential. And then if those -- if --
8 if the source term exposure potential, and then
9 who was likely exposed and over what time
10 periods, then how is NIOSH proposing to
11 reconstruct those doses. You know, it -- it --
12 and -- and part of the reason for the last
13 question is -- I should preface all of this by
14 saying that for most of these other
15 radioisotopes -- not true for all of them, but
16 for many of them there's not a -- a lot of
17 urinalysis data or individual data, so they
18 have to have a -- a separate approach if
19 there's a significant exposure potential. And
20 so we've asked, you know, how -- how is this
21 going to be done, assuming there's significant
22 potential. We've got a preliminary report from
23 NIOSH that was received just prior to this
24 meeting. I don't think SC&A has ful-- has
25 reviewed that yet completely, but we're in

1 review on that. The -- the meeting yesterday
2 was a good step in that process. We have
3 better information on -- on these other source
4 terms now so I think we're moving well forward
5 on that -- on that -- on that action item.
6 The third item is neutron dose reconstruction
7 and -- several pieces to this that are bi--
8 that are in the works, sort of. And one of
9 them is OTIB-58, which is the coworker model
10 that's being proposed, and there's some
11 questions on this coworker model.
12 A second issue -- and some of these are
13 related, certainly, but a second issue which
14 has been discussed quite a bit is the -- a
15 method being used to estimate neutron doses
16 when they don't have neutron badges is to use a
17 neutron-to-photon ratio, and we're looking at
18 the derivation of these ratios. And actually I
19 guess the last discussion involved, you know,
20 are there any sort of benchmark data from the
21 time periods of question that would reassure us
22 that we've got this ratio fairly well-
23 established with -- the -- this ratio ends up
24 being a part of the coworker model, so there's
25 some -- some final checks on the neutron-to-

1 photon ratio.

2 The last part of it is -- and this falls into

3 that bigger category that I mentioned earlier,

4 the validity or reliability of the neutron dose

5 records themselves. These are NDRP records.

6 It's unclear to what extent they were validated

7 against any raw records, so that's -- that sort

8 of falls under the validation question, but I

9 am mentioning it in the neutron topic here.

10 As far as the first two go, this is one of

11 those -- this is one of those -- the -- the

12 coworker model -- you know, notwithstanding the

13 question on the data reliability, but we also

14 indicated to NIOSH that, you know, if certain

15 things can't be done that they proposed that

16 they may be able to substitute an alternate

17 model, basically, that would be a -- a bounding

18 approach. And they're not clear they want to

19 do that yet. I don't think they're there yet.

20 But this is one of those that may be not --

21 again, notwithstanding the data reliability

22 question, it may be more of a site profile

23 issue if they can get the coworker model

24 correct to where we believe it can -- can be

25 used to calculate a maximum plausible dose,

1 then -- then some of these other details are
2 more -- you know, they -- they have to be
3 worked out, but they're more of a site profile
4 follow-through issue.

5 The fourth item is the internal coworker model,
6 and this is referencing TIB-38 -- OTIB-38. And
7 here again, some remaining questions on this --
8 this approach for the coworker model. One --
9 one big one is the question on the
10 representativeness of the data and, you know,
11 were the maximally exposed people actually
12 sampled for all these time periods and -- and -
13 - you know, so therefore it -- it's a question
14 of can this -- can this distribution be used to
15 sort of represent all the workers of concern in
16 this petition.

17 The second part is, again, the data reliability
18 question. And there's -- there's a bit of
19 history here, and I think it's worth -- worth
20 going through for a second because I -- I've
21 had to do this four or five times on the
22 workgroup as we get new members sitting in on
23 the workgroup calls. The -- the coworker model
24 is based on CER data, and the CER data -- so
25 the first question -- this is Center for

1 Epidemiological Research. So one of the first
2 questions -- I'm not sure I did it -- either
3 SC&A or -- or someone on the workgroup raised
4 the question of, you know, was it appropriate
5 to use an epidemiological database to -- to
6 develop a coworker model. And the response
7 that we got from NIOSH that a -- they basically
8 said well, we -- we've done this already;
9 however, we've compared it to HIS-20, which was
10 presented as sort of the primary database
11 source. And when we did that, basically the
12 intakes that would be calculated from either
13 model ended up being essentially the same. So
14 that was -- that was the response, that okay,
15 maybe we shouldn't have used CER, but even if
16 we use the HIS-20 database it would have
17 resulted in the same conclusions essentially
18 for our coworker models so we're sticking with
19 it. And that -- you know, that seemed -- I --
20 I'm not sure how much SC&A reviewed that
21 response, but that was the response at the
22 time.

23 The -- as -- as we went down this then we -- we
24 -- we were sort of probing HIS-20 as the
25 primary database, and -- and as we -- as we've

1 evolved in this workgroup we've found a lot of
2 problems with the HIS-20 data. So some of the
3 ongoing actions here is that -- is that we want
4 -- we want to know sort of -- and -- and the
5 big "for instance" on that -- when I say some
6 problems, I shouldn't say a lot of problems but
7 some problems at least have been identified in
8 the HIS-20 database, and one of them is that we
9 looked at some of the high values and when you
10 -- when you compare and look for high values in
11 -- in the HIS-20 database, they weren't there.
12 And then we -- for this particular situation,
13 anyway, was looked in CER database and they
14 happened to be in there. So you say well, you
15 know, that seems good, at least they're in the
16 coworker model. They use the CER data. What's
17 -- what's the big deal. Well, I don't -- I
18 don't understand -- it's kind of hard for me to
19 understand how an epidemiological database that
20 was -- at least my assumption was that it was
21 derived from HIS-20, how it could have more
22 data than the original, and it had these higher
23 values in it. So there's a question of the
24 pedigree of the databases and -- and NIOSH is
25 investigating that. They've got I believe

1 Donna Kragle* from the ORAU group, who was
2 probably one of the primary carriers of the CER
3 data when they did these studies, is checking
4 into that for us.

5 I think that's the -- that's the follow-up and
6 I -- NIOSH has also provided a white paper to
7 SC&A explaining the basis of the coworker
8 model. So I know this is getting down in the
9 mud a little bit, but this is an important
10 thing to go through 'cause I think it sort of
11 explains why some of this is taking a little
12 time. But as we pull back some layers, we're
13 finding some -- some questions, more questions
14 are arising. And you know, at least my feeling
15 is we -- we really need to be thorough on this
16 data reliability question. It's been raised a
17 lot by the petitioners and I think we need to
18 take it to ground on -- on -- for -- for this
19 petition review.

20 So going to data reliability, on the data
21 reliability category, I think I've -- I've
22 tried to put all -- there's -- there's several
23 items in the matrix related to data
24 reliability, and I think the best way to think
25 about it is in -- in sort of two broad

1 categories. One is -- is the sort of systemic
2 analysis, what -- are there any problems
3 throughout the records throughout the databases
4 that would make it a broad problem for many
5 petitioners with-- within this -- this petition
6 covers the history of the site, so you know, we
7 want to look at that -- that broad issue.
8 The second part is, to be responsive to the
9 petition, there -- there were many specific
10 allegations that were brought forward in the
11 petition, and also in other interviews or
12 offered in public comment before the Board that
13 we felt that NIOSH and the workgroup need to be
14 responsive to those individuals. I -- I -- the
15 -- the way I try to -- to view some of those
16 specifics, though, is to sort of think of them
17 as a -- a -- in a category sense, that a lot of
18 the specific allegations were related to things
19 like "no data available" and questions about --
20 you know, so, you know, my -- when we step back
21 and have to make a decision as a board, I think
22 we have to consider how -- how -- not so much
23 for this particular case, although that's
24 important, we want to think about how it
25 impacts the entire petitioning class or -- or a

1 subset of the petitioning class. So that's
2 kind of what we're trying to do with our path
3 forward. It's taken us a little while to sort
4 that out and get there, but that's kind of
5 where we're going.

6 For the sys-- for the systemat-- or systemic
7 analysis, one thing we've asked for NIOSH to
8 provide is -- is sort of a -- a methodology for
9 sampling from what I'd describe as these sort
10 of raw data sources. And when I say raw data
11 sources, I'm talking anything from -- we've had
12 a lot of discussion about some log books that
13 have been uncovered and have some references to
14 specific measurements or data. Some are not so
15 useful. Some are useful. There's also some
16 health physics reports that might have summary
17 data. We found that very useful in our review
18 of Y-12 where they had summary datas for -- for
19 six months where they actually show the
20 distribution of urinalysis samples, the 50th
21 percentile, the 95th percentile, things like
22 that were graphed out in these raw -- it may be
23 a secondary source, but it was very useful in
24 terms of looking at -- at the database in terms
25 of reliability. So any of those raw types of

1 sources, we've asked for NIOSH to sort of say -
2 - you know, present to us a strategy on how you
3 can demonstrate to -- to the workgroup that in
4 fact these records are reliable for dose
5 reconstruction.
6 Part of the -- the -- we haven't had that
7 product yet, and I will say part of the
8 reasoning is I think NIOSH had to -- they're --
9 they're in the process of capturing some of
10 these log books, and us-- they -- there's a --
11 you know, some of them, as -- as the -- it's
12 hard to develop a strategy until you know what
13 you're -- you've got to work with, and I think
14 that's kind of where they're at is they're --
15 we've got some -- we're getting some log books
16 that -- that have very useful information for
17 cross-checking, but you know, you might go
18 through six or seven that -- that have very
19 mundane sort of process information and -- and
20 allocation information, things like that,
21 nothing on dosimetry records really. So it's -
22 - it's been a little hit and miss, but we're --
23 you know, we're -- we are getting that. We've
24 got many more log books. As of the last
25 workgroup meeting we've got about 30 that have

1 been posted on the O drive -- I think 30 --
2 anyway, got a number of log books and -- and
3 we're working on that process.
4 I -- I think -- now -- now one thing -- one
5 challenge that we have ahead of us is that the
6 raw records -- checking the raw records against
7 HIS-20, which is one level we -- we've gone
8 with these log book reviews. We've got a
9 number of log books posted, raw handwritten
10 records in the log books, spot-checking some of
11 these against the HIS-20 electronic database to
12 see if they're in fact in there and as of the
13 last workgroup meeting SC&A, as well as the
14 workgroup -- we provided some what I would
15 define as leads on some things that weren't
16 matching. And you know, these include some --
17 many in vivo measurements, lung count data that
18 were not in -- in the database, some of the
19 urinalysis results -- although we didn't have a
20 lot of urinalysis to -- to -- from the log
21 books so we didn't do a lot of spot checking,
22 but of -- of some that we went through, there
23 were definitely discrepancies found. A lot of
24 the data we had to review was uranium in the
25 1959/1960 er-- you -- those two years. We

1 would have much preferred it to be reviewing
2 plutonium, but we had -- had to work with the
3 log books we had, but we definitely found
4 discrepancies there. And then we -- we had --
5 from the external dose side, we did find some
6 mention in log books of -- and I want to
7 reference this because it was addressed on the
8 call yesterday, some mention of -- of damaged
9 badges and -- or destroyed badges, Paul, I -- I
10 correct myself there, destroyed badges. And
11 these -- the way it was referenced in the log
12 books I think is important -- an important
13 clarification here. It said destroyed badges
14 due to contamination, and I think what -- what
15 I would read -- what I -- the way I understand
16 that is that the badges were probably
17 contaminated on the job and therefore
18 destroyed. The follow-through that I think we
19 need to do is that all -- in many of these
20 cases there was -- there was identifiers. We
21 have workers' names right there. And the
22 question, to me, to follow through on what the
23 petitioners have been -- been alleging anyway
24 is what was the recorded dose for that -- for
25 those workers, or where there -- or where there

1 no data in that period. That would be very
2 worthwhile follow throughing -- following
3 through on.

4 So the next -- and then to -- another ongoing
5 item which SC&A has been working on on this is
6 -- is this -- this question of -- of the
7 completeness of the dose records for the
8 claimants. And I think this becomes important
9 -- you know, we -- we -- we've been -- we've --
10 have had multi-prongs in this data reliability
11 review, certainly. And it -- it -- it's hard
12 for us to sometimes sort it out amongst our own
13 workgroup. But you know, when I mentioned, for
14 instance, that I was having problems matching
15 some of the in vivo information, and sometimes
16 it wasn't even data, it was just the -- that an
17 individual had been sent for a lung count on a
18 certain day, and you look in that time period
19 and you find nothing for this individual
20 anywhere close to that day or, you know, time
21 period was happening a lot. The response from
22 -- from NIOSH was that they -- they in fact
23 knew that there were problems with the in vivo
24 electronic record, but they remind me that, you
25 know, we're not going to rely on -- first of

1 all, we're not going to rely on the lung count
2 data at all, we're relying on the urinalysis
3 data. And secondly that -- that we're
4 primarily relying on the individual --
5 individual's -- claimant's data, not -- there's
6 very few that are going to rely on coworker
7 models. So I guess in the big scheme of
8 things, the final product we have to deliver is
9 are there sufficient -- is there sufficient
10 completeness of records within the individual
11 claimants' files -- obviously we're not going
12 to look through all the files, but we got -- we
13 have to do this on some sort of sampling basis
14 and demonstrate that there is -- that there are
15 sufficient indi-- records in the individuals'
16 files to do dose reconstruction. So that's
17 where we have to come back with this whole data
18 reliability picture.

19 There are some other -- other items on the data
20 reliability review which were ongoing. Let's
21 see, I'll -- I'll just go down some of these
22 action items. It might be redundant with some
23 of what I just said, but SC&A is reviewing
24 claimant files for completeness. I think
25 they've got a preliminary draft. I think

1 they've gone through maybe eight claimant files
2 and -- and they're looking at completeness of
3 records for -- for claimants.
4 Let's see, the -- the log book question, we're
5 trying to get representative log books, and the
6 workgroup's desire I think was that we had
7 primar-- primary buildings or processes
8 represented and something from each decade,
9 since we're covering the whole span of the
10 history of the site. Thus far I think we've
11 had a little difficulty getting much use-- many
12 useful log books, anyway, in the time periods
13 beyond the early '60s. A lot of the log books
14 seem to be around the early '60s so we -- we've
15 got a little work to do there and we're hoping
16 that we can round that out a little more.
17 The third -- another type of log book, which
18 was a specific action, was related to the
19 urinalysis log books. These are the -- the
20 urinalysis log books that were the handwritten
21 entries in the -- in the laboratory, I presume,
22 where they're doing the -- they have -- they
23 have the gross counts, background, net counts
24 right down -- and then conversion to dpm per 24
25 hours, all in -- in handwritten calculations in

1 the log books. We have had some posted. It
2 seems like it only covers one year, though,
3 1960. I think these -- at least to me, I was
4 under the impression that there are a number of
5 these that exist that span a fair time period,
6 because they're referenced in the Technical
7 Basis Documents. The internal dose Technical
8 Basis Documents mentions that these were used
9 to derive the MDA -- the minimum detectable
10 activities for various time periods, so I think
11 there's at least -- there's got to be more
12 there, and I think we just have to -- we've
13 asked already that NIOSH uncover those, find
14 those and -- and -- and we need to review
15 those.

16 And then on the specific concern sides, and
17 these -- you know, again, we're sort of
18 aggregating these to look at the big picture,
19 but we've also spent a fair amount of energy on
20 the workgroup level looking at some of the
21 specific allegations within the petition. One
22 topic along those lines is reviewing these
23 safety concern reports. And NIOSH so far has -
24 - went back and found a database with a listing
25 of all these reports and, by title, pulled off

1 ones that they thought were pertinent to
2 dosimetry issues and they reviewed 33 of those.
3 They provided the workgroup with a report, and
4 I don't think we're ready to -- to -- I don't
5 think SC&A has reviewed that yet completely, so
6 -- but we're in the works. They -- NIOSH has
7 certainly done a lot of work in reviewing those
8 33 reports.

9 There are 16 additional ones that were
10 identified by SC&A and the workgroup asked
11 NIOSH to do -- to review those, at least in a
12 cursory sense, maybe not as in-depth as they
13 reviewed the first 33. We just want sort of a
14 snapshot of what kinds of -- of concerns were
15 in these other 16 reports, because if they're
16 very much overlapping I don't think we need the
17 detail that they spent on the first 33.

18 The second, for specific concerns, was a -- and
19 this is many of the matrix items -- involved a
20 -- specific allegations put forward by the
21 petitioners or by other public commenters, et
22 cetera, and NIOSH has provided a report on --
23 went through the petition and -- and pulled out
24 all -- all the allegations from there and went
25 through and did a report, I think it's about 75

1 pages, covering all those allegations one by
2 one. And you know, I think SC&A's in the
3 process of reviewing that report as well, but -
4 - but again, the -- the thing I take away from
5 that also is that out of those 75 pages, and
6 I'm not sure how many allegations that covers,
7 but it was -- it was a number of allegations,
8 there were some central themes and I think we -
9 - we want to start thinking about it that way,
10 that -- that, you know, from a class-wide
11 basis, you know, could this have an effect on
12 reconstructing dose for a certain part of the
13 class or the entire class.

14 Two items left and then we'll -- the '69 fire.
15 NIOSH provided the declassified report on the O
16 drive and presented an overview of it at the
17 last workgroup meeting. Within that report
18 there are -- I think it identifies 40 -- 40
19 individuals that were immediately sent for lung
20 counts and 110 later, or something like that.
21 But it identifies a number of people that were
22 sent for lung count. Obviously the most hi--
23 the people who were most likely exposed or the
24 highest potential for exposure. And we -- the
25 worker -- I think at this point -- I think SC&A

1 might have already made this request, I'm not
2 sure, but we'd like to see if we can get
3 identifiers -- you know, who -- who -- who were
4 these people. And the reason for this is that
5 -- and the reason for this focus on the '69
6 fire, quite frankly, I think is that as we've
7 gone through this workgroup process and identi-
8 - a gap in the 1969 time frame was identified
9 by SC&A. And NIOSH agrees to this, that there
10 was some odd things going on in the '69
11 dosimetry records within the claimant files.
12 So to better understand why there's some gaps,
13 we thought it might be useful to have these
14 identifiers and at least spot check some of the
15 rad records. And this would involve going back
16 to the original rad records, obviously, 'cause
17 there are gaps in the database. But spot check
18 the individual records and see if in fact they
19 do have recorded doses in their records. So
20 that's part of the -- of the focus on the -- on
21 that time frame and the fire was to -- to
22 resolve this issue of this gap in records in
23 1969.
24 The last issue is the D&D workers and the --
25 really the questi-- the -- the whole question

1 behind this is was there sufficient data during
2 the D&D time frame for all potentially exposed
3 workers -- and I think that phrase is the
4 important part, for all potentially exposed
5 workers -- to reconstruct dose. And
6 particularly I guess the concern was that as --
7 as many of these sites, and it sounds like
8 Rocky was similar, went into this D&D phase,
9 the bioassay programs were modified -- you
10 know, probably with good basis. The question
11 is, not only for the prime contractor but also
12 for subcontractors, did everyone who -- who had
13 a potential for exposure have monitoring, and
14 do we have enough there to reconstruct, or at
15 least bound, their dose, even if it's -- even
16 if they worked on D&D for six or seven years
17 and had a sample at the end of their career,
18 you -- you have something there to -- to
19 possibly bound your internal doses. So that's
20 sort of what we've been questioning.
21 NIOSH discussed bas-- trying to identify
22 rosters. In particular they -- they believe
23 that the rad worker-2 -- it -- if within the
24 roster they could identify rad worker-2 rosters
25 for those time periods, they thought that would

1 be -- 'cause rad worker-2 was required for any
2 of the radiation areas and therefore if they
3 could identify that roster and cross-check it
4 with the database, and if they had data, that
5 would be a confirmation that -- that people
6 were monitored. I don't -- I think they've had
7 a little trouble getting those rosters. They
8 have provided us -- in lieu of that, I guess,
9 they've offered a -- a description of the
10 monitoring program and an audit -- one audit
11 report or multiple audit, I -- I'm not sure if
12 it was multiple audit reports or one audit
13 report from the D&D time period. It was an au-
14 - it was a -- internal audit? I'm checking
15 with Brant to...

16 **DR. ULSH:** Yes, I think it was.

17 **MR. GRIFFON:** I think it was a internal audit
18 of -- of the dosimetry program during that D&D
19 time period, and those have been provided but
20 certainly at this point not reviewed by SC&A.
21 So I guess to -- to -- to summarize, I think
22 the -- the biggest remaining issue is -- is the
23 data reliability issue, and there's several
24 items that that sort of sprinkles through. And
25 I think we -- you know, we have a path forward,

1 you know, this -- this broader class approach
2 that we want to -- we want to understand for
3 the class, for subsections of the class, can we
4 reconstruct dose; is the data reliable for
5 those -- you know, to do that. And I think
6 that's clearly the -- the biggest item. Not
7 that -- these other items are not closed out,
8 but I think that's the -- the biggest item on
9 our priorities at this point.

10 **DR. ZIEMER:** Thank you very much, Mark. We'll
11 open the floor for questions, and let me begin.
12 Yesterday Terrie Barrie raised a question I
13 think that had to do with data reliability, and
14 I -- I think from what I heard you say that the
15 workgroup is in fact addressing a number of the
16 questions, including those that were raised by
17 Terrie Barrie on the phone call yesterday. Is
18 that -- do I understand that correctly? A
19 number of the specific allegations that impact
20 or at least reflect on potential reliability of
21 data.

22 **MR. GRIFFON:** Yeah, I -- I think so, and I
23 think -- you know, I think one thing that's
24 sort of evolved is inst-- you know, we want to
25 be responsive to the individual allegations,

1 but we also want to step back and say, you
2 know, given that there were many allegations in
3 this -- in this area about the data
4 reliability, we need to -- you know, NIOSH
5 needs to present to the workgroup -- to the
6 Board, you know, that -- that -- an argument
7 that this data is -- is in fact reliable and
8 here's how we've checked it, here's how we've
9 proved it and, you know, for the whole class,
10 not just -- not just for -- allegation by
11 allegation and that's -- that's kind of where
12 we're at with that I think, yeah.

13 **DR. ZIEMER:** Wanda Munn and then Gen Roessler.

14 **MS. MUNN:** From information that you've just
15 heard, I think it's probably clear to everyone
16 that the level of detail that's involved in
17 this particular site overview is staggering.
18 And it perhaps was not emphasized in Mark's
19 presentation the quantity of data that is
20 available. There are extensive records with
21 respect to the employees at Rocky Flats. We've
22 been very fortunate to be able to have access
23 to so many things.

24 Another point that may not have been made that
25 I believe perhaps should be made, deficiencies

1 are always findable in any dataset that you can
2 find. An extreme amount of effort is being put
3 here in identifying the answer to the question
4 as to whether or not those deficiencies are
5 systematic, whether they were intentional, and
6 what the magnitude of the impact might be on
7 the program to reconstruct those doses. That's
8 really the bottom line.

9 To this date, to the best of my knowledge,
10 there's been no indication that the
11 deficiencies that were found fall into those
12 categories, but certainly every effort, I
13 believe, is being made to put that issue to bed
14 in a way that would be acceptable to any
15 reasonable objective observer.

16 **DR. ZIEMER:** Okay. Thank you. Dr. Roessler?

17 **DR. ROESSLER:** Mark, you talked about
18 databases, and as I see it, there are three.
19 There's the raw data, the original data;
20 there's this HIS-20 database; and then the CER
21 database. I know about the CER database, but
22 either I've forgotten or never knew, what is
23 the HIS-20 database, where did that come from?
24 Is that something that was discovered more
25 recently and is that specific just to Rocky

1 Flats?

2 **MR. GRIFFON:** Yeah, specific to -- yeah, that -
3 - that's a -- a Rocky Flats-specific database,
4 and there's actually predecessors to HIS-20 as
5 well, so you know, they -- they're -- and I --
6 I don't have all those acronyms off-hand,
7 unless Brant -- I don't know if it's worth --
8 but there were predecessors to it. The final
9 evolution I think was the HIS-20 database and
10 that's what we've been kind of taking as sort
11 of the primary electronic source and -- so that
12 was some of the -- some of the confusion of why
13 -- why these inconsistencies.

14 I -- I agree with Wanda's over-- overall
15 statement, that -- that the bottom line is to
16 find out if there's a -- you know, a systemic
17 problem. I think that's -- that's kind of our
18 path forward. You know, I'm not sure some of
19 the discrepancies -- and I think I said this,
20 may-- maybe I went past it quickly, but
21 discrepancies that I identified I was -- I was
22 almost reluctant to -- to share them 'cause
23 they were -- I had a printout of some of the
24 stuff I found in log books. I put it on a
25 spreadsheet and then on the -- you know, in a -

1 - in -- in -- in the course of -- of checking
2 these against the database I was handwriting
3 some of my findings from the database next to
4 the spreadsheet so it was very draft form. But
5 I gave it to NIOSH and ORAU at the last
6 workgroup saying -- presenting it as leads, and
7 that's -- that's sort of how I take it is that,
8 you know, maybe it's not a big -- you know,
9 maybe it's not a -- a problem overall, but
10 certainly there was -- I think out of the
11 uranium data I looked at in '59 and '60 there
12 were -- and I -- and I did look at the -- the
13 higher values in the log books, mainly because
14 they're the easiest to cross-walk. When you
15 look in an electronic database you can sort by
16 value and it's just easier to cross-walk those
17 kind of data. And -- and looking at the higher
18 values, out of maybe 70 I think I had 30 that -
19 - that were not matching up with the HIS-20
20 database.
21 Now it doesn't mean that the individuals' files
22 didn't have that raw data in it. That -- that
23 we don't know. But at least, to me, that was a
24 lead of -- of -- you know, this -- this seems
25 like it might be a problem, you know, and I

1 thought that -- now it's a very small snapshot,
2 but it's all we've had to work with, so -- but
3 I agree with Wanda's overall conclusion, that
4 we have to -- to look at this and see how it --
5 if it -- if it could affect the class as a
6 whole or subsets of a class 'cause there will
7 be discrepancies in any data we look at. I --
8 I understand that, too.

9 **DR. ZIEMER:** Gen Roessler --

10 **DR. ROESSLER:** I still have a question about
11 HIS-20. Who put -- where did that come from --

12 **MR. GRIFFON:** Maybe Brant can --

13 **DR. ROESSLER:** -- who put it together, how
14 encompassing is it? I mean is it all people --

15 **MR. GRIFFON:** (Unintelligible) every day.

16 **DR. ROESSLER:** Okay.

17 **DR. ULSH:** Hi, Gen. To answer your question,
18 HIS-20 is a -- I believe it's a Canberra
19 product, so Canberra came up with the software
20 and Rocky Flats is using it. As Mark
21 mentioned, there were some predecessor
22 databases. Some of those acronyms are RHRS --
23 I'm not even going to try to give you the --
24 what those letters stand for, but those
25 databases are used as a basis for the -- the

1 coworker models. In terms of dose
2 reconstruction, we actually go back to the
3 individual worker rad files. So HIS-20 is not
4 a -- a database that was developed by Rocky
5 Flats. It was developed by Canberra and Rocky
6 Flats acquired it from -- from Canberra and is
7 using it.

8 **MR. GRIFFON:** But let me just add to that --
9 that point that I think -- and -- and this --
10 even at the last workgroup, and we've been at
11 this for a while, I agree, but even at the last
12 workgroup I got a little more clarity on this
13 issue, that if you look at the individual
14 claimants' files -- I think in the mid to late
15 '60s -- there no more raw data beyond that.
16 There -- there are printouts of the databases,
17 and it might be the predecessors of -- of HIS-
18 20 or it might be HIS-20 printouts, but they're
19 printouts from the database. That -- that's
20 sort of why we went down that line of -- of
21 checking against the electronic data 'cause
22 it's a lot easier than pulling all the
23 claimants' files and trying to -- to check that
24 way. Now -- now we're realizing that there is
25 -- you know, there is some problems with the in

1 vivo, and I'm not exactly clear still why, you
2 know, they -- they -- they're claiming -- that
3 NIOSH is claiming -- at least I think, I don't
4 want to put words in your mouth -- that the
5 urinalysis data in HIS-20 is much sounder than
6 the in vivo. And I'm not exactly sure why one
7 would be better than the other, but I guess it
8 would be different groups doing the entry and
9 maybe you can explain that, I don't --

10 **DR. ULSH:** You're right, Mark, there are some
11 other data that are necessary to properly
12 interpret the in vivo counts that you would
13 need in addition to what you would see in -- in
14 HIS-20. It would get pretty far down in the
15 technical weeds to go into that. And we can do
16 that, Mark. Perhaps this isn't the appropriate
17 forum for that --

18 **MR. GRIFFON:** No, I'm not saying some of the
19 data, I'm saying missing entries, you know,
20 that -- that's the issue. There's no -- no
21 data in HIS-- in HIS-20 for a lot of the in
22 vivo measurements that were made, so --

23 **DR. ULSH:** Right, I think --

24 **MR. GRIFFON:** Yeah.

25 **DR. ULSH:** -- we're in agreement here that the

1 -- the HIS-20 data -- the in vivo data that is
2 in HIS-20 is -- is perhaps not as reliable as
3 the urinalysis data. That -- I would agree
4 with that.

5 And what Mark was mentioning earlier about
6 handwritten records up through -- I think it's
7 about 1969 time frame --

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

9 **DR. ULSH:** -- there are in fact -- in the
10 individual worker radiation files, there are
11 handwritten urinalysis cards. After that point
12 in time, right around 1969, the results began
13 to be recorded electronically, and those became
14 the -- I always hesitate to use this term, the
15 dose of record. But that's how those results
16 were reported, so we don't have those
17 handwritten bioassay cards after about 1969.
18 Is that what you were thinking of, Mark?

19 **MR. GRIFFON:** Yeah, and I think -- I think you
20 also said that beyond that point there wouldn't
21 be any urinalysis logs, either. They were --
22 they were entering this stuff real time, I
23 guess, in the laboratory right into the system.

24 **DR. ULSH:** Yeah, it might --

25 **MR. GRIFFON:** I'm not clear on that.

1 **DR. ULSH:** Well, I'm not -- I'm not, either,
2 Mark. It might extend for maybe just a few
3 years after that, but it's not much further, I
4 don't think, in terms of log books.

5 **MR. GRIFFON:** Right.

6 **DR. ULSH:** Does that answer your question, Gen?

7 **DR. ROESSLER:** (Unintelligible)

8 **DR. ULSH:** Okay.

9 **MR. GRIFFON:** Okay.

10 **DR. ZIEMER:** Dr. Melius.

11 **DR. MELIUS:** Yeah, a quick follow-up. So how
12 does the epi database have the high values and
13 HIS-20 not have? That -- that's --

14 **MR. GRIFFON:** Should be the (unintelligible).

15 **DR. MELIUS:** Right.

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

17 **DR. ULSH:** That's a very good question and we
18 are looking at that.

19 **DR. MELIUS:** Okay, I just --

20 **DR. ULSH:** I guess I don't want to comment too
21 far before the analysis is complete. As Mark
22 mentioned, Donna Kragle is looking into this.
23 She has presented us with -- with some results
24 and we are currently evaluating that and we're
25 going to write it up and present it to the --

1 to the working group.

2 **DR. ZIEMER:** So it appears that there are a
3 number of issues that are still being pursued,
4 and this may involve a bit more time before
5 we're ready to sort of come to closure on Rocky
6 Flats related issues and -- and take formal
7 action relative to an SEC petition.

8 Let me ask a related question now, Mark, just
9 for our records. You distributed to the Board
10 the matrix. I have a version dated July 26th.
11 Is that the most recent version or --

12 **MS. MUNN:** Yeah, we've -- we've added -- we've
13 added and -- and put some comments on it, but I
14 think that's -- I think the matrix itself --

15 **MR. GRIFFON:** I think it's --

16 **MS. MUNN:** Is it?

17 **MR. GRIFFON:** I think that is. I can get back
18 -- I can certainly --

19 **DR. ZIEMER:** That date is only a few weeks
20 prior to your August meeting -- August 30th
21 meeting, and I'm sort of asking is there
22 another version of the matrix that was prepared
23 after that August meeting?

24 **MR. GRIFFON:** I think I can -- I -- I'll
25 probably have to go back to the matrix -- we --

1 we've been working sort of off the matrix. As
2 I said, we -- we -- been trying to discuss
3 these broader topics and -- and cross-walking
4 it with our hard copies of the matrix, saying
5 okay, we covered all these items in this topic.
6 But we -- we need to update the matrix probably
7 so that everybody can follow through where we
8 stand, but that -- I think that is the latest
9 version.

10 **DR. ZIEMER:** Okay.

11 **DR. ULSH:** It is the latest version of the
12 matrix. A lot of action has been going on
13 between NIOSH and SC&A and the working group --

14 **DR. ZIEMER:** I wasn't -- this wasn't meant in
15 any way a critical -- a criticism. I simply
16 want to make sure that we had the latest
17 version in our own files. And in your case,
18 the color codes don't have a particular meaning
19 like -- like the Presley group.

20 **MR. GRIFFON:** The yellow -- the yellow
21 highlighted were -- usually when I highlight in
22 yellow it's -- it's to reflect a change from
23 the previous version of the matrix, so when I
24 went to the -- or -- or an outstanding action,
25 yeah.

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

2 **MR. GRIFFON:** So one of those two, yeah --
3 outstanding action, right.

4 **DR. ZIEMER:** Okay. Other questions or
5 comments?

6 **MS. BOLLER:** I don't have a question -- this is
7 Carolyn from Congressman Mark Udall's office.

8 **DR. ZIEMER:** I'm sorry, I --

9 **MS. BOLLER:** I wanted to thank Mark and the
10 Board for taking as much time --

11 **DR. WADE:** Could you just hold for a minute?
12 We need to adjust our system so that we can be
13 sure to hear you.

14 **MS. BOLLER:** Okay.

15 **DR. ZIEMER:** Is this Terrie Barrie?

16 **DR. WADE:** No, it's someone from Congressman
17 Udall's office.

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

19 **DR. WADE:** Okay, go ahead. Go ahead.

20 (No responses)

21 I don't know how she knows to go ahead.

22 **MR. GRIFFON:** Go ahead.

23 **DR. ZIEMER:** Yeah, could you repeat your
24 comment, please?

25 **MS. BOLLER:** Yeah, this is Carolyn and I'm with

1 Congressman Mark Udall's office, and I just
2 wanted to thank this group for taking as much
3 time as they have with the Rocky Flats SEC, and
4 I would hope that they would continue to do
5 that and get all the way through this process
6 so that we have a good, fair, solid answer for
7 this workforce.

8 **DR. ZIEMER:** Thank you for those comments, and
9 indeed that -- the intent indeed is to follow
10 up on all of these issues.

11 Perhaps I could ask if either Terrie Barrie or
12 -- or Kay has -- has comments also they wish to
13 add.

14 **UNIDENTIFIED:** Yes -- well, actually I have a
15 question. Did -- did I understand correctly
16 that the HIS-20 base -- or from that discussion
17 that Rocky Flats had a card -- handwritten
18 urinalysis record for after 1969?

19 **MR. GRIFFON:** Go ahead.

20 **DR. ULSH:** Terrie, this is Brant Ulsh. What we
21 find when we review the individual workers'
22 radiation files is that there are handwritten
23 urinalysis cards up through -- I think it's
24 1969 is the year. After that, as -- as Mark
25 said, we see printouts from various electronic

1 databases that were employed throughout the
2 later history of the site.

3 **MS. BARRIE:** Okay, 'cause I have a -- a copy of
4 a -- a handwritten card from my husband's file
5 from 1982, and I don't know if that would
6 affect anything with this discussion and...

7 **DR. ULSH:** We -- we might actually be talking -
8 - we might actually be talking about semantics,
9 and I don't mean to minimize what you're
10 saying. What I'm talking about when I talk
11 about the urinalysis cards, these are cards
12 where you'll see handwritten entries and they
13 have essentially a calendar year with results
14 posted for individual urinalyses that were
15 performed throughout the year. There might be
16 some other records that reflect some
17 handwritten notations, but I would have to see
18 exactly what you're talking about before I
19 could --

20 **MS. BARRIE:** Okay, I can -- I can fax it.

21 **DR. WADE:** Follow up on the workgroup.

22 **MR. GRIFFON:** Tell her we can follow up on the
23 workgroup.

24 **DR. ULSH:** Okay. Yeah, Mark says that we will
25 follow up on that in the -- in the workgroup

1 format.

2 **DR. ZIEMER:** Okay. Thank you. Kay or Terrie,
3 any further questions?

4 **MS. BARKER:** No, Dr. Ziemer. I would just like
5 to thank Mark and his work-- working group, all
6 the hard and diligent work that they have been
7 doing and to please continue.

8 **DR. ZIEMER:** Okay, thank you very much, and
9 indeed we will do so.

10 **DR. WADE:** If I could just frame a question,
11 and I know it's not answerable at this point.
12 We have heard yesterday very passionately from
13 the petitioners at Rocky Flats that they would
14 like us to be in Denver when we vote this issue
15 through. And I know we can't really project
16 now whether or not that would be our December
17 meeting, but it is something we need to keep in
18 mind as we move forward.

19 Mark, would you hazard a guess at this point as
20 to whether we should go to Denver in December,
21 or is it too early to tell?

22 **MR. GRIFFON:** I think it's probably a little
23 early to tell, but I -- I would hope, but I
24 think it's a little early to tell.

25 **DR. WADE:** Thank you. And I realized that, I

1 just want to make sure that we keep that on our
2 mind.

3 **MS. BOLLER:** Doctor, I do -- this is Carolyn
4 again. I do have one question. What are you
5 doing to address this issue of conflict of
6 interest on the letter by Kate Kimpan to Mr.
7 Elliott? Is there a process for handling these
8 kind of things?

9 **DR. ZIEMER:** Okay.

10 **MS. BOLLER:** Do you know what I'm talking
11 about?

12 **DR. ZIEMER:** Yes.

13 **MS. BOLLER:** Sorry.

14 **DR. ZIEMER:** Am I back on line here?

15 **UNIDENTIFIED:** Yes.

16 **DR. ZIEMER:** Yeah. Well, let me -- let me
17 start out with the -- the fact that there now
18 is a new conflict of interest policy that NIOSH
19 has, and that also has implications for the
20 contractors for ORAU. I don't know, Larry, if
21 either you or Kate want to address this with
22 respect to Rocky or any of those questions on
23 conflict of interest or -- or issues that have
24 been raised on that.

25 **MS. KIMPAN:** I apologize, this is Kate Kimpan,

1 I missed Terrie's question. I was having a
2 discussion. Could --

3 **DR. ZIEMER:** It concerned --

4 **MS. KIMPAN:** -- you repeat that?

5 **DR. ZIEMER:** It was with conflict of --
6 conflict of interest issues on -- on the Rocky
7 Flats -- I assume on the site profile.

8 **MS. KIMPAN:** Okay, and how ORAU team is
9 handling --

10 **DR. ZIEMER:** Right.

11 **MS. KIMPAN:** -- concerns therewith?

12 **DR. ZIEMER:** Yes.

13 **MS. KIMPAN:** Terrie, members of the Board and
14 others, I think this is going to be a similar
15 answer to what I have given before, and that is
16 that we -- the ORAU team stand ready to
17 implement the exact NIOSH policy as written, or
18 a similar policy that we will mark as an ORAU
19 policy, as soon as the policy from NIOSH is
20 finalized and implemented. We have endeavored,
21 as I've reported at prior meetings, to assure
22 we're in compliance with either the most recent
23 or the most restrictive of the policies that
24 have been put out there as drafts. So right
25 now we are operating to the draft policy that

1 NIOSH has out there for purposes of the Rocky
2 Flats site profile, the Rocky Flats evaluation
3 report for the Special Exposure Cohort -- and,
4 by the way, for all other activities on the
5 project.

6 Is that -- does that answer it, Terrie? I'm
7 sorry.

8 **MS. BOLLER:** This is Carolyn that answered
9 (sic) the question. Maybe we can have a
10 conversation about this off-line, Kate.

11 **MS. KIMPAN:** Oh, I'm sorry, Carolyn; I thought
12 it was Terrie speaking.

13 **DR. ZIEMER:** Yeah, she -- she suggested an off-
14 line conversation.

15 Mark, did you have an additional --

16 **MR. GRIFFON:** I just wanted to follow up with
17 Kate.

18 **MS. KIMPAN:** Yes.

19 **MR. GRIFFON:** Is there a revision of the site
20 profile for Rocky based on these -- the
21 conflict of interest review that you -- you've
22 indicated at the last meeting, I think, or one
23 of -- a prior meeting that you were --

24 **MS. KIMPAN:** Let me be clear --

25 **MR. GRIFFON:** Yeah.

1 **MS. KIMPAN:** -- for all -- again I'm going to
2 state this because it's very important. For
3 any documents -- the ORAU team has had a
4 conflict of interest policy in force since the
5 first day of this program. The policy is
6 currently changing. We're doing something --
7 because it's the right thing to do. With
8 NIOSH's support and encouragement, we're going
9 to take the conflict of interest policy that's
10 currently in draft form -- when it's finalized,
11 we're going to look at everything the team has
12 done prior, under another policy, to see if we
13 have gotten any documents that might have,
14 under the new policy, a conflicted author or
15 owner, roles like that. As such, we will
16 review any document that has had any problems
17 when we look at old work under the new policy.
18 Rocky is one of those documents that we will
19 give a very close review to. We do not
20 anticipate a revision based on COI. Let me be
21 clear. We have a method of looking at,
22 reviewing and revising documents whenever we
23 get new information that merits a revision. We
24 have a two-year review of all documents which
25 will proceed.

1 Something we are doing for Rocky, and this may
2 be what Carolyn's referring to that I talked
3 about at the last Board meeting, is we're using
4 that as our example for how we are, as the ORAU
5 team, electing to do full annotation and
6 attribution of everything in a site profile.
7 As soon as NIOSH has reviewed the work that
8 we've completed in annotating and attributing
9 that document, we'll bring it to the Board,
10 you'll see what we're doing.

11 And as I've described before, what we intend to
12 do is something much more extensive than a
13 professional peer review kind of document with
14 footnotes. There'll be those kinds of
15 references, but we're also assuring that we
16 talk about every contributor to the document,
17 the contribution they made and why particular
18 tables, factual information and other
19 conclusions -- of course any that might affect
20 a dose reconstruction or other work done on a
21 worker, we're going to make certain that you,
22 that NIOSH, that the public knows exactly where
23 we've gotten those findings.

24 If, Mark, we were to find something in any of
25 these reviews or annotations or attributions

1 that required updating, we would do so. We do
2 not, as the ORAU team, expect that these
3 reviews for COI, or even these independent
4 reviews that we're going to conduct of every
5 finding in a document that, under the new
6 policy, an author or an owner might be
7 conflicted even though it was written a long
8 time ago -- we're going to review every one of
9 those findings. You as the public, you as the
10 Board will certainly see that. We don't
11 anticipate that individual findings are going
12 to be -- require changing, quote, because of
13 COI.

14 What we've done of course is we've changed who
15 the document owners are for any site that might
16 have a conflict. You see that on our web site
17 there was an interim status where my task
18 manager in charge of that work, John Byrne*,
19 became document owners. What we've done is
20 assign the task manager as an interim step to
21 assure a conflicted owner is not there. And as
22 we are able to bring an appropriately skilled,
23 appropriately qualified, appropriately up-to-
24 speed, non-conflicted author, we're assigning
25 new authors. And you'll see that progress on

1 our web site as we proceed.

2 I'd be glad to give you more information about
3 any of those.

4 **MR. GRIFFON:** I guess I was just asking about
5 the -- the Rocky one. You said you -- you've
6 done this annotation citation draft and it's in
7 NIOSH's hands --

8 **MS. KIMPAN:** It's in my hands right now --

9 **MR. GRIFFON:** Okay.

10 **MS. KIMPAN:** -- prepared for NIOSH's review,
11 correct. Our team has done that, completed it
12 --

13 **MR. GRIFFON:** 'Cause I -- I think we'd be
14 interested in that, especially since we're
15 involved in an SEC discussion on that site.

16 **MS. KIMPAN:** Absolutely.

17 **MR. GRIFFON:** Yeah.

18 **DR. ZIEMER:** Thank you very much for that
19 update. Okay, I'm looking for --

20 **DR. MELIUS:** Actually --

21 **DR. ZIEMER:** Okay, Dr. Melius.

22 **DR. MELIUS:** -- a follow-up. I'd just like to
23 know the schedule on the Rocky Flats -- if it's
24 in your hands now, Kate, when will it get in
25 Larry's hands?

1 **MS. KIMPAN:** It'll get in Larry's hands when a
2 policy's finalized and there's an appropriate
3 policy to say we're operating to. Right now we
4 could do that and create a lot of work for
5 Larry and his team and my team, and the policy
6 could change again. So what we have is a
7 schedule for annotation and attribution of
8 every document. We've gone through and looked
9 at what we need to annotate or attribute and
10 we've got a schedule to do that. The -- the
11 schematic is laid out for what to do. As soon
12 as the policy finalizes we're under a very fast
13 window. We've got 60 days to implement a
14 number of aspects of this policy, and this is
15 one of those where there will then be a time
16 line for every document. We've prioritized
17 those internally till now. We have -- expect
18 some help from OCAS and indeed guidance that
19 you all provide to OCAS about what order you'd
20 like to see that occur in. It's an intensive
21 process which we intend to complete in very
22 rapid order as soon as there's a policy that's
23 final and in force.

24 **DR. MELIUS:** So have you or have you not
25 started the Rocky Flats annotation?

1 **MS. KIMPAN:** Yes, we have started, and actually
2 we have a draft that is complete that I have
3 yet to give to Larry.

4 **DR. MELIUS:** Okay, good, 'cause it seems to me
5 the annotation doesn't need to wait for a new
6 policy -- finalized policy.

7 **MS. KIMPAN:** That's correct.

8 **DR. MELIUS:** Okay.

9 **MS. KIMPAN:** That's correct.

10 **DR. MELIUS:** Okay. And -- and who --

11 **MR. GRIFFON:** (Unintelligible) -- go ahead.

12 **DR. MELIUS:** And who is the document owner then
13 on the Rocky Flats site profile now?

14 **MS. KIMPAN:** Bob Meyers -- Bob Meyer, no S.

15 **MS. BOLLER:** Kate, I'm sorry, I didn't hear who
16 the document owner is.

17 **MS. KIMPAN:** Bob Meyer.

18 **MS. BOLLER:** Bob Meyer, 'cause the letter I
19 have dated August 7th shows Matt McKee --
20 McFee.

21 **MS. KIMPAN:** That's the SEC rather than the
22 site profile. Sorry, we're talking about two
23 different documents. One's the Technical Basis
24 Document, site profile. The other's the
25 evaluation report for the Special Exposure

1 Cohort. Both are Rocky Flats documents. The
2 annotation/attribution I'm referring to is for
3 the six-document TBDs site profile is what
4 we're talking about for this annotation effort
5 and attribution effort.

6 **MS. BOLLER:** And are you doing anything with
7 the SEC evaluation report?

8 **MS. KIMPAN:** We're assuring that the people who
9 are contributors and owners -- as you know,
10 they're very, very different documents. The
11 SEC does a very different thing. It looks at
12 the data that have been gathered through our
13 work, through the work of OCAS, and makes some
14 scientific opinions about the availability and
15 quality of data. That work is wholly different
16 from the TBD development. And what we're doing
17 regarding SEC petitions is, like other areas,
18 we've been replacing authors as appropriate in
19 the evaluation report process to assure
20 compliance, again, with a not-yet-finalized
21 policy. And -- and if it finalizes looking
22 much like it does right now, then we'll be good
23 to go with the owners we've established for
24 those evaluation reports, as well, Carolyn.

25 **DR. WADE:** Just -- Kate, just a few follow-ups.

1 Will you do an attribution of the SEC
2 evaluation report work that you've done?

3 **MS. KIMPAN:** We certainly can. We certainly
4 can make -- it would be, I'm certain, redundant
5 to some of the other information, but yes is
6 the answer. Am I getting people yelling at me
7 from behind on my team, 'cause it's more work -
8 - yes, we can -- we can certainly endeavor to
9 do that. We certainly want folks to know where
10 our information's from, why we've used it in
11 these reports and what we're doing with it.

12 **DR. WADE:** Okay. Assuming that the NIOSH
13 policy is finalized Monday --

14 **MS. KIMPAN:** Yes.

15 **DR. WADE:** -- then when will you get to Larry
16 the annotation of the site profile?

17 **MS. KIMPAN:** The first thing we'll get to Larry
18 is the Rocky example for what we've done, and I
19 can get that to Larry --

20 **DR. WADE:** Like for Rocky --

21 **MS. KIMPAN:** -- next week. It's prepared to
22 deliver to Larry. I actually, had we not been
23 on the road so much the last two weeks, might
24 well have gotten it to him before now. My
25 apologies. We will then get to Larry the same

1 day the schedule of those documents that might
2 need to sustain one of these reviews. For
3 annotation it's all of them; for the
4 independent review it will be only those that,
5 through the new lens, would have had a conflict
6 prior. We'll expect some help from OCAS in
7 prioritizing those. Right now we've got them
8 ordered in a sort of natural order based on our
9 work flow, but we certainly can amend that.

10 **DR. WADE:** In terms of the Rocky discussion,
11 though, the annotation of the Rocky Flats site
12 profile will go to Larry --

13 **MS. KIMPAN:** Next week.

14 **DR. WADE:** -- next week. Okay.

15 **DR. ZIEMER:** Thank you.

16 **MS. BOLLER:** Kate, did I understand you that
17 you're talking about individuals who might have
18 a conflict of -- conflict of interest versus
19 the corporate conflict of interest?

20 **MS. KIMPAN:** Very good question, Carolyn. I
21 didn't mean to act like it was one thing.
22 We're talking about both. For individual,
23 they're -- they're -- what that individual did,
24 the work they might have done at Rocky or some
25 other site is going to affect which -- which

1 conflicts, who can be in what role, who can be
2 a particular owner of a document, a contributor
3 in certain ways. Those corporate conflicts are
4 also part of our consideration, so anyone with
5 a corporate conflict will likewise be replaced
6 as needed, review done as needed, et cetera.
7 And those, too, will rely upon this draft
8 policy. If those signi-- if those substantive
9 elements don't change -- what's a personal
10 conflict, what's a corporate conflict -- we're
11 ready to flip a switch and go wide with this
12 policy. We -- we have been hesitating to do
13 that in all arenas, yet while that's been going
14 on we have been moving owners and authors
15 commensurate with what we believe the policy
16 will be at the end. We hope not to have to,
17 you know, do another dose-y-do. It takes a long
18 while, as you can imagine, to bring an
19 appropriately-skilled author up to speed. You
20 all know in these working groups and subgroups,
21 the person who owns these documents has to be
22 able to speak eloquently with you all, with
23 your contractor, with members of the public
24 about everything that's gone on at these
25 facilities. It's not surprising we've relied

1 upon people, in the five years of this program,
2 who've had experience at these facilities.

3 So what we're trying to do right now is make
4 certain that we're managing properly
5 contributions of people that we all know are
6 conflicted. The idea that someone has a
7 conflict because of the work that they did for
8 DOE is not a problem for us at all. That's how
9 you got experience, at DOE. There's no other
10 company that showed you what DOE did except
11 DOE. What's incumbent upon us and upon my
12 managers and me is to make certain and manage
13 those contributions properly so there's a great
14 deal of confidence among the public, among the
15 claimants, among this Board and certainly among
16 OCAS with who we have submitting these very
17 important findings in these documents for the
18 elaborate review and QA that goes on for every
19 one of these findings.

20 **MS. BOLLER:** This letter -- this August 6th
21 letter says ORAU has a corporate conflict, so
22 is that the entire organization?

23 **MS. KIMPAN:** It is. Right now our
24 determination is, including me. I can't sign a
25 document for Rocky Flats because the ORAU team

1 did work that is officially considered dose
2 reconstruction work at Rocky. I was not ORAU
3 at the time. People on my team did not do that
4 work. And because of that, our determination,
5 in an abundance of caution, is that the ORAU
6 corporation has a conflict at Rocky Flats and I
7 don't sign those documents.

8 **DR. ZIEMER:** Okay. Thank you, Kate.

9 **MS. BOLLER:** Kate, one more question, then I'll
10 leave you alone.

11 **DR. ZIEMER:** Oh, another question for you,
12 Kate.

13 **MS. BOLLER:** Or maybe somebody else can answer
14 this. Do you know what NIOSH's position is on
15 this corporate conflict of interest, as it
16 relates to the neutron dose reconstruction
17 project?

18 **MS. KIMPAN:** We have not sought NIOSH's opinion
19 other than to bless our now preliminary
20 determination that we are conflicted. If NIOSH
21 thought aggressively we were not conflicted,
22 they could tell us so and I'd still recuse
23 because of the appearance. The document that
24 ORAU helped on says dose reconstruction in the
25 title, so you could say you could get into the

1 details of that work that ORAU did. They
2 picked up work for a field office at the 11th
3 hour. They did a very small, in relative
4 terms, amount of work on this document. But
5 the fact that the title of the document has the
6 words "dose reconstruction" in the title has
7 said to us that the appearance of -- with an
8 abundance of caution, the ORAU team needs to
9 declare a conflict at that facility and step
10 away from the plate, and that's what we've
11 done.

12 **DR. ZIEMER:** Okay. And Larry has an additional
13 comment -- Larry Elliott.

14 **MR. ELLIOTT:** Yes, Carolyn, to answer your
15 comment, what NIOSH's view of this is, the
16 current draft conflict of interest policy gives
17 us pause with what we've heard from ORAU and
18 their interpretation of that language and
19 whether they find themselves corporately
20 conflicted at Rocky. We -- we agree with what
21 we see there now under the current language of
22 the draft conflict of interest policy. So if
23 that stays as it currently is and becomes final
24 policy, we will see ORAU conflicted at Rocky
25 Flats.

1 book that says procedures review, and we have
2 John's fine work product that looks at all the
3 procedures that are on the web site as of a
4 certain date that have not been reviewed. What
5 we asked John to do yesterday was to go through
6 and mark off those procedures that have been
7 reviewed by SC&A through other than the
8 procedures review task. This could be in dose
9 reconstructions or site profile. And I think
10 he's prepared to report to us on what they are.
11 I've also asked John, in anticipation of a
12 discussion with the Board, to bring forward any
13 recommendations SC&A would like to bring
14 forward as to procedures that are here that
15 SC&A would recommend that the Board task them
16 with the review of. So we could start to
17 accept some information from John on that
18 aspect of the business. It's something we'll
19 have to do tomorrow, so if we can do some of it
20 now --

21 **DR. ZIEMER:** Get started --

22 **DR. WADE:** -- it's in our interest.

23 **DR. ZIEMER:** Very good. John, you -- you are
24 prepared then to indicate which of these items
25 -- this is in tab -- I think it's tab three,

1 procedures review -- which of these you in
2 essence have sort of reviewed --

3 **DR. MAURO:** Yes, yes.

4 **DR. ZIEMER:** -- already, and then we also were
5 going to add to this I think some of the TIBs -
6 -

7 **DR. WADE:** TIB-52.

8 **DR. ZIEMER:** -- TIB-52 to be added, at least to
9 the list.

10 **DR. WADE:** Right.

11 **DR. ZIEMER:** And were there any other TIBs to
12 be added to the list -- or you'll -- you --

13 **DR. MAURO:** 38.

14 **DR. ZIEMER:** Okay. So if you're prepared to do
15 that, let us proceed.

16 **DR. MAURO:** Yes. There are -- this was
17 prepared in June, and my -- I suspect, haven't
18 checked it -- there's probably additional
19 procedures that are there now over and above,
20 so this is a good point of departure to start
21 the process of selection. And what I would say
22 is out of the 53 that are here, seven have
23 already been effectively reviewed as a result
24 of primarily the SEC and site profile review
25 process. Let me first point out -- and so --

1 so for all intents and purposes, when you folks
2 pick the 30 that you'd like us to review, you
3 don't have to worry about the seven I'm going
4 to give you. So you'll get -- you're really
5 going to get a review of 37 since we would --
6 we'll roll them into the product so that it's
7 all in one place, but for -- it's the -- the
8 seven are effectively done, except for some
9 mop-up, perhaps, and so -- all right, let --
10 going down the left-hand column you'll see
11 toward the bottom there's an ORAUT-OTIB-34.
12 That has to do with the coworker model for X-
13 10. That's done.
14 Going a little further down to the very last
15 one on that page is OTIB-37, has to do with
16 coworker for Paducah. That's, as a matter of
17 fact, almost done. We're in the process of
18 delivering to you our site profile review for
19 Paducah, and that's part and parcel of that
20 work product, so that's done.
21 We've added in one that's not on this list, and
22 you may want to just write this down at the
23 bottom of that first page, below the OTIB-37.
24 You may want to write down OTIB-21, which deals
25 with X-10 external coworker procedures. That's

1 not on this list, but it's done.
2 Let -- and now we'll flip to the next page.
3 Toward the top you will see OTIB-47 dealing
4 with Y-12 -- done. Right below that, OTIB-50,
5 a Rocky Flats neutron OTIB -- done. 51,
6 dealing with Y-12 NTA film -- done. You move
7 toward the center of that page you'll see an
8 OTIB-58 dealing with external coworker, our
9 review work on that is very much part of the
10 work we're involved in so that review is, for
11 all intents and purposes, done. We have our
12 position and our opinions on it and it's
13 certainly a matter of discussion that's ongoing
14 as part of the closeout process related to
15 Rocky, but our review is -- is completed. And
16 certainly that review and our commentary on it
17 can be incorporated into a work product. But
18 bear in mind of course that the outcome of all
19 of this, how all of the issues that we may
20 raise, that's also in process. But
21 nevertheless, what we would do is deliver the
22 product that -- as part of the eventual
23 deliverable, which would be on that subject but
24 we would make certain statements in the work
25 product that perhaps some of the issues that

1 we've identified are either in the process of
2 being addressed or have been addressed because
3 there are a lot, it's real time.

4 Let's go on, let's see, to the very last page.
5 There's nothing on the last page that -- that
6 that -- we've done, so that's your list and
7 that should be a total of --

8 **DR. ZIEMER:** That -- that is seven items,
9 right.

10 **DR. MAURO:** -- seven, those are seven. Now I'd
11 like to go back to the beginning. What I did
12 was -- and this was purely a judgment call that
13 we made related to the ones we feel would
14 probably be good ones to review that we haven't
15 reviewed. So again let's start from the -- the
16 first page, at the top. There -- sort of the
17 fourth one down, so it's OCAS-PER-003. This
18 has to do with Bethlehem Steel ingestion --
19 heard a lot about that over the last couple of
20 days that that's in place; probably a good idea
21 to take a look at that. We recommend OCAS-PER-
22 3.

23 The one right below that is OCAS-PER-4. This
24 is dealing with photofluorography at Pinellas.
25 We -- we did not review that document as part

1 of our deliverable on Pinellas, which you folks
2 have just received. Should be -- we should
3 take a look at that, should be pretty easy to
4 do, but we recommend it be done.

5 Going a little further down, just below you'll
6 see TIB-13 dealing with external exposure,
7 Mallinckrodt. It's a -- we would recommend
8 taking a look at that.

9 A little further down you'll see OTIB number 6.
10 We've reviewed 6, but it's been revised and
11 we're recommending that we take a look at that
12 particular -- it has to do with diagnostic
13 medical X-rays. The procedure has been
14 revised, probably a good idea to take a look to
15 see if anything has changed substantively from
16 the previous one, probably pretty easy to do.
17 Recommend the one just below that dealing with
18 Bonner survey procedures for neutron dosimetry,
19 that's OTIB number 9; probably ought to get a
20 look at that.

21 The one below that, OTIB-13, it's a Y-12-
22 related procedure that has not been reviewed,
23 probably should look at that.

24 OTIB-15 having to do with Bayesian
25 methodologies, again related to Y-12, we

1 recommend that one.

2 Also O-- right below that, 26, OTIB-26, a K-25
3 external coworker -- by the way, we believe all
4 the procedures that are coming out, OTIBs, the
5 coworker models are probably the ones that are
6 right up there as the highest priority, how to
7 -- because in the end, it's the coworker models
8 that create the vehicle for dose reconstruction
9 when you don't have data or you're missing
10 data, so we -- we give that the highest
11 priority.

12 Let's keep going down. A little below that
13 you'll see OTIB-35, coworker, K-25. We
14 recommend that.

15 Just below that, OTIB-36, this is another
16 coworker model, Portsmouth.

17 Flip -- next page, the very top one, OTIB-39,
18 coworker, Hanford.

19 Just below that, OTIB-40, another external
20 coworker, Portsmouth.

21 Go down a little further you will see a OTIB
22 number 55. It has to do with neutron dosimetry
23 and NCRP report number 38. I just looked at
24 that. It seemed to be pretty interesting. I
25 would say I'd like to take a look at that.

1 And the one below that, again it's a -- it's a
2 Y-12, OTIB number 57 related to Y-12. We
3 recommend that.

4 Next to -- the very end, the very last page
5 now, almost done, PROC -- these are procedures,
6 these are more generic. You notice the ones
7 before are more site-specific. These are more
8 generic. Very first PROC-59.

9 The next one, PROC-60, we've reviewed, but it's
10 a revision. We'd probably take another look at
11 that. We recommend that.

12 There's a -- a one a little further down called
13 PROC-86, a comp-- dealing with complex internal
14 dosimetry claims. That struck us as something
15 of great interest.

16 And then there -- at the very bottom there are
17 three, PROC-94, 95 and 97. We feel that all of
18 tho-- those three should be looked at.

19 Then on top of that of course we have the one
20 we mentioned earlier, namely adding in OTIB-52
21 that we talked about earlier today, and we have
22 been talking a lot about OTIB-38 as part of the
23 Rocky process and we recommend -- since that --
24 that's not on this list, that you add that.

25 If you count all of the ones that I just

1 recommended, it's in the 20s, low 20s I believe
2 --

3 **DR. WADE:** Twenty-two.

4 **DR. MAURO:** -- 22, so what I'm saying is -- so
5 there's 22. Our proposal to you folks that has
6 been approved is for 30, so there are eight
7 more that could be added in, gives us a little
8 leeway. When we take a look at the latest
9 list, the ones that are over and above the ones
10 we just went over, probably could take a look
11 at that and see if there are additional ones
12 there that might be worth looking at and we
13 could add an additional eight and then fill up
14 the pipeline, but that's our recommendations
15 and we're looking to you for guidance.

16 **DR. WADE:** Thank you.

17 **DR. ZIEMER:** Thank you, John. Maybe a question
18 here and -- Wanda has a question and then Mark.

19 **MS. MUNN:** John, the two that you suggested
20 which are new versions of --

21 **DR. MAURO:** Yes.

22 **MS. MUNN:** -- procedures that you've already
23 reviewed, I had made the assumption -- perhaps
24 erroneously -- that the revisions had been
25 based on your earlier review. And is that an

1 erroneous assumption?

2 **DR. MAURO:** Don't know. We'd look -- my -- I
3 suspect that we'd look at it and very quickly
4 know the answer to that. We haven't done that.
5 Now it may turn out the level of effort to put
6 that to bed would be very easy, but I don't
7 have an answer to that.

8 **MS. MUNN:** And I guess one of the reasons I
9 bring that up is because I think this kind of
10 bears on our -- our cross-cutting issue of how
11 we follow up on previous work that we have
12 suggested. When it's done, how do we know that
13 it's done. And I know we're going to talk
14 about that tomorrow, but this I think just --

15 **DR. ZIEMER:** And some of the earlier ones --

16 **MS. MUNN:** -- the point --

17 **DR. ZIEMER:** -- we know are no longer used, in
18 any event, the ones that were in the first
19 round of reviews. But it would be helpful to --
20 - to sort of know the answer to that. I don't
21 know if that's something that NIOSH could
22 readily answer. You know, on the first round
23 of reviews, which of the procedures are simply
24 no longer used so it's a -- doesn't matter
25 whether there was a critique for changing or

1 not; they're simply not used. Which ones did
2 what Wanda described and resulted in the
3 revision, the revision simply incorporates
4 suggestions. Is that something we could get
5 ahold of readily, Larry or --

6 **MR. GRIFFON:** I think some of that --

7 **DR. ZIEMER:** -- or Stu?

8 **MR. GRIFFON:** Yeah, Stu might be able to answer
9 better, but I think some of that we tried to
10 capture in our matrix, that -- you know, if it
11 was a --

12 **DR. ZIEMER:** What the follow-up would be.

13 **MR. GRIFFON:** Yeah, what the follow-up would
14 be, and if it was -- that's one -- you know,
15 one procedure was no longer used was replaced
16 by this procedure --

17 **DR. ZIEMER:** Maybe the matrix already answers
18 that.

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

20 **MR. HINNEFELD:** I haven't been following the
21 selection of procedures carefully, but
22 certainly the -- the matrices for both the
23 original procedure review, while you're talking
24 about reviewing revised versions of procedures,
25 so the -- the matrix would say whether this is

1 being revised or not so it should be able to
2 say whether this revision that is now subject
3 to review incorporated what we said we would do
4 in response to that.

5 **MS. MUNN:** Yeah, yeah.

6 **DR. ZIEMER:** Thank you. Larry, additional
7 comment?

8 **MR. ELLIOTT:** Let me answer this a little
9 differently. I heard the question to be the
10 ones that have already been reviewed and then
11 revised, has that revision taken place because
12 of the review comment.

13 **DR. ZIEMER:** Yeah, that was the question.

14 **MR. ELLIOTT:** I'll answer your question -- it's
15 probably a duke's mixture. Okay?

16 **DR. ZIEMER:** Uh-huh.

17 **MR. ELLIOTT:** It's -- and if you look on all of
18 our documents, we have a document control
19 system and they -- like the second page of that
20 -- any document shows what changes have been
21 made, what revisions and why those revisions
22 have been made. We have to go in and look at
23 each one of those and hope that we have
24 captured completely and accurately all of the
25 reasons for why a document was revised. In

1 some instances I hope we would see that it was
2 as an outcome of the Board's review findings.
3 In other cases it may be simply that we've
4 identified new information --

5 **MS. MUNN:** Better --

6 **MR. ELLIOTT:** -- we've made a policy change or
7 something of that sort, but yes, that's there.
8 It would take us a little bit of time to pull
9 it all together.

10 **DR. ZIEMER:** But the -- an SC&A review actually
11 would very quickly answer that on --

12 **MR. ELLIOTT:** Yes.

13 **DR. ZIEMER:** -- any particular one. They could
14 look at it and say oh, okay, here's the
15 revision, it's what we recommended, there it
16 is, fine and --

17 **MR. ELLIOTT:** Yeah, I hope we've done a good
18 job of capturing that in our document control -
19 -

20 **DR. ZIEMER:** Right.

21 **MR. ELLIOTT:** -- revision sheet. But perhaps
22 if we haven't, reading the document would
23 answer the question.

24 **DR. WADE:** Sure.

25 **DR. MAURO:** Like to point out, on the last set

1 of 30 that we delivered, you may recall we had
2 an introductory paragraph that said listen, you
3 know, when we originally laid out -- we go back
4 in time a year and identified the set that
5 you'd like us to review, what happened is -- I
6 mean once we got into the process, we recognize
7 and you start to read it, you say you know
8 what, this is weird, this really is something
9 that we probably are wasting our time. This is
10 not an important one for us to review, here's
11 why. By the way, here's another one that we
12 probably should have put in that we would
13 suggest replace. So what I would say is that
14 we fill the pipeline up as best we can using
15 the best judgment we have with the information
16 we have before us now to say here's the 30 we
17 would like you to look at. SC&A dives in,
18 starts to work on it. My guess is we're going
19 to find out that several of these we can review
20 in about ten minutes or -- and we'd let you
21 know that listen, everything is fine, this
22 review has been made. If you'd like, we could
23 add others. We would recommend to you others
24 that -- to replace. So I'd like to keep this
25 as an iterative, ongoing dialogue and not like

1 freeze it. You know, freeze it in time, here's
2 your list, boom, we have to do that. We'll
3 keep talking to each other as we move through
4 the process.

5 **DR. ZIEMER:** Uh-huh, Mark.

6 **MR. GRIFFON:** John -- Go ahead, Larry, I'm
7 sorry.

8 **MR. ELLIOTT:** I'd like to augment my answer a
9 little bit, and that would be to say to you
10 that -- keep in mind that when SC&A did their
11 first round of review on some of these
12 documents, we were already in the process of
13 revising some documents. And so, you know,
14 it's my direction to staff that we attend to
15 those issues as they've been raised, even
16 though we were already under a revision of the
17 document, so there may be that going on here,
18 too. This is a very dynamic situation and so I
19 hope we can find -- figure this out.

20 **DR. ZIEMER:** Actually I'm now looking at the
21 matrix itself and I see, for example, there
22 were -- here -- there's several. For example,
23 it says Board recommendation recommend NIOSH
24 modify procedure. Also there's a priority on
25 different ones. And then the program action,

1 it gives in many cases the revisions -- or not
2 -- not the actual revisions, but the fact that
3 that --

4 **MR. GRIFFON:** That was the action.

5 **DR. ZIEMER:** -- that was the action that would
6 be taken. And so the matrix can also be laid
7 side by side with these and -- and we can use
8 that as a tracking tool. Mark.

9 **MR. GRIFFON:** Just -- just a couple questions
10 on the -- on the list. I've talked to John
11 off-line on this and I -- I just question it
12 and I think we should leave it open and make
13 sure we have the universe of procedures here
14 and -- and I'm not sure -- I think -- I mean
15 does -- I guess it would be helpful to me to
16 have the entire list, including from the first
17 round of procedures review, not -- you know, so
18 that we can see completed, completed, and then
19 I'd like to ask NIOSH is that the universe of
20 procedures that exist up to this point. That's
21 one question.

22 The second part -- or -- or one statement. The
23 second part is does -- does this include work
24 book reviews. I know we had a lengthy
25 discussion on we need to get into the work book

1 review stuff.

2 **DR. MAURO:** One of the new -- in our proposal
3 of work we -- recognizing that the work books
4 are part and parcel to OTIBs, to other
5 procedures, PROCs as appropriate, to site
6 profiles, so you'll -- you'll probably notice
7 if you look at our proposal of work which has
8 been approved, all the work books are an
9 integral part of the review, as if it's part of
10 the review of the procedures, so it's -- so
11 that's why you don't see in any of our new
12 proposals a separate deliverable called work
13 books, because we don't see it that way any
14 longer. We see that as part of it. All right?
15 And as far as your question, certainly we can
16 very easily get back together with Kathy and
17 Hans, download the latest version, go through
18 this again --

19 **MR. GRIFFON:** For instance, just -- just --

20 **DR. MAURO:** -- and get back to you.

21 **MR. GRIFFON:** -- as a point, I don't see the
22 super S TIB on here related to Rocky, and I
23 think was already published by June 6th -- or
24 maybe not, but -- and then -- then there's also
25 a -- a TIB on recycled uranium. I think there

1 was an older draft. I don't see that draft on
2 here. There's going to be a revision, I think
3 we want to wait for the revision 'cause we've
4 heard that -- that they've expan-- expanded
5 that OTIB quite a bit. But I -- I think we do
6 need to keep an eye on --

7 **DR. MAURO:** Maybe --

8 **MR. GRIFFON:** -- what's out there.

9 **DR. MAURO:** Maybe we put another one of these
10 out, have a conference call, do it again -- it
11 shouldn't be too difficult -- to make sure
12 we're current.

13 **DR. WADE:** Well, now let me speak to this.

14 **MR. GRIFFON:** But -- yeah, go ahead.

15 **DR. WADE:** We do want SC&A to be working on
16 this task when we leave this meeting, so --

17 **MR. GRIFFON:** Yeah.

18 **DR. WADE:** -- I would like to see the Board
19 recommend a review of some number of
20 procedures. You can decide if it's 20 or ten
21 or 15, and then hold the others for this more
22 deliberate discussion. But without that, then
23 SC&A would have to stop work on this task --

24 **MR. GRIFFON:** Right.

25 **DR. WADE:** -- and we don't want that.

1 **DR. MAURO:** What might be helpful is if --
2 based on what I just went through, if we'd get
3 some feedback right -- right now or -- yeah,
4 no, this is, you know, the current version,
5 probably a good one to review. Other words,
6 then if there's -- I'm not sure if you folks
7 are in the position to make such a judgment
8 that readily, but if you are and say yeah, no,
9 this is the one that's active, alive and well,
10 and then it's pretty easy to make a decision,
11 let's go forward or -- or if you know that in
12 fact no, this is being revised, the extent to
13 which we can do that in real time, that's fine,
14 too.

15 **DR. ZIEMER:** Yeah, and we could in fact -- we
16 could postpone action till tomorrow, giving --
17 giving NIOSH an opportunity to look at your
18 list and tell us whether there are some of
19 these that are basically no longer used anyway,
20 also giving the Board members a chance to
21 cogitate on your proposal and look at the
22 others that were not included to see if --

23 **DR. WADE:** That's fine.

24 **DR. ZIEMER:** -- they would rather have
25 something else looked at first.

1 **DR. WADE:** I think regardless of that outcome,
2 we hold some -- we hold some capacity in
3 abeyance to allow the more complete list to be
4 generated and looked at at the next conference
5 call, so I think we can have our cake and eat
6 it, too.

7 **DR. MELIUS:** Can we get a list by tomorrow, the
8 up-- the updated list?

9 **MR. ELLIOTT:** I don't know that I can do that.

10 **DR. MELIUS:** Okay.

11 **MR. ELLIOTT:** 'Cause I don't think -- not to
12 sound detrimental to SC&A, but I don't think
13 this is a complete list of all our procedures,
14 first of all. Secondly, I'm not sure --
15 there's no Rev numbers on this list, so I'd
16 have to cross-- we'd have to cross-check which
17 revision we're at, and then we'd also have to
18 understand where we are on the staging of a
19 revision, has something -- is something going
20 forward for revision or has it got through a
21 revision. So --

22 **DR. ZIEMER:** Sounds like we --

23 **MR. ELLIOTT:** -- this is not something I feel
24 like I can get for you in about 24 hours.

25 **DR. MELIUS:** Okay.

1 **DR. ZIEMER:** Okay. But we could get underway
2 with at least a reduced number that could be
3 modified and added to by the time of our phone
4 meeting.

5 **DR. WADE:** But Larry, you and Stu could look at
6 this candidate list of SC&A and at least say
7 no, we don't think this one should be on it
8 because -- and allow the Board to take some
9 action tomorrow to at least start SC&A down the
10 path of the next 30.

11 **MR. ELLIOTT:** Certainly, and I don't see
12 anything on this list right now that waves a
13 flag in my mind, do you, Stu?

14 **MR. HINNEFELD:** Not yet.

15 **MR. ELLIOTT:** Stu's still studying it. He's a
16 better studier than I am.

17 **DR. WADE:** We have time tomorrow, so --

18 **DR. ZIEMER:** Let me suggest then we'll take
19 this under advisement and take action on it
20 tomorrow, one way or the other, and we'll have
21 a chance to cogitate further. Jim Melius.

22 **DR. MELIUS:** I would just caution us to using
23 up 22 or whatever it is of the 30 that they're
24 allowed to do this year on a list that's not
25 complete.

1 **DR. ZIEMER:** Yeah, it's not an all or nothing.
2 Again, I think I'd suggest that the Board look
3 at these, and you can prioritize them if you
4 wish and if we say okay, let's take -- select
5 15 or some number --

6 **DR. MELIUS:** Yeah.

7 **DR. ZIEMER:** -- and we can go from there, not a
8 problem.

9 **DR. WADE:** Right, just -- just -- if I can just
10 hear the contractual issue with John. So if
11 the Board was to say here is ten, start and
12 we'll, at our next phone call, augment that,
13 then that would keep you working at capacity?

14 **MS. BEHLING:** This is Kathy Behling, can I
15 interject something?

16 **DR. WADE:** Yes, I think so.

17 **MS. BEHLING:** I actually probably could put
18 together a complete list tonight of all the
19 documents that we have reviewed to date. When
20 I was initially asked to do this I was under
21 the impression that you only wanted to look at
22 a list of those documents that have not been
23 reviewed, and at least the initial list that I
24 had provided to John I tried to include those
25 procedures -- such as one that comes to my mind

1 that I always think of as an important
2 procedure that has been revised and that I
3 believe we should look at it also is the ORAU-
4 PROC-6, the external dose reconstruction
5 procedure. We reviewed Rev. 0 of that. I
6 believe there was a page change Rev and then
7 there's also now a Rev. 1, and I believe on my
8 list that I provided to John I did include that
9 to indicate that we had reviewed the original
10 but not the Rev. 1. But I can go back to that
11 list and identify for you all of the documents
12 that we have reviewed to date and try to
13 indicate on there what the Rev number of those
14 documents were and what the current Rev number
15 is. And I possibly could get that to you by
16 tomorrow.

17 **DR. WADE:** Okay, thank you. John, back to my
18 question.

19 **DR. MAURO:** Yes. I guess what I was saying is
20 that what's going to happen is yes, let's say
21 we start to fill the pipeline up with five,
22 that would -- that -- that would be -- you
23 know, whatever is -- makes as reasonable at
24 this point in time that we could say, with a
25 degree of confidence, that it looks like we

1 could move forward on this group, whatever
2 number they are. I also would like to add that
3 that doesn't mean that we're locked into that,
4 either. That is, once we start those and as --
5 as we move forward, I think it's probably
6 important to keep -- even if it's a limited
7 number -- the dialogue active so that even then
8 if we do pick even a handful to start to fill
9 the pipeline up, that doesn't mean we're locked
10 into that by any means. We'll let common sense
11 dictate. So I don't think that, you know,
12 we're trying to draw bright lines --

13 **DR. ZIEMER:** Yeah, the list can be modified.

14 **DR. MAURO:** We can just change it as -- as we
15 move through it.

16 **DR. ZIEMER:** Wanda Munn.

17 **MS. MUNN:** Perhaps this --

18 **UNIDENTIFIED:** I think the --

19 **MS. MUNN:** -- discussion has already --

20 **UNIDENTIFIED:** -- phone speaker needs to be put
21 --

22 **MS. MUNN:** -- covered any comment that I was --

23 **DR. ZIEMER:** Hold on, Kathy. Let's hear Wanda,
24 then we'll come back.

25 **MS. MUNN:** My original thought was thank

1 goodness we're looking at what hasn't been
2 reviewed, not what has already been reviewed
3 because that's so mind-boggling that it's
4 impossible for some of us to get our arms
5 around it. When I go back and look at the
6 original matrix that we still have not really
7 updated or reduced in size, it's -- it's sort
8 of overwhelming. So I was going to express my
9 thanks for looking at what hasn't been done
10 rather than what has been done, but it seems
11 that -- from the discussion here -- there are a
12 number of people who want to see what has been
13 done, as well. So I'm -- I have some concern
14 over how to format that, given what we've done
15 in the past with respect to matrices and the
16 number of subtasks that occur under various of
17 the entries here. I don't know that there's
18 any way one can fully capture all that, but it
19 might be beneficial to at least see those
20 procedures and other work items that have
21 already served their purpose and have
22 essentially dropped off the current list. That
23 might be helpful.

24 **DR. ZIEMER:** Well, I think that was part of the
25 intent. The other thing is that I think the

1 focus indeed is going to be on what has not
2 been done; that is this new list. But insofar
3 as there are revisions, we can determine
4 whether those are significant and need in-depth
5 reviews or they're just oh, okay, they just
6 revised according to what was suggested. Those
7 -- those would -- in terms of work product, are
8 fairly minor. It just keeps things up to date
9 on both the old and -- but this is -- this is
10 looking forward pretty much, I would say.

11 Now Kathy, did you have another remark? I
12 guess that was Kathy.

13 **MS. BEHLING:** No, that was not me talking. I
14 believe that was Liz, and I think that there
15 were some people on the phone that cannot hear
16 the Board.

17 **MS. HOMOKI-TITUS:** Oh, we can hear now. I'm
18 sorry. They're doing something with the
19 microphones and (unintelligible) --

20 **DR. ZIEMER:** We can hear you, Liz, go ahead.

21 **MS. HOMOKI-TITUS:** -- (unintelligible) get on
22 the phone and they just needed to switch back.
23 Thank you.

24 **DR. ZIEMER:** I think that's Liz. Liz, did you
25 have a comment?

1 **DR. WADE:** No, she was just making a comment
2 about hearing.

3 **DR. ZIEMER:** Okay.

4 **DR. WADE:** Okay.

5 **DR. ZIEMER:** Okay, if there's no objection,
6 we'll defer action on this item till our work
7 session tomorrow. Any other comments? It's
8 time for lunch, I believe. The Board has
9 managed to use up the time available. Mark,
10 one final comment?

11 **MR. GRIFFON:** Just one more -- one more. I
12 promise it's a short one. On -- back to the
13 work book question, and really related to site
14 profiles. I know it's tangential to what we're
15 discussing here, but when you -- you've
16 submitted us a number of site profile reviews.
17 Can we assume that you reviewed associated work
18 books with those site profile reviews as well
19 at this point or is that -- 'cause there's all
20 -- most every site profile, or the bigger
21 sites, anyway, all have associated work books.

22 **DR. MAURO:** For the site prof-- the answer is
23 I've read all of the site profiles -- products
24 that we put out to date, and the answer is
25 probably no. The place where the work books

1 are getting reviewed is in the cases. That is,
2 when we're actually auditing a case, we find
3 that that's where we are reviewing the -- the
4 work books 'cause we use them. So yeah. Now
5 that may not be absolute. There may be a few
6 times where, in the process of reviewing a site
7 profile, it was necessary to look at the work
8 book. But I have to tell you, I don't recall
9 any of them that I -- you know, I read them all
10 -- where the work book was part of the review
11 of the site profile.

12 **DR. ZIEMER:** Well, John, I guess the question
13 might be do we have some way of confirming, for
14 example, that all work books have been or are
15 being or will be reviewed?

16 **MS. BEHLING:** This is Kathy Behling. I can
17 answer that question.

18 **DR. ZIEMER:** Okay, Kathy.

19 **MS. BEHLING:** Okay. We are in the process at
20 the moment of reviewing a list of work books
21 that have been approved by the Board, and many
22 of those are site-specific work books, such as
23 Savannah River Site and the Hanford site.
24 We're looking at both the min/max type of work
25 books and also best estimate work books, and

1 that is a deliverable that we are intending to
2 give to you within hopefully about a month from
3 now.

4 **DR. ZIEMER:** Okay, I didn't quite understand
5 the statement about work books that have been
6 approved by the Board.

7 **MS. BEHLING:** I believe that during -- there
8 was (unintelligible) --

9 **DR. ZIEMER:** (Unintelligible) missed this.

10 **MS. BEHLING:** -- Task III had a listing of work
11 books --

12 **DR. ZIEMER:** Oh, oh, a list --

13 **MS. BEHLING:** -- and we reiterated that in the
14 --

15 **DR. ZIEMER:** Okay, I underst--

16 **MS. BEHLING:** -- progress report a few months
17 ago because I went through the list of work
18 books that we were reviewing and I realized
19 that in some cases -- again, John had indicated
20 it -- it didn't make sense to review some work
21 books and there were other work books that we
22 thought we should review, and we revised that
23 list, and I was under the impression that that
24 was a Board-approved list.

25 **DR. ZIEMER:** Yeah, I understand, but I thought

1 you were referring to the idea that we had
2 reviewed or approved some work books, but it's
3 the list that you're talking about.

4 **DR. MAURO:** The process, if you recall, is our
5 proposals contained lists of work books. We
6 had one for Task I and one for Task III. We're
7 doing that -- that list, but the list is
8 morphing as we move through it. As I said
9 before, we -- we've learned, and as Kathy
10 described, basically we have two activities
11 going on right now. One is what we call the
12 site-specific work book review -- work product,
13 which is well along. And the other one, which
14 is not well along, is the generic. And these
15 are work products that are going to be stand-
16 alone products that you will be receiving in
17 the next month.

18 However, in moving into this new -- next -- you
19 know, the -- these procedures, you know, that
20 we just talked about, imbedded in some of those
21 there's no doubt there's a work book, and the
22 work book review will be part and parcel of
23 that, as opposed to the way it is now where we
24 have a whole separate work product that's going
25 to be just work books. I think it makes more

1 sense to marry the work book with the procedure
2 that is sort of linked to it, so we changed our
3 mode of operation a bit in moving into this
4 next fiscal year.

5 **DR. ZIEMER:** Okay. Thank you. Okay, let's
6 recess for lunch and we'll return at 1:30.

7 (Whereupon, a recess was taken from 12:20 p.m.
8 to 1:40 p.m.)

OAK RIDGE INSTITUTE OF NUCLEAR STUDIES (ORINS)

9 **SEC PETITION**

10 **DR. ZIEMER:** Okay, thank you very much. We're
11 going to call the afternoon session to order.
12 The first item on our agenda this afternoon is
13 the SEC petition for Oak Ridge Institute of
14 Nuclear Studies. The presentation from NIOSH
15 will be made by LaVon Rutherford, then we'll
16 have an opportunity to hear from the
17 petitioners. I believe that Susan Atkinson may
18 be on the phone; we should perhaps check.
19 Susan, are you on the phone?

20 **MS. ATKINSON:** Yes, and my brothers, George and
21 Paul.

22 **DR. ZIEMER:** Thank you very much, and we'll
23 have an opportunity to hear from you.

24 Before LaVon starts, I've been informed that
25 Cindy Blackston is with us this afternoon.

1 Cindy's back there. She's with the majority
2 staff of the House Judiciary Committee.

3 Welcome, Cindy.

4 **MS. BLACKSTON:** Hi.

5 **DR. ZIEMER:** And we'll now hear from LaVon
6 Rutherford. LaVon, if you'll proceed.

7 **DR. WADE:** Maybe we can just get a sense if
8 Mike is on the phone. Mike Gibson, are you
9 with us?

10 **DR. ZIEMER:** Still there, Mike?

11 **MR. GIBSON:** Lew, I'm here.

12 **DR. WADE:** Okay.

13 **DR. ZIEMER:** Thank you.

14 **NIOSH PRESENTATION**

15 **MR. RUTHERFORD:** All right. Thank you, Dr.
16 Ziemer and the rest of the Board, for giving me
17 this opportunity to speak on behalf of NIOSH
18 concerning the Oak Ridge Institute of Nuclear
19 Studies SEC petition. For those of you who
20 don't know me, I'm the Special Exposure Cohort
21 health physics team leader for NIOSH. Let's
22 see if I can operate this.

23 NIOSH received a petition on May 5th, 2005. We
24 immediately recognized that the Oak Ridge
25 Institute of Nuclear Studies -- that this

1 petition -- our contractor, Oak Ridge
2 Associated Universities, would be conflicted on
3 this petition. Oak Ridge Institute of Nuclear
4 Studies is the predecessor name for ORAU.
5 Therefore NIOSH -- we determined that we would
6 conduct the evaluation internally ourselves.
7 We did use ORAU team for records recovery from
8 their historical files.
9 We qualified the petition on October 6th, 2005,
10 and we completed our evaluation on June -- or
11 actually July 20th of 2006. We actually
12 finalized the report July 20th, 2006. We did
13 not issue the report until August 18th of 2006.
14 That was because we were in conversation with
15 Department of Labor concerning issues with Oak
16 Ridge Hospital and the Oak Ridge Cancer
17 Research facility -- or Cancer Research
18 Hospital, two separate facilities.
19 The petition was submitted to NIOSH for a given
20 class -- a -- on behalf of a class of employees
21 at the Oak Ridge Institute of Nuclear Studies.
22 The initial class definition was "All Medical
23 Division employees that worked at the Oak Ridge
24 Institute of Nuclear Studies from June 1, 1950
25 through June 25th, 1956." That was the class

1 definition provided by the petitioner that
2 qualified the petition for evaluation.
3 There are 11 claims in our NIOSH claims
4 tracking system that currently fall -- that --
5 that fall within that class definition. Now
6 recognize, though, that the Department of Labor
7 makes that final determination on individuals,
8 whether they qualify for a given class or not.
9 A little history here. Oak Ridge Institute of
10 Nuclear Studies Cancer Research Hospital, which
11 was a -- one single part of ORINS, it was not
12 the whole thing -- the Cancer Research Hospital
13 -- radiological operations began in 1950 and --
14 and pretty much stopped in the mid-1970s.
15 Their primary function was the exploration of
16 the use of radioisotopes in the field of
17 medicine, cancer research. They used a --
18 there was a number of cancer therapies and such
19 that started at this facility or were
20 progressed at this facility. Thyroid treatment
21 -- thyroid cancers were treated with
22 radioiodine at this facility at various levels.
23 They used gallium-67, gallium-72 for bone
24 cancer treatment. They used gold-198 and other
25 -- and numerous other isotopes from ingest-- or

1 for ingestion type applications of these
2 radioisotopes.

3 They also had teletherapy units, cobalt-60,
4 cesium-137 teletherapy units at the facility.
5 So there was a number of different applications
6 they had there.

7 Okay, when we look at this facility, this
8 facility is not a typical weapons complex
9 facility. This is a cancer research hospital,
10 so it was definitely something that we hadn't
11 seen in our -- in our earlier studies of all
12 these other facilities, so we looked at a
13 number of different documents and a number of
14 different sources of information to find out
15 about the Cancer Research Hospital itself, and
16 about, you know, potential exposures to medical
17 personnel in this type of environment.

18 We looked at the existing ORAU TIBs, which as
19 you can imagine, there's little information to
20 support this -- this type of application. We -
21 - we interviewed ORINS staff -- former staff
22 members from the class period. We actually
23 talked to two research scientists, two health
24 physicists and a nurse that are -- we were able
25 to find through various sources and -- and

1 discussed, you know, potential exposure
2 scenarios, anything that might support us in
3 our evaluation.

4 We looked at case files that -- that fit -- fit
5 within the class definition in our NIOSH
6 database.

7 We looked at our site research database. We
8 were -- we were able to retrieve a number of
9 documents in the site research database --
10 annual reports, early memos, different surveys,
11 some internal -- some external monitoring data
12 for the class period. So we were able to
13 recover a number of things in our site research
14 database.

15 We also reviewed our doc-- the documents and
16 affidavits submit-- submitted by the
17 petitioner.

18 We looked at document-- we actually contacted
19 ORAU down at Oak Ridge and asked for a number
20 of documents. We went through -- we asked for,
21 you know, internal/external monitoring data
22 they may have records, source term information,
23 any type of information they -- may support our
24 evaluation of -- of this petition.

25 And then we also went out to the PubMed

1 database, which is a source of the U.S.
2 National Library of Medicine, and -- and we
3 went to PubMed database to look for reports or
4 -- reports that -- that would give us
5 indications of potential medical -- or
6 potential exposures to medical staff in this
7 type of environment dealing with these
8 radioisotopes for cancer therapy. We were able
9 to recover a number of documents to support the
10 evaluation from there.
11 I'm talking about occupational exposures. The
12 external exposures, you know, were well-
13 documented. They actually used film badges
14 from the very beginning. They had high gamma
15 emitters that -- that -- both internally
16 through ingestion, where they ingested gallium-
17 67 and 72 into the patients would -- so these -
18 - you know, high gamma emitters there. They
19 also had other -- you know, numerous isotopes
20 that they dealt with during the period. They
21 had a cobalt-60 teletherapy unit that provided
22 external dose to -- directly to the patients
23 that potentially exposed workers, as well as a
24 cesium tele-- teletherapy unit.
25 There was a report issued by Dr. Brucer* in

1 1951 -- he was the medical director of the
2 ORINS facility at that time. He actually went
3 through and they studied their exposures over a
4 three-month period to not only the physicians
5 and research scientists, but all the way down
6 to the administrative staff. This is a fairly
7 small facility, 30-bed -- basically 30-bed
8 hospital, three-story, pretty small facility at
9 the time. They actually looked at all those
10 exposures over that three-month period,
11 documented those exposures in the report.
12 They also went in and they looked at surgical
13 procedures where they went in and they, you
14 know, worked on cancerous organs that had been
15 ingested -- injected with radioisotopes, and
16 they looked at exposures to the physicians, the
17 physician's assistant and the anesthesiologist.
18 So we have a number of -- of different sources
19 of information when it comes to the external
20 exposures from these years.
21 Internal exposures -- when we initially looked
22 at this, we looked at the memos and reports,
23 and we talked to those former ORINS staff
24 members. The initial feeling by -- by them,
25 and you could read through the reports, was

1 that they felt there was a little potential for
2 internal exposure. And I think they felt this
3 because of the -- you know, the short half-
4 lives (sic) of the -- most of the isotopes, and
5 I say most of the isotopes, they were dealing
6 with at that time, therefore it wouldn't be
7 around long. As well as most of it was in a
8 liquid form and so potential for airborne was
9 limited.

10 However, in our review of those documents, we
11 also recognized some internal exposures that
12 were not as apparent I guess to the staff at
13 that time. And we also, in our review, looked
14 at a number of reports from the PubMed database
15 which identified, you know, potential exposure
16 scenarios that were clearly not looked at
17 during that time period. For example, thyroid
18 cancer with the radioiodine treatment, and
19 radioiodine is very volatile and a -- a -- a
20 certain percentage of -- some estimates of one
21 to two percent of the actual source will come
22 out of solution and can become airborne with
23 that potential exposure scenario, so that's
24 just one example of it.

25 We looked at -- we determined that -- that

1 there were other isotopes that could as well,
2 you know, present the same internal exposure
3 issues. So we -- you know, we see the issue as
4 during the prep-- preparation and
5 administration of radioactive medicines,
6 disposal of waste, and spills. Spills were
7 mentioned through numerous reports. One of the
8 initial reports in 1951, it was actually an
9 external exposure discussion, but in that
10 discussion associated problems that were
11 mentioned were potential spills or spills that
12 were occurring, and actually contaminated food
13 utensils, spoon and fork, that were noticed in
14 the cafeteria at the time, as well as they were
15 mentioned -- that the facility was not support
16 -- or not -- was not designed enough to handle
17 the large volumes of biological waste that they
18 were -- they were actually receiving at the
19 time. So there were numerous -- we felt that
20 there -- these were the primary means of a
21 potential internal exposure.

22 All right, availability of data. External
23 dosimetry data, we had -- well, 11 applica-- or
24 the 11 claimants we have, eight of those we
25 have external data. All right? And we

1 actually contacted ORAU to see if they actually
2 had a database for workers that worked during
3 the class period. We were -- we were able to
4 retri-- retrieve the database from ORAU that
5 actually lays out the individuals that worked
6 during the time period, their dose for every
7 year through the class period. In addition we
8 have memos and reports that identify dose
9 rates, doses to individuals -- as I mentioned,
10 physicians and assistants and administrative
11 staff through -- through the process and it --
12 it -- for different applications.

13 Internal monitoring data, we had no internal
14 monitoring data prior to 1964. We have -- in
15 1964 the whole body counter went into
16 operation. In addition, we also have more
17 detailed source term information in 1964. We
18 actually have packages, the actual -- you know,
19 where they've laid out the doses -- or the
20 sources for a given application to an
21 individual that we can use to -- for -- after
22 1964, but prior to 1964 we have no internal
23 monitoring data. This is -- but -- you know,
24 with the exception of the source term
25 information we have in a few given years.

1 All right, our evaluation process we were doing
2 is we look for is it feasible to estimate the
3 levels of radiation dose for a given class, and
4 is it feasible with sufficient accuracy. And
5 our second test, is there a likelihood that
6 these individuals that -- that meet the class
7 were endangered from their potential exposures.
8 NIOSH found that the availability of records,
9 process and source term information were
10 insufficient for us to do dose reconstructions
11 for the proposed class of employees. We --
12 NIOSH currently lacks information that would
13 support internal -- developing an internal dose
14 model. NIOSH found that the available external
15 data, through our external monitoring data from
16 badge data, our process information and source
17 term information, were sufficient for us to
18 actually reconstruct the external --
19 occupational external dose, including medical
20 X-rays.

21 Again, NIOSH has determined that it's not
22 feasible to estimate the dose with sufficient
23 accuracy for -- internal dose with suffi--
24 sufficient accuracy for the covered class, and
25 there's evidence that individuals that worked

1 -- the Board members and out here, they are
2 incorrect. The actual internal at the top
3 should be as indicated on this -- up here on
4 the presentation. We determined we cannot
5 reconstruct the internal dose for the class,
6 but we can reconstruct the external beta/gamma
7 and the occupational medical X-rays. And
8 that's it.

9 **PETITIONER PRESENTATION**

10 **DR. ZIEMER:** Before we have discussion we want
11 to hear from the petitioner --

12 **UNIDENTIFIED:** Yeah, this is George
13 (unintelligible) --

14 **DR. ZIEMER:** -- so let's --

15 **UNIDENTIFIED:** -- (unintelligible) --

16 **DR. ZIEMER:** -- (unintelligible) Susan
17 Atkinson. Susan, if you're on the phone, why -
18 -

19 **UNIDENTIFIED:** First of all, I want to thank
20 NIOSH for clearing up finally that --

21 **DR. WADE:** Who's speaking, please?

22 **UNIDENTIFIED:** -- Oak Ridge National Laboratory
23 or X-10 and ORINS are --

24 **DR. WADE:** Who's speaking?

25 **DR. ZIEMER:** Who's speaking, please?

1 **DR. WADE:** Could you wait just a minute --

2 **UNIDENTIFIED:** -- (unintelligible) --

3 **DR. WADE:** -- and then start again from the
4 beginning, please?

5 **UNIDENTIFIED:** -- difficulty in getting people
6 to understand that. Secondly, we really don't
7 have anything to add, but I would --

8 **DR. WADE:** Might I ask the speaker to stop for
9 a minute and start at the beginning. Because
10 of the sound system here, we have a bit of a
11 technical task we need to do before you begin,
12 so if you would count to five and then begin
13 from the beginning, we would appreciate that.

14 **DR. ZIEMER:** And identify yourself.

15 **DR. WADE:** Right, start by identifying
16 yourself. Thank you.

17 **MR. ELDRIDGE:** My name is George Eldridge. I'm
18 speaking on behalf of myself, my brother Paul
19 Eldridge and my sister, Ms. Susan Atkinson. I
20 don't have a great deal to add. I would like
21 to first thank NIOSH for finally clearing up
22 the fact that the X-10 facility, or Oak Ridge
23 National Laboratory as it's known, and the
24 ORINS Cancer Hospital are indeed two separate
25 facilities. We've undergone a long period of

1 time trying to get people to understand that
2 those were -- were not one and the same
3 facility.

4 Secondly, I would like to take a moment to
5 thank Mr. Rutherford for his diligence in
6 preparing this report, and the Advisory Board
7 for taking this petition under consideration.
8 And with that, again, I have nothing further to
9 add at this time.

10 **DR. ZIEMER:** Okay, thank you very much, Mr.
11 Eldridge.

12 **BOARD DISCUSSION**

13 Let me open the floor now for discussion, and
14 perhaps I'll begin. I'd like to ask LaVon if
15 you would go back to the mike, I have a couple
16 of questions. Number one, I noticed in the
17 list of treatment nuclides they were using
18 radium at that time. Is there any evidence
19 there were leak tests done of the radium
20 sources?

21 **MR. RUTHERFORD:** No, there was none. We
22 actually have records of -- of -- actually when
23 they started leak testing other sources was in
24 the cobalt-60 teletherapy unit when they
25 actually had a leak in that teletherapy unit,

1 and I believe it was 1956 -- my report
2 identifies that -- but that's when they started
3 looking at other sources.

4 **DR. ZIEMER:** Okay, because leaking radium
5 sources were very common during that period of
6 time, and we almost have to assume they were
7 using leakers if we have no evidence from leak
8 tests otherwise.

9 **MR. RUTHERFORD:** There's no evidence of leak
10 tests.

11 **DR. ZIEMER:** On the radioiodine, there
12 certainly -- there must be information on the
13 amounts of iodine used for those therapy
14 treatments?

15 **MR. RUTHERFORD:** Actually there is, and when --
16 I discussed it in the later years, and when we
17 talked to a couple of the research scientists
18 and we talked to the health physicists, they
19 indicated that there might be records available
20 but -- for those early years. But we've been
21 unable to get those records at all. We did get
22 records for later years, starting in 19--
23 around 1964. We also have source term da--
24 some source term data, if you look in the
25 report, from a few of the years. We actually

1 looked at that source term data, it was annual
2 data, to see if we could come up with a
3 reasonable estimate of the internal dose.

4 **DR. ZIEMER:** Source term data in terms of the
5 inventories?

6 **MR. RUTHERFORD:** Yeah, they were -- they were
7 inventories, purely.

8 **DR. ZIEMER:** Okay. So --

9 **MR. GRIFFON:** I guess finish that though,
10 'cause...

11 **MR. RUTHERFORD:** Well, what we looked at was we
12 actually looked at the -- can we use, for those
13 few years that we had of annual source term
14 data, can we develop an internal exposure model
15 that we could use to bound that exposure. The
16 problem we got into, if you look at one to --
17 one to two percent of the radioiodine becoming
18 airborne, when we take that of that annual
19 amount that they used, that's -- it -- it
20 presents a pretty significant internal exposure
21 to the thyroid.

22 **DR. ZIEMER:** Yes. Also in that connection, is
23 there any indication that use of hoods is
24 associated with the preparation of the --

25 **MR. RUTHERFORD:** We did --

1 **DR. ZIEMER:** -- doses?

2 **MR. RUTHERFORD:** We did get one report that --
3 actually one of the CATIs or claimant
4 interviews that we reviewed, when we looked at
5 their data, they said -- indicated that -- that
6 some of the medicines were prepared in a hood.
7 However, there were no documents -- other
8 documents that really supported that, so we
9 couldn't -- we couldn't be for sure -- at least
10 during the early years. It was clear during
11 the later years that the hoods, you know, were
12 put -- put in use.

13 **DR. ZIEMER:** Did you have a related question,
14 Mark?

15 **MR. GRIFFON:** Not -- not yet.

16 **DR. ZIEMER:** Okay. Gen Roessler.

17 **DR. ROESSLER:** My question has to do with
18 dates, and actually before I saw your last
19 slide I was going to ask you why not extend the
20 period up to the time they started whole body
21 counting, but I see you did.

22 **MR. RUTHERFORD:** I did.

23 **DR. ROESSLER:** So I guess I'm wondering why was
24 the initial petition only through 1956?

25 **MR. RUTHERFORD:** That's because the petitioners

1 that -- their survivor was only work from -- at
2 ORINS from 1950 to 1956, so that was the --
3 that's what got them in the door, you know, for
4 that initial proposed class. We accepted that
5 initial proposed class of that period, and then
6 in our evaluation, as we evaluated we
7 determined that things didn't change after '56.
8 They didn't change until 1964.

9 **DR. ROESSLER:** And then -- so when you spoke of
10 11 claimants, that's -- you had one to begin
11 with and you added the other ten for those
12 remaining years? I'm trying to get a feeling
13 for how many claimants there might possibly be
14 in this petition.

15 **MR. RUTHERFORD:** Well, I think if you look at -
16 - right now we have 11 claimants that fit the
17 class definition, total. Okay? The final
18 class definition, which is up to 1965 -- 1950
19 to 1964. We have 11 that we've determined.
20 Again, Department of Labor makes that final
21 determination.

22 Now if you look at the database of the number
23 of individuals that worked at the facility --
24 and there's -- one of the tables in the report,
25 you know, you're looking at 50 to 60 people per

1 year that were working, and I'm sure there were
2 turnover -- you know, during that time period,
3 and I'm -- if I remember correctly, 50 to 60
4 people. So it's not a large population that
5 worked at the -- and it was a pretty small
6 facility, really.

7 **DR. ROESSLER:** And then it got me thinking
8 about whole body counting when I read your
9 report and thinking they didn't start with
10 their whole body counter until '64. And I did
11 a lot of whole body counting. I didn't start
12 until '65, but I was kind of late in getting
13 into my career. I'm just trying to think on a
14 general basis, when did whole body counters
15 really become available at any of these
16 facilities for doing these --

17 **MR. RUTHERFORD:** If you look at --

18 **DR. ROESSLER:** -- (unintelligible)?

19 **MR. RUTHERFORD:** -- if you look at the
20 chronology at the facility and -- in -- in -- I
21 think it's Section 4 of the report, it's one of
22 the sections, you'll actually go through and
23 you can see where they started designing their
24 whole body counter in like 1956. They
25 initially started the steps of -- of working --

1 so you -- as -- which is pretty consistent with
2 what you're saying, so they started their
3 design preparation, working on what detectors
4 they were going to use, their setup, and each
5 year it grew until they -- they actually built
6 it in, you know, 1962/'63 time period and put
7 it in operation in '64.

8 **DR. ROESSLER:** So is that kind of consistent
9 with what would be available at other
10 facilities? You wouldn't expect whole body
11 counts anywhere, really --

12 **DR. ZIEMER:** Los Alamos --

13 **DR. ROESSLER:** -- (unintelligible).

14 **DR. ZIEMER:** -- was using liquid scintillation
15 whole body counters in the mid-'50s. Wright
16 Langham* and Ernie Anderson and those folks,
17 the large --

18 **MR. RUTHERFORD:** Right.

19 **DR. ZIEMER:** -- liquid scintillation counters,
20 so I think that was -- now if you're talking
21 about the crystal -- the (unintelligible) --

22 **MR. RUTHERFORD:** (Unintelligible)

23 **DR. ROESSLER:** (Unintelligible)

24 **DR. ZIEMER:** -- (unintelligible), those were
25 probably after 1960, roughly.

1 **MR. RUTHERFORD:** And their initial use for this
2 was not occupational purposes. Their initial
3 use for this was to actually look at
4 individuals and see if they could -- that --
5 patients that they would -- they could survey -
6 - do whole body counts on patients, you know,
7 the actual -- they recognized after -- later on
8 that hey, we can use this for occupational
9 exposures as well.

10 **DR. ZIEMER:** Other questions or comments? I
11 noticed that some dose reconstructions have
12 been done for maybe half a dozen folks --

13 **MR. RUTHERFORD:** Right.

14 **DR. ZIEMER:** -- out of this group.

15 **MR. RUTHERFORD:** Yes.

16 **DR. ZIEMER:** Will tho-- and those obviously
17 were external.

18 **MR. RUTHERFORD:** Uh-huh.

19 **DR. ZIEMER:** Did -- are those cases where there
20 was no -- determined that there was no
21 internal, or the external was simply great
22 enough to make --

23 **MR. RUTHERFORD:** Well, a number of the cases
24 were -- were compensation cases, you know, that
25 --

1 amazing to observe how much progress this small
2 number of people made in this period of time,
3 and what a debt of gratitude we owe them for
4 the advances that they've made possible in
5 diagnosis and treatment in this field.

6 I am prepared to offer a motion that we accept
7 the NIOSH proposed class as stated in the
8 report.

9 **DR. ROESSLER:** Second.

10 **DR. ZIEMER:** Okay, we've heard a motion and
11 seconded, and I'm wondering if we can have a
12 friendly amendment that would put the motion
13 into our usual wording. And I would ask our
14 wording expert, Dr. Melius, if he has the --

15 **MS. MUNN:** Certainly, I'm -- I'm sure the
16 wording exists already on the computer.

17 **DR. ZIEMER:** But before -- before you do that,
18 I -- I would like to ask one additional
19 question. I don't think it'll affect the
20 motion, but just for clarity, although we know
21 that these two entities, Oak Ridge National Lab
22 and ORAU or ORINS at that time --

23 **MR. RUTHERFORD:** Right.

24 **DR. ZIEMER:** -- are separate entities, yet
25 there was a lot of interaction between them in

1 those days. I would guess that ORINS used Oak
2 Ridge dosimetry, for example.

3 **MS. MUNN:** Sure.

4 **MR. RUTHERFORD:** Yes.

5 **DR. ZIEMER:** Can you tell us what was going on
6 at X-10 and Y-12 in the way of -- of bioassay
7 during those same years, and why wouldn't ORINS
8 have had bioassay?

9 **MR. RUTHERFORD:** Well, if you remember, Dr.
10 Ziemer, the Y-12 petition where the actual
11 isotopes that were developed using the
12 Cyclotron -- which were the, for the most part,
13 a lot of these -- these same isotopes that --
14 that the ORINS facility used, we did not have
15 internal dosimetry monitoring data for those
16 exotic radionuclides, so that --

17 **DR. ZIEMER:** There -- there was gross alpha,
18 gross beta, for example, in those days.

19 **MR. RUTHERFORD:** Sure, but -- but you're not,
20 you know --

21 **DR. ZIEMER:** Not specific.

22 **MR. RUTHERFORD:** Right, right, so -- so there
23 was not -- there was no bioassay data -- okay?
24 -- that was specifically used for those
25 facilities at that time.

1 DR. ZIEMER: Okay, thank you.

2 MR. RUTHERFORD: Uh-huh.

3 DR. ZIEMER: So --

4 DR. WADE: Friendly amendment.

5 DR. ZIEMER: -- the friendly amendment wording?

6 DR. MELIUS: Yeah.

7 DR. ZIEMER: James Melius.

8 DR. MELIUS: Before I offer that, I just have a

9 question for Larry -- who's not here. Maybe

10 LaVon can --

11 DR. ZIEMER: Hold on.

12 DR. MELIUS: Okay.

13 DR. ZIEMER: Point of information. I

14 stimulated another question, was there indeed -

15 -

16 MR. GRIFFON: Gross alpha and gross be-- I mean

17 was there the gross alpha/gross beta to --

18 MR. RUTHERFORD: You mean at ORINS?

19 MR. GRIFFON: Yeah.

20 MR. RUTHERFORD: No.

21 MR. GRIFFON: None?

22 MR. RUTHERFORD: No, none at all.

23 MR. GRIFFON: Just want to clarify that. Okay.

24 DR. ZIEMER: Proceed.

25 MR. RUTHERFORD: Just a quick -- we actually --

1 we actually went back and even looked at the
2 names under the X-10 database to see if we
3 could cross any of the names that were working
4 for the ORINS facility to see if we could -- if
5 maybe that -- as you mentioned, that Oak Ridge
6 National Lab, maybe they were doing the
7 internal monitoring, so...

8 **MR. GRIFFON:** Thank you.

9 **DR. MELIUS:** Do I have to --

10 **MR. GRIFFON:** You want to start over, Jim?
11 Sorry.

12 **DR. MELIUS:** Yeah.

13 **DR. WADE:** Do you want to try your question to
14 Stu Hinnefeld?

15 **DR. MELIUS:** Well, let me offer it as a motion
16 and we can maybe go back to take it out. The
17 question is to what extent we need to -- want
18 us to specify what NIOSH can do in terms of
19 dose reconstruction, and particularly regard to
20 external exposures here where we -- I believe
21 we can do dose reconstruction using the
22 external --

23 **MS. MUNN:** They're assuming --

24 **DR. MELIUS:** -- data?

25 **MS. MUNN:** -- there's the potential for

1 internal --

2 **MR. HINNEFELD:** Those components are specified
3 in our evaluation report, and I think it may
4 serve us well to have some acknowledgement in
5 the Board's recommendation that if you agree
6 with that part, that that's part of your
7 recommendation as well, you agree with our
8 determination in the evaluation report.

9 **DR. ZIEMER:** I believe in our past
10 recommendations, as a template we have
11 recognized the ability of NIOSH to do certain
12 types of dose reconstructions, such as external
13 only.

14 **DR. MELIUS:** Right.

15 **DR. ZIEMER:** So if we can use one of those as
16 our template.

17 **DR. MELIUS:** Okay.

18 **DR. ZIEMER:** Proceed.

19 **DR. MELIUS:** We'll -- got a quick change and
20 I'll be able to do this.

21 (Pause)

22 The -- this'll be very unfamiliar language, so
23 -- everyone try to stay awake.

24 The Board recommends that the following letter
25 be transmitted to the Secretary of Health and

1 Human Services within 21 days. Should the
2 Chair become aware of any issue that, in his
3 judgment, would preclude the transmittal of
4 this letter within that time period, the Board
5 requests that he promptly informs the Board of
6 the delay and the reasons for this delay, that
7 he immediately works with NIOSH to schedule an
8 emergency meeting of the Board to discuss this
9 issue.

10 The letter itself: The Advisory Board on
11 Radiation and Worker Health, parentheses, the
12 Board, close parentheses, has evaluated SEC
13 Petition-00033 concerning workers at the Oak
14 Ridge Institute of Nuclear Studies, parentheses
15 ORINS, close parentheses, under the statutory
16 requirements established by EEOICPA
17 incorporated into 42 CFR 83.13(c)(1), 42 CFR
18 Section 83.13(c)(3). The Board respectfully
19 recommends that a Special Exposure Cohort be
20 accorded to all employees of the DOE or DOE
21 contractors or subcontractors who were
22 monitored or should have been monitored while
23 working at the Oak Ridge Institute of Nuclear
24 Studies Cancer Research Hospital from May 15th,
25 1950 through December 31st, 1963, and who were

1 employed for a number of work days aggregating
2 at least 250 work days during the period from
3 May 15th, 1950 through December 31st, 1963, or
4 in combination with work days within the
5 parameters established for one or more other
6 classes of employees in the SEC.

7 This recommendation is based on the following
8 factors.

9 This facility conducted research on the use of
10 various radioactive isotopes for the treatment
11 of cancer. People working in this facility
12 were exposed to these radioactive materials
13 through a number of work activities. Although
14 there was a potential for substantial internal
15 exposures arising from preparing, administering
16 and disposing of radioisotopes and radioactive
17 waste, NIOSH found no evidence of personnel or
18 workplace monitoring that could be used to
19 bound internal exposure rad-- internal
20 radiation exposures.

21 As a result of these limitations, NIOSH cannot
22 establish a maximum internal exposure scenario
23 that addresses all of the internal exposure
24 potential for the petitioning class and
25 therefore cannot estimate internal doses for

1 this class with sufficient accuracy. The Board
2 concur with this demonstration.
3 NIOSH determined that health was endangered for
4 the -- for the workers at the Oak Ridge
5 Institute of Nuclear Sciences (sic) Cancer
6 Research Hospital exposed to radiation at this
7 facility during the time period in question.
8 The Board concurs with this determination.
9 The Board -- NIOSH and Board review of the data
10 found it was sufficient to support accurate
11 dose reconstructions for a number of important
12 exposures. These include but are not
13 necessarily limited to -- NIOSH demonstrated
14 that sufficient monitoring records are
15 available for individual dose reconstruction
16 for external doses for workers at the Oak Ridge
17 Institute of Nuclear Studies Cancer Research
18 Hospital.
19 Enclosed is supporting documentation from the
20 recent Advisory Board meeting held in Las
21 Vegas, Nevada where the Special Exposure Cohort
22 was discussed. If any of these items aren't
23 available at this time, they will follow
24 shortly.
25 **DR. ZIEMER:** Okay, that's the friendly

1 amendment wording. Jim, toward the very end
2 you said these are -- these in-- let's see,
3 these include but -- but are not limited to --

4 **DR. MELIUS:** Yeah, well, let me reword --

5 **DR. ZIEMER:** -- but then the next couple of
6 words do not flow from that.

7 **DR. MELIUS:** Yeah, yeah. No, I was quickly
8 lifting something from another letter and I
9 need to...

10 **DR. ZIEMER:** Okay. While he was polishing --
11 the intent is correct. While he's polishing
12 that, let me ask if there are questions,
13 comments on the proposed detailed wording of
14 the Munn motion.

15 (No responses)

16 **AUDIO-VISUAL TECHNICIAN:** (Unintelligible) Mike
17 Gibson (unintelligible).

18 **DR. ZIEMER:** Okay. Mike Gibson, are you still
19 on the phone?

20 **MR. GIBSON:** Yes, Paul, I am.

21 **DR. ZIEMER:** Okay, I just want to make sure.
22 We'll take a roll call here in just a moment,
23 just want to get the wording on this one set
24 and clarified.

25 **DR. MELIUS:** Okay, let me suggest the following

1 change. After the paragraph on health
2 endangerment, it'll be a new paragraph calling
3 -- saying "The NIOSH review of the data" --
4 okay -- then "that it was sufficient to support
5 accurate dose reconstructions for individual --
6 accurate -- individual dose reconstructions for
7 external doses for workers at the ORINS Cancer
8 Research Hospital. The Board concurs with this
9 demonstration."

10 **DR. ZIEMER:** Okay, thank you. That -- that
11 reads much more smoothly. Does that also take
12 care of the medical exposure, external --
13 that's all-inclusive, I think, the way your
14 terminology is there.

15 **DR. MELIUS:** Right, yeah.

16 **DR. ZIEMER:** 'Cause you have them listed
17 separately in --

18 **DR. MELIUS:** (Unintelligible) from...

19 **DR. ZIEMER:** Okay, discussion on the motion?

20 (No responses)

21 Okay, are we ready to vote on the motion? It
22 appears that we're ready to vote on the motion.
23 Those who favor the motion, raise your right
24 hand.

25 (Affirmative responses)

1 The Chair will also vote. Okay, and I see all
2 hands raised here, and Mike Gibson, your vote,
3 please?

4 **MR. GIBSON:** Aye.

5 **DR. ZIEMER:** Mike votes yes. There are no no's
6 then, and apparently no abstentions. The
7 motion carries and the recommendation will be
8 forwarded to the Secretary in accordance with
9 the -- the requirements of the motion itself.
10 Thank you very much. And Susan Atkinson and
11 George Eldridge, you are free to report to your
12 fellow petitioners and colleagues that the
13 Board is recommending that the petition be
14 granted. You must recognize that that does not
15 at this point mean that the petition is
16 granted. It simply means that this Board is
17 recommending it, and that recommendation will
18 go with the NIOSH recommendation to the
19 Secretary, and he in turn will take action and
20 it actually goes on up to Congress from there.
21 Okay.

22 **SC&A SITE PROFILES TASK**

23 **DR. WADE:** We have some if you --

24 **DR. ZIEMER:** Yes, we have a little time here
25 and we have some proposed fillers. Go ahead.

1 **DR. WADE:** To parallel our efforts this morning
2 where we tried to set the stage for the Board's
3 selection of procedures for SC&A to review this
4 next year, I think now is the time we could use
5 to set the stage for the Board to task SC&A on
6 additional site profiles that it might consider
7 for review next year. I -- I take you back to
8 the presentation that David Staudt made to us.
9 This is Task Order I under the SC&A contract.
10 The proposal now -- the Task Order in place has
11 SC&A reviewing six site profiles next year.
12 One of them is the re-review of the Savannah
13 River Site. That leaves five additional site
14 profiles for SC&A to consider for review.
15 Yesterday you were given this sheet that listed
16 the site profiles currently listed on the web
17 site. We marked off the site profiles that had
18 been reviewed by SC&A to this point. And then
19 you asked for additional information to be
20 brought before you for your consideration, and
21 I think Stu Hinnefeld is going to approach the
22 microphone and do what he can do at this point
23 to provide you with that information.

24 **MR. HINNEFELD:** Okay, I have most of the
25 information that was asked for yesterday. In

1 the first -- I think the first question was
2 which of the sites on the list of published
3 site profiles have a qualified SEC petition.
4 And so that list is Bethlehem Steel, Blockson,
5 Mallinckrodt -- which of course has already
6 been recommended by the Board, Nevada Test
7 Site, Los Alamos National Laboratory -- LANL,
8 Rocky Flats, Y-12, Fernald, Linde Ceramics --
9 which I believe the Board has already
10 recommended on, Chapman Valve, and Iowa
11 Ordnance Plant -- which the Board has acted on.
12 The question was asked what other qualified
13 petitions are there, so the -- the qualified
14 petitions, in addition to those -- these are
15 from Larry's presentation yesterday -- Ames
16 Laboratory, which has been acted on; Pacific
17 Proving Ground, which has been acted on; Oak
18 Ridge Institute for Nuclear Studies, which you
19 just acted on; Monsanto Chemical Company,
20 General Atomics --

21 **DR. WADE:** Say again?

22 **MR. HINNEFELD:** -- General Atomics, Harshaw
23 Chemical and S-50 Thermal Diffusion Plant which
24 will be presented tomorrow to the Board.
25 The question was asked what site profiles are

1 under development, so these are site profiles
2 that should be available for review -- they're
3 not published yet, should be available for
4 review certainly in the coming fiscal year. I
5 don't have a date to give you on which -- when
6 any particular one will be available. And
7 there's a list being prepared by Oak Ridge
8 Associated Universities, and then there are a
9 couple being prepared by Battelle as part of
10 the AWE work that they're doing, so I'll start
11 with the Battelle approach -- the Battelle
12 sites.

13 The Battelle approach is to prepare generic
14 TBDs for types of work -- for instance, uranium
15 metal forming and handling -- and then to
16 prepare appendices underneath that general --
17 or generic (unintelligible) to include specific
18 information about the sites that fall into --
19 or that are categorized in that fashion. So
20 the generic -- the uranium metal shaping or
21 uranium metal handling is one of the generic
22 TBDs, should be available forthwith, and
23 there's an appendix that's been drafted and
24 should be available before too long for a
25 company known as American Machine and Foundry.

1 So a second generic TBD for what's referred to
2 as uranium refining, it's really going to be
3 uranium -- uranium chemical and purification
4 processes, and that generic TB-- TBD should be
5 available forthwith, and there's one appendix
6 that's been drafted under that. That's for an
7 Ashland Oil site.

8 **MS. MUNN:** National Oil?

9 **DR. WADE:** Say again? Ashland?

10 **MR. HINNEFELD:** Ashland Oil, just like the oil
11 company.

12 **MS. MUNN:** Got it.

13 **MR. HINNEFELD:** Then on the ORAU list of sites
14 that are in preparation, there's
15 Clarksville/Medina -- that's two different
16 sites performed similar type of work, and they
17 will probably be addressed in a single site
18 profile. They were weapons storage facilities.
19 The Sandia National Lab, NUMEC -- that's the
20 Nuclear Materials and Engineering Company;
21 there are two plants in Pennsylvania, one is in
22 Apollo and the other is in Parks Township, and
23 one profile will probably cover both. South
24 Albuquerque Works, Metals and Controls --

25 **MS. MUNN:** What was that last one, Stu?

1 **MR. HINNEFELD:** Metals and Controls, that's an
2 AWE. It's in the northeast, I don't remember
3 exactly where. I believe they did some uranium
4 purification type work. One that is currently
5 referred to as Peak Street facility, it will
6 probably address two other facilities as well
7 that are parts of the Knowles Atomic Power
8 Laboratory that -- and they're the only parts
9 of Knowles that did covered work. The rest of
10 Knowles worked for the nuclear Navy that is
11 excluded from the program, but these facilities
12 did AEC non-nuclear Navy work and so the -- the
13 other two sites I don't -- aren't on the list,
14 but they're the Sacandaga site and the Special
15 Separations Unit.

16 **DR. WADE:** Say that again, Stu. I'm sorry.

17 **MR. HINNEFELD:** The Sacandaga -- S-a-c-a-n-d-a-
18 g-a, that's one of the two -- I think that's
19 how you spell it.

20 **DR. WADE:** Sounds good.

21 **MR. HINNEFELD:** And the other I believe is
22 called the Separ-- Special Separations Unit.
23 Oak Ridge Hospital, but I would warn that that
24 may end up not being finally prepared because
25 there are very few claims. It had made it on

1 the list before the days we sorted out the
2 difference between Oak Ridge Hospital and ORINS
3 and there was more interest on it, and I think
4 there were so few claims from Oak Ridge
5 Hospital that we may end up not doing a site
6 profile but just writing -- doing the research,
7 writing it in the dose reconstruction and, you
8 know, describing all the research that was done
9 in the -- in the dose reconstruction itself.
10 Sandia National Lab at Livermore, a separate
11 facility from the one in Albuquerque; West
12 Valley --

13 **MS. MUNN:** I wondered when they were going to
14 show up.

15 **MR. HINNEFELD:** -- Harshaw Chemical; the
16 Stanford Linear Accelerator Complex; Ames
17 Laboratory, recall that the petition for Ames
18 did not cover its entire operating period. It
19 went up into the mid-'50s and there's
20 operational periods after that, and there's
21 also -- they're non-presumptives before.
22 Battelle facilities in Columbus, Ohio, they're
23 referred to as the King -- Jefferson Avenue
24 facilities; RMI, which is -- stands for
25 Reactive Metals, Incorporated, it's in

1 Ashtabula, Ohio; and GE, that's General
2 Electric -- you know, like GE -- Vallecitos,
3 and I don't recall off-hand what they -- what
4 their work was.

5 I was also asked to in addition -- this has the
6 total -- the -- your original list has the
7 total cases per site. I was asked to provide
8 the list of completed cases per site, and I
9 don't have the complete information on that. I
10 have some. I can have a couple more in a few
11 minutes, and I can have the remainder maybe by
12 tomorrow. It's not all with us today -- this
13 information is not with us today. So I can
14 give you what I have now --

15 **DR. WADE:** Why don't you do that.

16 **MR. HINNEFELD:** Blockson Chemical -- we're on
17 this -- this sheet here, working from the top
18 again. Blockson Chemical, 46 are complete.
19 Next one I have information on is K-25 -- oh, I
20 didn't look for information on the ones that
21 are crossed out where the site profile's
22 already been evaluated. I just looked for the
23 information on the others. But the next one I
24 have information on is K-25, 908 -- say 900 are
25 complete of theirs. Next one I have is

1 Portsmouth, 480 are complete for Portsmouth.
2 On down to Aliquippa Forge, 19 are complete at
3 Aliquippa Forge. Next one I have is Pacific
4 Northwest National Laboratory, 208; and Weldon
5 Spring, 117; the Kansas City Plant, 179;
6 Simonds Saw and Steel, 79; Superior Steel in
7 Carnegie, 28 -- and that's the last value I
8 have right now.

9 **DR. WADE:** Thank you, Stu, very much.

10 **DR. MELIUS:** Stu, for -- you wouldn't happen to
11 have any numbers on the number of claims at
12 Sandia? I'm just trying to remember that list
13 you gave that aren't on our list of -- yeah,
14 Albuquerque --

15 **MR. HINNEFELD:** I think -- I think I have that
16 if you'll give me a minute.

17 **DR. MELIUS:** I'm just trying to figure what are
18 some of the bigger sites where we'd have a
19 number of -- larger number of claims. I could
20 be wrong.

21 **MR. HINNEFELD:** From Sandia we have 217 claims
22 --

23 **DR. MELIUS:** Okay.

24 **MR. HINNEFELD:** -- 68 are complete.

25 **DR. MELIUS:** Okay.

1 **MR. PRESLEY:** Is that Albuquerque or
2 (unintelligible)?

3 **MR. HINNEFELD:** That's -- that's Albuquerque.

4 **DR. MELIUS:** Albuquerque.

5 **MR. HINNEFELD:** That's Albuquerque.

6 **DR. MELIUS:** Some of them surprise me.

7 **MR. HINNEFELD:** I can give you Livermore, as
8 well. At Sandia Livermore we have 74 claims
9 and 17 are complete.

10 **DR. WADE:** Seventy-four claims, 17 are
11 completed, Sandia National Labs at Livermore.

12 **DR. ZIEMER:** Oh, Sandia.

13 **DR. WADE:** Again I would remind the Board that
14 the task at hand is to develop a list of site
15 profiles that SC&A can begin to review. And
16 again, in order to keep SC&A working, I would
17 like to leave here with some assignment to
18 them. It doesn't have to be all five, but
19 certainly some assignment to them as to site
20 profiles they could begin to review.

21 **DR. ZIEMER:** And we estimated, in terms of work
22 load next year, was it five or six --

23 **DR. WADE:** Six is the task, one of them will be
24 a re-review of Savannah River Site, so five
25 additional.

1 **DR. ZIEMER:** Do we have any feel for -- and
2 maybe John Mauro can partially answer this, but
3 it seems to me that there'd be quite a
4 difference between doing K-25 and -- oh, pick
5 one out here, maybe Superior Steel -- in terms
6 of work load, so...

7 **DR. MAURO:** Absolutely. In fact, I recently
8 looked at the ones that you would call the
9 smaller units as part of case reviews, I
10 reviewed a number of AWE cases. And to do the
11 review it was necessary to review what they
12 call an exposure matrix, which are relatively
13 small documents on the order of maybe 50 pages,
14 as compared to a full-blown site profile with
15 six chapters very often are well over 200 and
16 extremely complex, with hundreds of references.
17 So yes, the difference in the level of effort
18 between some of these different facilities in
19 terms of doing a site profile review is
20 substantial.

21 **DR. ZIEMER:** Okay, thank you. I'd like to also
22 ask, and maybe, Stu, you might be able to
23 answer this, but I was always under the
24 impression that the Kansas City Plant --
25 certainly was always referred to as kind of a

1 non-nuclear part of the DOE family. What --
2 can you, in a nutshell, tell us why we have all
3 these claimants from Kans-- what went on at
4 Kansas City that was nuclear?

5 **MR. HINNEFELD:** Well, if memory serves
6 correctly, they had some uranium inventory. I
7 don't even know exactly what they did --

8 **DR. ZIEMER:** Really?

9 **MR. HINNEFELD:** -- it was uranium metal, I
10 believe, and they had some sealed sources. And
11 they had a -- actually a sealed source leak
12 that was kind of spread around the plant before
13 it was detected, so there was some period of
14 time -- I think it was like promethium-147 or
15 something, it's not -- you know --

16 **DR. ZIEMER:** Okay, the sealed -- the sealed
17 sources I could understand if they were more
18 like industrial gauges.

19 **MR. HINNEFELD:** Right. I don't -- I don't know
20 exactly what the source was used for, but it --
21 okay, hang on just a second.

22 **DR. ZIEMER:** Okay, that was just a matter of
23 information, because again, a site like Kansas
24 City, although it looks big, it may not have
25 much nuclear there. I don't -- I don't know.

1 Board members, we don't need to make a final
2 decision till tomorrow, but we do want to
3 gather whatever additional information you
4 might need to make your decision. Wanda, you
5 have a question or comment at this point? And
6 then Dr. Melius.

7 **MS. MUNN:** No, I was just going to make a
8 comment. I was under the impression that we
9 were actually considering making the
10 recommendation now, but you're --

11 **DR. ZIEMER:** If we -- if we have the
12 information, but we can delay it if we need
13 more information. But we -- we certainly ask
14 that we get this additional information to
15 inform our decision, and if the Board is ready
16 to make the decisions, we certainly can.

17 **MS. MUNN:** The comment was made yesterday --
18 this is repetitious -- but it would appear it
19 would be wise to consider those sites with the
20 largest number of claimants as being the most
21 pressing for us to look at. With that thought
22 in mind, having reviewed the list, working on
23 that premise we come up with five fairly
24 different types of facilities to observe.

25 **DR. ZIEMER:** Well, there are some numbers that

1 certainly stick out right away, but that was
2 part of the question I had on Kansas City. It
3 looks like one of the bigger ones, but I'm not
4 sure they had that much going on nuclear-wise.

5 **MS. MUNN:** Probably not, but five that might be
6 considered, if we want to think about that
7 today, is -- the obvious one's K-25, that
8 almost cries out for attention. Pantex is
9 quite unlike anything that we've done so far.
10 PNNL is -- I mean Argonne West is, again, a
11 different type of laboratory. Lawrence
12 Livermore we've talked about in the past, but
13 it's still outstanding and it's obviously one
14 that, again, would be worthy of some
15 consideration. And AI -- Atomics International
16 is, again, an entirely different type of
17 facility. I would propose that we might at
18 least consider those five.

19 **DR. ZIEMER:** Are you making that as a formal
20 motion, or are you just stimulating our
21 discussion?

22 **MS. MUNN:** I'm offering it as a first
23 suggestion.

24 **DR. ZIEMER:** Suggestion, okay, which is not
25 quite the level of a motion. Dr. Melius.

1 **DR. MELIUS:** I have a friendly suggestion to
2 that suggestion. My only -- one of my
3 questions would be is -- I have some concerns
4 about Chapman Valve and I -- at least in terms
5 of our decision-making, I'd like to wait until
6 we've discussed that before we've fixed on the
7 final list, that's all. So either leave an
8 option open or -- you know, for the sixth one,
9 or -- however we want to do that. I don't
10 think we necessarily need to postpone the
11 decision entirely, but I'd like to leave open
12 for Chapman until we've heard the presentation
13 and -- this afternoon.

14 **DR. ZIEMER:** Okay. Mr. Presley?

15 **MR. PRESLEY:** I'd like to leave open
16 Clarksville/Medina, too. It's not on our list.
17 It was one of the early tear-down refurbishment
18 sites. I don't think that we've done any of
19 those yet, and that was probably the largest,
20 if I'm not mistaken. Was it -- was that not
21 one of the early largest sites?

22 **MR. HINNEFELD:** I believe they probably were
23 the two main ones early on, Clarksville and
24 Medina is two different -- two different --

25 **MR. PRESLEY:** Yeah, two different sites, but

1 together they would be --

2 **MR. HINNEFELD:** I believe so.

3 **MR. PRESLEY:** Yeah.

4 **MR. HINNEFELD:** I believe so.

5 **MR. PRESLEY:** Thank you, Stu.

6 **MR. HINNEFELD:** Lew, I have those other
7 completed on -- the remainder of the ones I
8 have today, I could give those to you now.

9 **DR. WADE:** Okay, let's do that quickly, then we
10 can move on.

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

12 **MR. HINNEFELD:** The last one I gave you was
13 Superior Steel. Lawrence Livermore, there are
14 278 that are done. Argonne East, 81. This
15 next line, going by the name Energy Technology
16 Engineering Center, ETEC, which is now known by
17 four different facility names, in combination
18 there are 153 done. That's -- the new facility
19 names are Area 4 of the Sasquehanna Field
20 Laboratory, Downey Facility, the DeSoto
21 Facility and the Canoga Avenue Facility.

22 **MR. GIBSON:** Dr. Ziemer?

23 **MR. HINNEFELD:** W. R. Grace --

24 **DR. ZIEMER:** 153 out of how many?

25 **MR. HINNEFELD:** 153 out of 261.

1 **MS. MUNN:** It's up there under AI, under --

2 **MR. HINNEFELD:** Oh, yeah, it starts with
3 Atomics International, but there was -- there
4 was a lot of name confusion early on on that --
5 on that area of California. W. R. Grace, 23;
6 Allied Chemical, 26; and Lawrence Berkeley, 51.

7 **DR. WADE:** Thank you.

8 **MR. GIBSON:** Dr. Ziemer?

9 **DR. ZIEMER:** Yeah, another question?

10 **MR. GRIFFON:** Just a follow-up. Wanda
11 suggested Atomics International, and I -- can
12 someone describe what went on at Atomics
13 International? I'm not familiar with that
14 facility -- or facilities, I guess, or
15 whatever.

16 **MR. HINNEFELD:** Atomics International line,
17 that also is referred to ETEC, and then the
18 four facility names I just gave you, these were
19 essentially research laboratories that used --
20 did work -- you know, research work. I believe
21 there was some -- maybe some small-scale fuel
22 fabrication. I believe there's irradiated fuel
23 testing, things of that sort -- may have been
24 some work with a nuclear airplane, but I don't
25 remember for sure. Those -- it was kind of

1 experimental laboratory kind of environment.

2 **DR. WADE:** We have someone on the phone trying
3 to say something.

4 **MR. GIBSON:** Yeah, this is Mike. Dr. Ziemer --

5 **DR. WADE:** Please? Someone on the ph--

6 **MR. GIBSON:** Yeah, Dr. Ziemer, this is Mike.

7 **DR. ZIEMER:** Yeah, Mike, go ahead.

8 **MR. GIBSON:** Hello? Can you hear me?

9 **DR. ZIEMER:** Yes. Yes.

10 **DR. WADE:** Yes.

11 **MR. GIBSON:** I know I'm conflicted, but I would
12 like -- to my understanding, the SEC petition
13 for the Monsanto Chemical Company does not
14 include the Mound facility. Correct?

15 **MR. HINNEFELD:** That's correct.

16 **MR. GIBSON:** I would like to suggest that
17 perhaps, even though I'm conflicted and I would
18 be recused from a lot of this, that we consider
19 the Mound facility for several reasons. They
20 were also involved with the stable tritiated
21 particulates, the high fired oxides of
22 plutonium, actinium and several other isotopes.
23 To my knowledge, I don't know of any other site
24 that has been fined more by Price Anderson for
25 violation of radiation protection rules or had

1 inquiries from the Defense Nuclear Safety Board
2 and also been shut down by DOE for not
3 providing adequate radiation protection. So I
4 would just suggest that even though maybe the -
5 - there's not an SEC petition at this point
6 and, you know, maybe there's not a lot of
7 cases, but it has certainly been a site with a
8 questionable history. So the dose
9 reconstructions that have been done, I think --
10 I think a review of the site profile may turn
11 out a different story.

12 **DR. ZIEMER:** Yeah, thanks for that comment,
13 Mike. Just a reminder, actually SC&A has done
14 Mound and it's been a while, and so you, like
15 many of us, may have forgotten that. But we do
16 have the site profile review by SC&A of Mound
17 already, and the Board has -- I don't know if
18 they provided you with the list, but on our
19 list the ones that were already done are
20 designated. Mound is one of those that has
21 been done, so --

22 **MR. GIBSON:** Okay.

23 **DR. ZIEMER:** -- so we're looking to others
24 beyond what has already been done by SC&A.

25 **DR. WADE:** Take it to break.

1 **DR. ZIEMER:** I think we're ready to take a
2 break. We don't need to take action on these
3 right now, but we appreciate the additional
4 information. It helps inform the Board as we
5 do prepare to make that decision. So let's
6 take our break. We have a 15-minute break
7 scheduled, then we'll reconvene.

8 (Whereupon, a recess was taken from 2:45 p.m.
9 to 3:10 p.m.)

10 **CHAPMAN VALVE**

11 **DR. ZIEMER:** We're ready to resume our
12 deliberations. The next item on the agenda is
13 the SEC petition from Chapman Valve. We're
14 going to have a presentation of the NIOSH
15 recommendation from Dr. Ulsh, and then we'll
16 hear from the petitioner, Mary -- let's see,
17 it's -- if I pronounce her name -- it's Realle.
18 I may not have pronounced that correctly, Mary,
19 I'm sorry. And then we'll read into the record
20 a statement from Senators Kennedy, Kerry and
21 Neal, and then we'll have opportunity for Board
22 discussion.

23 We will begin with the Chapman Valve SEC
24 petition evaluation report. Brant, you may
25 proceed, and I think for the record, we don't

1 have any Board members conflicted on this
2 particular site, so all are present. Let me
3 double-check and make sure that Mr. Gibson is
4 still on the line. Michael, are you there?

5 **MR. GIBSON:** Yes, I'm here.

6 **DR. ZIEMER:** Thank you.

7 **NIOSH PRESENTATION**

8 **DR. ULSH:** Thank you, Dr. Ziemer. For those of
9 you who are dialing in and can't see me, my
10 name is Brant Ulsh and I will be presenting
11 NIOSH's evaluation of the SEC petition for the
12 Chapman Valve facility.

13 **DR. ZIEMER:** Brant, just one moment. Let me
14 make sure that the petitioners at least are on
15 the line. Mary, are you there?

16 **MS. REALLE:** Yes, Mary is here in your office,
17 thanks. I can hardly hear you.

18 **DR. WADE:** Sir -- can you wake that guy?

19 **DR. ZIEMER:** Now just -- we're having a little
20 trouble with our sound volume. Mary, you are
21 there?

22 **DR. WADE:** Hello?

23 **DR. ZIEMER:** Hello, Mary? Are you on the line?

24 **MR. GRIFFON:** Try it again -- try it again, try
25 --

1 **DR. ZIEMER:** Yes, Mary, are you on the line?

2 **MS. REALLE:** Yes, I'm on the line.

3 **DR. ZIEMER:** Thank you very much. We'll
4 proceed then.

5 **DR. ULSH:** Okay. I'd like to begin with just a
6 brief history of the work that the Chapman
7 Valve facility performed for the Atomic Energy
8 Commission and for Manhattan Engineering
9 District. Primarily Chapman Valve supplied
10 valves to these entities, and the covered work
11 that they performed was machining natural
12 uranium rods into slugs that were then used in
13 the Brookhaven reactor. And this work occurred
14 in 1948.

15 The initial work in preparation for this
16 campaign began in November of 1947, and we know
17 that uranium arrived on-site as early as
18 January, 1948. The actual machining operations
19 occurred over a seven-month period spanning May
20 through November of 1948, and it involved
21 approximately 100 workers directly involved.
22 Certainly in terms -- just -- just as applies
23 to all other Atomic Weapons Employers and DOE
24 and AEC workers, they made a great contribution
25 to the security of our country and our national

1 defense mission. In terms of the work that
2 they performed, in a physical aspect in terms
3 of judging the scale and the degree of
4 radiological hazard that existed at Chapman
5 Valve, I think relative to other operations --
6 similar operations, for instance, Fernald or
7 Rocky Flats, other places that machined uranium
8 -- they -- their work was of a much smaller
9 scale than those other facilities, but
10 certainly important and the workers at Chapman
11 Valve made a great contribution.
12 After -- following the machining the occurred
13 in 1948, all uranium scrap was removed by the
14 end of the year in 1948. And then there was a
15 brief decommissioning and decontamination
16 process that occurred in the early '90s.
17 Now in terms of the SEC petition, as you know,
18 once a petition qualifies under our regulation,
19 then the petitioner is notified. And this
20 petition qualified on November 9th of 2005 and
21 the petitioners were notified the next day, on
22 November 10th, and a *Federal Register* notice
23 followed on December 27th of 2005.
24 Now the initial proposed class was the list of
25 several specific job titles that worked at

1 Chapman Valve in the '48/'49 time frame, and
2 then again during the decommissioning time
3 period in the '90s. NIOSH expanded this class
4 to include all workers who worked in a
5 particular building at Chapman Valve where the
6 radiological work was performed, and we kept
7 the -- we took the time frame January 1st, 1948
8 through December 31st, 1949. As you might
9 imagine with sites that performed work this
10 long ago, the specific dates are not
11 necessarily evident. And so we expanded that
12 time period to cover all possible operations at
13 Chapman Valve. And then again we included the
14 decommissioning and decontamination effort in
15 the '90s.

16 There were several sources of information
17 available to inform our evaluation. The site
18 profile for Chapman Valve was issued on
19 February 22nd, 2005. And I want to make it
20 clear that while we used the site profile in
21 our evaluation report, really what we relied
22 upon was the documents that are summarized, the
23 documents that we used to develop the site
24 profile. As you've heard throughout this
25 meeting, site profiles are living documents.

1 And that means that as we go through these
2 processes of the site profile reviews and the
3 SEC petition reviews, we revisit these profiles
4 and change them as new information becomes
5 available. But primarily we relied on the
6 source documentation that we used to develop
7 the site profile.

8 First and foremost, however, we relied on
9 individual dosimetry records, both internal and
10 external, for Chapman Valve employees. And
11 I'll talk more about that as I progress through
12 the presentation today. We also located
13 several source documents in the site research
14 database. And finally we used documentation
15 provided by the petitioners themselves.

16 All right. I'd like to give you the status of
17 the Chapman Valve claims. This speaks to the
18 issue of feasibility, I believe, and these
19 numbers are as of September 13th of this year,
20 so just a few days ago. We -- we have approxi-
21 - we have 124 cases that meet the class
22 definition, and we have completed dose
23 reconstructions for 92 of them, and that
24 represents 75 percent of the claims that we
25 have at Chapman Valve.

1 Now there were seven bases that formed the SEC
2 petition. They are listed here. I'm going to
3 go through each one of them individually, so I
4 won't read through the whole list.

5 The first basis, the petition expressed a
6 concern that there was an insufficient number
7 of bioassay measurements, and also the concern
8 was expressed that the bioassay measurements
9 that we have did not capture the most exposed
10 individuals at Chapman Valve.

11 Now you can see at the bottom of this slide our
12 -- NIOSH -- our evaluation of this concern. We
13 have 33 bioassay measurements among about 100
14 workers. Now if you're used to thinking in
15 terms of say a Fernald or a large DOE site like
16 Rocky Flats, 33 is not a big number. But here
17 we're talking about only approximately 100
18 workers who campaign-- who operated with
19 uranium over a seven-month period, so it's a
20 much more limited operation. So we have 33
21 bioassay measurements. In addition we have
22 seven bioassay measurements which were
23 associated with the fire, and I'll cover that
24 in a little more detail as well.

25 So we know that from other sites, from other

1 populations, that bioassay results tend to
2 follow a lognormal distribution. And certainly
3 if you are looking at a lognormal distribution,
4 a sample size of 33 out of 100 individuals
5 represents a fairly sizeable sample, from a
6 statistical standpoint.

7 Now the second concern involved the
8 representativeness of the bioassay samples that
9 we had available. And we're fortunate at
10 Chapman Valve to have the job titles associated
11 with the bioassay measurements that we have,
12 and they include a range of job functions.
13 Some of the functions that you would expect to
14 have the highest exposures -- cinderless
15 grinders, turret lathe operators -- and they
16 also include some that you might expect to have
17 lower exposures potentials -- inspectors,
18 guards, job titles like that.

19 Now I want to point out that of the bioassay
20 sample results that we have that are not
21 associated with that one fire -- so I'm talking
22 about the 33 bioassay samples now -- only one
23 of those 33 was above the detection limit for
24 the method that was employed at the time, that
25 was fluorimetry, to look for uranium in urine -

1 - only one. That indicates that this was a
2 fairly low exposure potential operation.
3 Okay, the next concern that was expressed in
4 the petition was that there is insufficient
5 data to support a plausible upper bound. As
6 you know, our rule requires that we either come
7 up with an upper bound or a more precise
8 estimate, and so this concern deals with
9 NIOSH's ability or inability to bound doses at
10 Chapman Valve. And the basis for this concern
11 was that the petitioners felt that we had a
12 lack of monitoring, process knowledge, and/or
13 source term data.
14 Now that would be a much more important issue
15 if we were not relying directly on bioassay
16 measurements. If we were relying on a source
17 term calculation or on air monitoring, that
18 would be a very important concern. But if you
19 recall the hierarchy of data that we use in
20 dose reconstruction, the best data that we can
21 have is individual bioassay and dosimetry
22 results, and we have that at Chapman Valve.
23 Furthermore, we do have process knowledge. We
24 know what material they were working with. We
25 know they were working with natural uranium and

1 so that informs us on the processes that were
2 going on at Chapman Valve. But I want to
3 emphasize, that is trumped by the fact that we
4 have individual bioassay and external
5 monitoring available.

6 The next concern expressed in the petition
7 dealt with the uranium fire that occurred in
8 June of 1948, and the petition expressed the
9 concern that we didn't have sufficient data
10 regarding this incident. However, our
11 evaluation concluded that we do in fact have
12 sufficient data to deal with this -- what this
13 recorded fire at Chapman Valve. We have a set
14 of seven bioassay samples that were collected
15 on June 11th of 1948, and they're clearly
16 identified as individuals who were involved in
17 responding to this fire. We do know that this
18 event occurred in June -- in the beginning of
19 June. Since we have bioassay samples on June
20 11th, we can pinpoint it to a window of June 1
21 to June 11th. That's a pretty -- that's a
22 pretty narrow window. Certainly it would be
23 helpful if we knew the exact day, but it's not
24 necessary for us to know that. We can make
25 claimant-favorable assumptions when we use

1 these bioassay results to model intakes that
2 resulted from the fire. And I would like to
3 point out that of those seven bioassay results,
4 four of them were above the detection limit.
5 And it's our -- it's our conclusion that the
6 bioassay results that we have -- we can use
7 that to adequately model the -- any intakes
8 that resulted from that fire.

9 The next concern expressed in the petition
10 dealt with enriched uranium. Now I told you
11 that Chapman Valve worked with natural uranium
12 to support the Brookhaven reactor. We have
13 documentary evidence of that, so we know that
14 they worked with natural uranium. The sole
15 evidence for believing that they -- that there
16 might have been enriched uranium present at
17 Chapman Valve consists of one sample, one
18 debris sample that was collected several
19 decades after the conclusion of the work that
20 Chapman performed for the Atomic Energy
21 Commission.

22 Now we have heard from former workers at
23 Chapman Valve that they also did radiological
24 work for other entities, possibly the Navy. So
25 it's not at all clear, number one, that there

1 was enriched uranium present at Chapman Valve.
2 That's based on one single sample. But even if
3 it was, it's not clear that that enriched
4 uranium was present during the covered period
5 for the covered -- the work that the Chapman --
6 that Chapman Valve performed for the AEC. But
7 the most important point here is that even if
8 you throw all that aside and you assume that
9 they did have enriched uranium at Chapman Valve
10 during the covered period, that does not
11 prevent us from doing dose reconstructions at
12 sufficient accuracy. It would result in higher
13 internal doses from -- from uptakes of this
14 material, but that is a boundable number. That
15 is a tractable number. We can put a number on
16 that. So at the end of the day, even if you
17 contend that there was enriched uranium at
18 Chapman Valve during the covered period, we can
19 deal with that.

20 The next peti-- the next concern expressed in
21 the petition dealt with some specific processes
22 that were indicated that could have or might
23 have occurred at Chapman Valve. And the
24 contention here is that the TBD does not
25 account for potential exposures that might have

1 been -- that might have resulted from the
2 operation of a cracking furnace or a chip
3 burner, and also the same argument for
4 potential rolling at Chapman Valve.
5 Our evaluation of this point, and I'll repeat
6 this point a number of times throughout the
7 presentation, is that we have bioassay results.
8 So no matter what processes led to the intake
9 of that material, whether it was a cracking
10 furnace, a chip burner, normal machining of
11 uranium at Chapman Valve, this is reflected in
12 the bioassay results that we have. So
13 certainly it's important from a historical
14 standpoint for us to put this material -- to
15 explain this -- the operations that occurred at
16 Chapman Valve. But at the end of the day, the
17 important point is that we have bioassay
18 results. And to the extent that there were
19 exposures resulting from a chip burner, that's
20 reflected in the bioassay results.
21 It is also not clear to us that there -- over --
22 - that any rolling operations ever occurred at
23 Chapman Valve. There is an anecdotal mention
24 of a rolling operation. But again, the same
25 argument applies. We have bioassay results.

1 If there were rolling operations and they did
2 result in an uptake, we see that in the
3 bioassay results.

4 The petition also expressed the concern that
5 there was only one day of air sampling, uranium
6 air sampling, for Chapman Valve. And that is
7 true. However, again, the hierarchy of data
8 indicates that we have bioassay results and we
9 have external dosimetry results, and that
10 trumps air data.

11 Now we did make use of this one day of air
12 sampling data. We looked at a document that
13 was prepared by the Health and Safety
14 Laboratory, HASL, that looked at the industrial
15 hygiene of uranium handling at several
16 different sites. They didn't explicitly
17 consider Chapman Valve, but they looked at
18 sites -- larger sites like Y-12 and also sites
19 like Simonds Saw and Steel and Bethlehem Steel.
20 We just wanted to get an order of magnitude
21 feel for whether the results that we were
22 seeing at Chapman Valve compared with those
23 other sites, and we found that they do compare.
24 They're in line with what you would expect to
25 see for this type of an operation.

1 But I want to stress that we did not rely on
2 this air sampling data for dose reconstruction.
3 We relied on the personal dosimetry results
4 that we have available.

5 The petition also expressed the concern that
6 our TBD had an inadequate treatment of -- I'll
7 describe it as routine uranium fires, although
8 there are no routine uranium fires. But the
9 fire that occurred in the beginning of June was
10 an unusual event. It was a larger fire. As
11 you know, uranium is a pyrophoric material, and
12 so it's not uncommon to see small fires as it's
13 being machined. That is certainly a
14 significant consideration. But again, we have
15 bioassay results. Any intakes that would have
16 resulted from these -- from any smaller fires
17 that might have occurred would be reflected in
18 the bioassay results.

19 Okay. In terms of our evaluation report, as
20 you can see on this slide, it was issued on
21 August 31st of this year. And this should be a
22 familiar slide to the members of the Board.
23 This is the two-pronged test that is applied in
24 determining our recommendation for whether or
25 not we can feasibly reconstruct doses.

1 The first prong of that test asks whether or
2 not it is feasible for NIOSH to estimate the
3 level of radiation doses that members of the
4 class received with sufficient accuracy. If,
5 and only if, the answer to that first prong is
6 "no," then we move on to the second prong of
7 the test, and that considers health
8 endangerment for the members of the class.
9 We concluded the answer to the first prong of
10 that test, can we feasibly reconstruct dose, we
11 concluded that we can. We have sufficient data
12 available to do that. Therefore we did not
13 move to the -- it was not necessary for us to
14 consider the second prong of the test. And
15 here's a summary of our recommendation from the
16 evaluation report. You see the class
17 summarized as workers who worked at Chapman
18 Valve from the fir-- January 1st, 1948 until
19 the end of 1949, and also again in the early
20 '90s from the remediation period. We concluded
21 that we can feasibly reconstruct dose, so we
22 did not move to the second prong of that test.
23 Okay. That is the end of the presentation.
24 I'd be happy to entertain questions.
25 **DR. ZIEMER:** I think we'll go ahead before our

1 discussion and hear from the petitioners, and
2 so let's open the phone lines for Mary Realle
3 to present on behalf of the petitioners.

4 Mary, are you still on the line?

5 **PETITIONER PRESENTATION**

6 **MS. REALLE:** I'm still on the line and you're
7 very, very faint. I can hardly hear you.

8 **DR. ZIEMER:** Go ahead, Mary.

9 **MS. REALLE:** Is it my turn?

10 **DR. ZIEMER:** Yes.

11 **UNIDENTIFIED:** Just go ahead, Mary.

12 **MS. REALLE:** Okay. This is Mary Ann Realle,
13 and I'm here with Darlene Ryan, who is our
14 second petitioner, and also Aaron Wilson, who
15 is the Executive Director for Western Mass.
16 Coalition for the Occupational Safety and
17 Health. I have a little -- I want to thank the
18 Advisory Board and NIOSH for allowing to speak
19 today on behalf of Chapman Valve Families for
20 Justice with respect to the SEC evaluation
21 report.

22 My father was a grinder operator in Building 23
23 at Chapman Valve, which is the building in
24 which the AEC-owned uranium was machined by
25 Chapman Valve. My father had cancer and was

1 unmonitored for radiation exposure.

2 At the outset let me also thank Senator
3 Kennedy, Senator Kerry and Congressman Neal and
4 their respective staffs for their steadfast
5 support in working through this process.

6 Without them, claimants would have had no --
7 nowhere in government to turn for assistance in
8 what is a complex, daunting and bureaucrat --
9 bureaucratic process.

10 With respect to the timeliness of the SEC
11 process, I want to note that NIOSH failed to
12 issue an SEC evaluation report by the May 9th,
13 2000 -- 2006 deadline, which is the 180 days
14 from the date the petition qualified, as set
15 forth in the NIOSH interim final regulation.
16 Instead, NIOSH took nearly ten months to
17 provide SEC evaluation report which delayed
18 disadvantaged us as claimants since we lack the
19 sources and resources to travel to Nevada for
20 their meeting today, whereas we could have
21 attended the Washington, D.C. meeting held back
22 in June, 2006 had there been a timely issuance
23 of a report.

24 Further, we would have welcomed the assistance
25 from NIOSH with this process. We have limited

1 data to work with beyond the provided by the
2 DOE under the Freedom of Information Act. We
3 have limited technical resources to address the
4 health physics issue and would welcome some
5 neutral technical assistance.

6 Finally, I assume that the SEC council
7 appointed by NIOSH must be very busy because we
8 have no information on the status of our
9 petition, had no assistance in preparing for
10 today, and had to pry the SEC report out of
11 NIOSH in late August, even though it report we
12 have this document in hand for several weeks.
13 We are grateful that Mr. Sundin provided us
14 with a phone number so that we could at least
15 call in to this meeting. Mr. Sundin, thank you
16 for that accommodation.

17 Chapman Valve families met with NIOSH on
18 February, 2005 to provide detailed comments on
19 the draft site profile. These included (1)
20 failure to account for enriched uranium which
21 was found at Oak Ridge National Lab --
22 Laboratory; (2) the failure to account for
23 uranium chip incinerator which is a source of
24 uranium smoke; and (3) the lack of
25 representative bioassay data upon which to

1 build a coworker model for internal dose; and
2 (4) the lack of knowledge on assigning the data
3 -- the date, I'm sorry, of the uranium fire
4 which occurred in May or June, 1948. NIOSH
5 issued the site profile the next day, February
6 15th, and never accounted for any of our
7 comments. And it's been suggested that the
8 reason for overlooking my technical information
9 is that the Oak Ridge Associate University
10 (sic) had to meet certain milestones to earn
11 its award fee for the period ending in mid-
12 March, 2005. You would think that NIOSH would
13 have reduced their award fee for failing to
14 account for claimant input instead.
15 We note, however, that the Department of Labor
16 has remanded Chapman Valve dose reconstruction
17 cases back to NIOSH because NIOSH failed to
18 account for the same data in their dose
19 reconstructions. Apparently DOL did not find
20 our concerns as meritless as NIOSH and ORAU.
21 Only five of 106 claims filed at Chapman Valve
22 and submitted to NIOSH for dose reconstruction
23 have internal bioassay dose data, according to
24 the SEC report. This means that the other 101
25 claims must rely on the coworker model and the

1 site profile for exposure estimates. In
2 theory, this approach could be made to work.
3 However, the NIOSH coworker model is based on
4 unrepresentative data. The data is
5 unrepresentative because it's based on cohort
6 sampling. Only a few workers, 32 in all, had a
7 routine bioassay sample. Seven others were
8 monitored on June 11th, 1948 after a uranium
9 fire. NIOSH concedes on page 33 of the SEC
10 report that the exact selection criteria is
11 unknown, but then it makes a fabulous leap of
12 faith and concludes that the sampling
13 (unintelligible) of the most exposed workers,
14 which report states samples were typically
15 collected from workers who were thought to have
16 the greatest likelihood of exposure.
17 Members of the Board, I have been advised by
18 Senator Kennedy's office, which has reviewed
19 this exposure data, that the most exposed
20 workers as determined by the results from our
21 weekly film badge readings were not monitored.
22 I have not seen (unintelligible) data, but I
23 imagine that you as Board members have the
24 right to see such (unintelligible) protected
25 information can see this data. It needs to be

1 looked at by more than NIOSH staff or its
2 contractor. NIOSH does say the basis for how
3 it jumped to a conclusion that most exposed
4 workers were monitored. If (unintelligible due
5 to interference on telephone line) was
6 monitored, there is no protocol that I can
7 find.

8 Frankly, it appears as if NIOSH
9 (unintelligible) and ignored the data
10 (unintelligible) and further presented by
11 petitioners demonstrating that cohort sampling
12 was used at this site. Cohort sampling was
13 common during the early years of the AEC.
14 During the deliberations on the Iowa Ordnance
15 Plant SEC NIOSH was first to admit that cohort
16 sampling was used and it was not representative
17 of the most exposed workers. Some of the NIOSH
18 staff who reviewed the Chapman Valve SEC
19 evaluation report were also involved in the
20 Iowa SEC evaluation report. The fact
21 (unintelligible) NIOSH staff seems to be
22 repeating (unintelligible) particular error.
23 Worker exposure from the uranium -- uranium --
24 uranium incinerator at Chapman Valve is glossed
25 over and NIOSH asserts that the exposures from

1 the incinerator would be reflected in coworker
2 data. It is unknown what (unintelligible) the
3 incinerator operated, and routine bioassay
4 samples were taken on only three occasions.
5 Uranium incinerators tend to be batched
6 operations and the days of operations are not
7 available. NIOSH was unable to match the date
8 of the incinerator operations with the workers
9 employed on those days and whether any of those
10 around the incinerator had bioassay samples.
11 Thus NIOSH's SEC evaluation report contains
12 uninformed speculation when it asserts that
13 workers would have received bioassay samples on
14 the day that they were exposed to the
15 incinerator operations. NIOSH clearly lacks
16 enough information to bound the
17 (unintelligible). NIOSH asserts that it
18 compared the incinerator data from the
19 (unintelligible) Pennsylvania with the data at
20 Chapman Valve. I did not know if the Numec
21 data was higher or lower than what was released
22 (unintelligible) Chapman Valve. I would
23 respectfully request that the Board review
24 (unintelligible) and assumptions
25 (unintelligible) cracking furnace at Chapman

1 Valve which deposited large amounts of uranium
2 out of stack through the roof (unintelligible)
3 furnace were not accounted for in the site
4 profile. We do not know how often the cracking
5 furnace operates. We do know it is separate
6 from the incinerator. NIOSH asserts that the
7 heat treaters would have been working around
8 the cracking furnace without providing any data
9 that this is the job title applied to those
10 working in this area. We respectfully request
11 that the Board (unintelligible) two sources of
12 airborne uranium with all other sources, such
13 as lathe operations, grinding, uranium fires,
14 et cetera.

15 There is no (unintelligible) of the
16 (unintelligible) of 2.68 percent
17 (unintelligible) enriched uranium that was
18 found by Oak Ridge. NIOSH asserts in its site
19 profile that only natural uranium was used at
20 Chapman Valve. NIOSH says that the presence of
21 the enriched uranium will not affect the
22 ability to (unintelligible) maximum plausible
23 dose, although they concede that the enriched
24 uranium will increase the dose, compared with
25 natural uranium. NIOSH staff has contended in

1 public forums that there was no enriched
2 uranium at this site, only natural uranium, and
3 that the results from the Oak Ridge survey of
4 Chapman Valve that found enriched uranium was
5 anomalous. NIOSH has -- NIOSH made no effort
6 in this SEC evaluation report to resolve that
7 question. NIOSH cannot say it doesn't believe
8 enriched uranium was present where there is
9 hard data to establish this fact. And it
10 cannot say it doesn't matter to the SEC
11 evaluation report and there -- and then not
12 accounted for in dose reconstruction. We think
13 that NIOSH cannot have it both ways. NIOSH has
14 failed to provide proof of process that it can
15 reconstruct dose using enriched uranium because
16 it has not revised its site profile to show
17 which worker would receive a dose from enriched
18 uranium. Absent such proof of process, doses
19 are being underestimated. This assertion that
20 maximum dose can be estimated has not been
21 demonstrated.

22 In conclusion, we ask that the Board -- to
23 review the raw data to understand the basis of
24 our contentions. We would be grateful if you
25 would -- if you could assign the auditor

1 contractor, Sanford Cohen & Associates, with
2 the task of reviewing SEC evaluation report.
3 Further, it would make sense to withhold
4 judgment until presents its revised site
5 profile, which it told Congress it would be
6 going -- it will be issuing in the future.
7 On behalf of the many families here in the
8 (unintelligible) area of western Massachusetts,
9 thank you for listening to my statement. And
10 now at this time, Mr. Chairman, with the
11 Board's permission, please allow me to
12 designate Richard Miller of the Government
13 Accountability Project to assist in the
14 presentation from the petitioners if there is
15 something I have left out. I hope he's in the
16 audience today. Thank you very much.

17 **DR. ZIEMER:** Yes, indeed, Richard Miller is
18 here today. And Richard -- I'm looking --
19 there you are. Do you have anything to add at
20 this point on -- as -- for -- on behalf of the
21 petitioners?

22 **MR. MILLER:** Dr. -- hello. Dr. Ziemer, if it
23 would be possible, I think there are other
24 people on from Congress that are probably on
25 the telephone, and maybe it'd be better to have

1 them go first.

2 **DR. ZIEMER:** Okay. We -- we do have a
3 statement from Senators Kennedy, Kerry and
4 Neal. I believe that's going to be read into
5 the record. Jason will come to the mike a read
6 that on their behalf.

7 **MR. BROEHM:** Hi, Jason Broehm from the CDC
8 Washington office. And actually before I read
9 this statement, Richard is correct that Portia
10 Wu from Senator Edward Kennedy's office is on
11 the phone, and William Powers from
12 Representative Richard Neal's office is on the
13 phone. And Mirah Horowitz from Senator John
14 Kerry's office I understand was planning to be
15 on the phone but had -- had something come up
16 at the last minute and is unable to join us, so
17 they would like -- Portia and William would
18 like to make a few remarks before I start the
19 letter.

20 **DR. ZIEMER:** Yes, certainly. Do -- do either
21 of you wish to make remarks before the
22 Senators' or the Congressman's letter is read
23 into the record?

24 **MS. WU:** Hello, this is Portia Wu with Senator
25 Kennedy's health committee's staff. First of

1 all, I want to express our appreciation to the
2 Board and also to NIOSH. We -- with Senator
3 Kennedy being the ranking member on the health
4 committee, we work very frequently with Dr.
5 Howard and with NIOSH, and we appreciate all
6 the good work they do on many -- many issues
7 that we cooperate with them on.

8 In addition, Senator Kennedy was one of the
9 original members who worked on EEOICPA and on
10 working to get compensation for sick Energy
11 workers, and it's very important. Though I
12 recognize the Chapman Valve site may not be as
13 large as many of the other sites, or as famous,
14 that they -- those workers and their health is
15 no less important to us than at any other site.
16 And it's obviously particularly important
17 because they're from Massachusetts.

18 There are a number of concerns that we have
19 elaborated in greater detail in our letter, and
20 I thank Jason for reading the letter. It is
21 somewhat lengthy, and because the connection on
22 this phone isn't the best, I'd prefer that it
23 read in the room where -- where the members are
24 present -- members of the Board are present so
25 they can hear it clearly. I do want to stress

1 a couple points and most -- most importantly
2 that we think there are some concerns we have
3 with the report, particularly the
4 representativeness of the data, and we
5 elaborate on those points more fully in the
6 letter. Specifically, the last few bioassay
7 samples that were taken, although we recognize
8 that data is important, really were not
9 representative of the highest exposed workers
10 and there were only a handful of workers in the
11 last two samples.

12 And because of all the questions about the data
13 and the lack of information about many of the
14 processes that workers may have been exposed
15 to, the concerns about the representativeness,
16 enriched uranium and many other process issues,
17 we also would request the Board look at this
18 more closely. In reviewing the raw data that
19 we got very recently, we felt like there were a
20 lot of questions that are -- should be raised
21 and ask that the Board look at that
22 information.

23 Bill?

24 **MR. POWERS:** Yes, Bill Powers here. I'm
25 counsel to Congressman Neal. I'd echo Portia's

1 sentiments. I think the letter will speak for
2 itself obviously. Obviously it's going to be
3 (unintelligible) significant issues here that I
4 think are raised. I do want to thank the Board
5 for obviously taking the time to -- to look at
6 this. I additionally would -- would like to
7 commend Ms. Realle and Mr. Ryan for an eloquent
8 resuscitation (sic) of -- of really where --
9 where we think this should be going at this
10 point and commend them for really hanging in
11 here and presenting the -- the data they did
12 today. And I would ask the Board to really
13 take a look -- issues workers I think here
14 today are raising.

15 **DR. ZIEMER:** Okay. Thank you both very much
16 for those comments, and we will now proceed
17 with the reading of the letter from Kennedy,
18 Kerry and Neal. Jason?

19 **MR. BROEHM:** Okay. Well, I think you should
20 all have copies of the letter sitting in front
21 of you, but to get this into the record, it
22 reads:

23 (Reading) Dear Dr. Ziemer: We write to express
24 our support for the Special Exposure Cohort
25 Petition, file number 012-05-3653, filed by

1 former employees at Chapman Valve Manufacturing
2 Company in Springfield, Massachusetts and their
3 survivors. Outlined below are issues that we
4 ask the Board to consider. A number of the
5 issues involve highly technical matters and we
6 respectfully suggest that the Board consider
7 engaging its technical support contractor to
8 assist in its review.

9 Congress passed the Energy Employees
10 Occupational Illness Compensation Program Act,
11 EEOICPA, in 2000 to ensure that nuclear energy
12 workers would be compensated for illnesses
13 caused by exposure to radiation and other toxic
14 substances. These unsung heroes of the Cold
15 War helped to build our nation's arsenal. In
16 many cases their work was performed in top-
17 secret conditions, and the extremely dangerous
18 nature of their jobs was concealed from them.
19 For the most part, exposure monitoring was
20 inadequate. It is often very difficult, if not
21 impossible, to establish the level of radiation
22 exposure for each worker. EEOICPA addressed
23 this problem by allowing workers and their
24 survivors to petition to become members of the
25 Special Exposure Cohort when it is not feasible

1 to estimate radiation doses with sufficient
2 accuracy.

3 Chapman Valve machined uranium for the Atomic
4 Energy Commission, AEC, in 1948 and 1949.
5 Their employees were exposed to radioactive
6 materials in the course of this AEC-related
7 work. Cleanup activities took place from 1991
8 to 1994 under the Department of Energy's
9 Formerly Utilized Sites Remedial Action
10 Program.

11 The SEC petition for these Chapman Valve
12 workers was submitted on August 15th, 2005;
13 qualified on November 9th, 2005; and the SEC
14 evaluation was due, under the terms of NIOSH's
15 Interim Final Rule, on May 9th, 2006. We
16 received the NIOSH SEC evaluation report on
17 August 31st, 2006, more than three months after
18 the 180-day deadline established under EEOICPA.
19 The evaluation report concludes that it is
20 feasible to complete dose reconstructions with
21 the data that has been recovered for this site.
22 We have serious questions about the basis for
23 this conclusion.

24 NIOSH is relying upon the February 22nd, 2005
25 site profile, ORAU-TKBS-0033, for the Chapman

1 Valve site as the basis for concluding that it
2 is feasible to reconstruct the dose for these
3 workers. That site profile was issued only one
4 day after a public meeting with former workers
5 in February, 2005. At that meeting NIOSH
6 received numerous pieces of evidence and
7 testimony regarding the activities at the
8 plant. Since the site profile was issued the
9 next day, it could not have incorporated the
10 evidence from that meeting.

11 We have been advised by NIOSH that the agency
12 intends to revise the site profile. We applaud
13 that -- this decision. In light of this
14 planned revision, however, we find it curious
15 that the evaluation report would be issued
16 based in substantial part on analyses from the
17 existing site profile. While NIOSH states
18 these -- states these changes to the site
19 profile will not make a difference in the SEC
20 evaluation report, we have difficulty
21 understanding how this could be the case. At a
22 minimum, the petitioners should be allowed to
23 see the revised site profile and to review it
24 in conjunction with the evaluation report to
25 make appropriate comment.

1 We are also deeply concerned about the
2 conclusions reached by the evaluation report.
3 Under EEOICPA, NIOSH has the burden of
4 demonstrating that the data is representative
5 of the highest exposed individuals at a work
6 site, and the Board has adopted evaluation
7 criteria regarding these workers.
8 And quoting number 4, consideration of data and
9 data subsets, NIOSH must demonstrate that there
10 are sufficient data, e.g., is the sample size
11 adequate, and that the data are representative
12 of the highest exposed individuals within the
13 class. This may involve looking at subsets of
14 larger exposure data sets. Often these subsets
15 are less comprehensive for a given time period,
16 usually earlier years. NIOSH should assess how
17 robust these data or data sets are for the
18 purposes of dose reconstruction. In answering
19 this question NIOSH should consider whether
20 they can determine the representativeness of
21 the data. Some questions which should be
22 considered in evaluating representativeness
23 include (1) are the data from the site in
24 question, from a surrogate site, or both; (2)
25 if from surrogate site, have these data been

1 appropriately evaluated and have the
2 uncertainties due to extrapolation from another
3 site been accounted for; (3) do they represent
4 the highest exposed individuals; (4) do they
5 represent the entire exposed cohort; (5) do
6 they represent all workers ever on the site;
7 (6) are the data from cohort type sampling; and
8 (7) can the data be interpreted in a way to
9 ensure that the maximum plausible dose can be
10 determined.

11 That's end quote.

12 While NIOSH states that it, quote, did identify
13 employees at the facility during this time
14 period for which complete dose reconstruction
15 would be feasible, unquote -- that's from the
16 evaluation report, page 37 -- we have serious
17 concerns about this conclusion with respect to
18 all members of the class. Indeed, the
19 Department of Labor has recently remanded a
20 number of cases to NIOSH for additional study
21 based on inadequacy of the data.

22 We are particularly concerned that data relied
23 upon for the evaluation report is not
24 representative of the maximally -- maxi--
25 maximally exposed individuals in the class.

1 This concern arises from our review of the raw
2 data that we recently received from NIOSH
3 regarding workers' exposure at Chapman Valve.
4 A few key -- a free -- excuse me, a few key
5 issues arose from our review.
6 First, records indicate that routine monitoring
7 for uranium intake took place on only three
8 occasions, July, September and October of 1948,
9 and involved only 33 samples covering 32
10 workers. Chapman Valve used cohort sampling,
11 covering a range of job classifications, rather
12 than sampling only the most exposed workers.
13 NIOSH concedes in its SEC evaluation report
14 that the, quote, exact selection criteria is
15 unknown, unquote. Samples were taken from only
16 six and five workers in September and October,
17 respectively, and none of the workers monitored
18 in October were production workers who faced
19 the greatest risk. Instead, bioassays were
20 concentrated in non-production workers such as
21 the associate director for research, foremen,
22 personnel managers, chief electricians,
23 engineers, inspectors and others who would have
24 had far less opportunity for internal radiation
25 exposure at this facility. Such samples

1 clearly would not reflect the highest exposures
2 at the plant.

3 Second, Chapman Valve also did not take
4 bioassay samples from the individuals with the
5 four highest film badge readings, which reflect
6 high levels of external exposure. These
7 readings were 650, 555, 500 and 500 mr per
8 week. The routine bioassay samples did not
9 include these maximally exposed individuals.

10 In addition, there was only one incident
11 monitored, a fire presumed to be in early June,
12 1948. Samples were taken from seven workers on
13 June 11th, 1948, five of whom had elevated
14 urine -- elevated uranium in urine readings.
15 Only two workers involved with fire and its
16 cleanup were re-sampled, both guards. Their
17 bioassay readings were the same or higher a
18 month later. NIOSH assumes the fire occurred
19 on June 10, but the date of the fire remains
20 unknown, despite extensive efforts by the
21 Chapman Valve families to ascertain the date
22 through archival research. We believe this
23 uncertainty should be reflected in the
24 estimation -- estimations of the monitored
25 workers so there is no possibility of an

1 underestimate of the uranium intake of these
2 workers. In addition, uranium machining
3 facilities are known to have frequent fires,
4 yet workers were only sampled after one
5 particular incident. NIOSH therefore simply
6 does not have data that reflects other
7 potential exposures.
8 Finally, NIOSH has failed to explain how it
9 accounted for the work history of those
10 individuals with bioassay samples, nor has it
11 adequately indicated how it assessed the
12 duration of time between when the workers were
13 exposed and when the bioassay samples were
14 taken. In light of these shortcomings, we fail
15 to see how NIOSH can conclude that it has
16 representative data from which it can develop a
17 plausible upper bound dose estimate.
18 In addition to these specific concerns
19 regarding the analysis of worker monitoring
20 data relied upon in the evaluation report, we
21 also have reservations about NIOSH's treatment
22 of other factors contributing to workers'
23 exposure.
24 For example, Oak Ridge National Labs documented
25 the presence of 2.16 percent enriched uranium

1 at the Chapman Valve site. However, this is
2 not explained in the site profile or the SEC
3 evaluation report. As part of a radiological
4 survey tied to the environmental cleanup
5 program in the 1990s, the Labs performed an
6 isotopic analysis on two uranium samples. One
7 of the two samples was positive for enriched
8 uranium. Despite this evidence, the NIOSH site
9 profile assumes only natural -- natural uranium
10 was processed. NIOSH has failed to explain how
11 it will account for enriched uranium in dose
12 reconstructions, given the lack of data on the
13 amount of material and on the processes used to
14 handle it. Nor has it shown how it will avoid
15 underestimating workers' potential exposures to
16 enriched uranium.

17 Also, the cracking furnace and uranium chip
18 incinerator operations, which may have been
19 intermittent and had high exposure potential,
20 appear not to be adequately addressed in the
21 report. They were also overlooked in the site
22 profile. Furthermore, although the stipulated
23 time period for operations was not long,
24 documents indicate potential for widespread
25 exposures, such as through contamination

1 spreading from the production area into the
2 lunchrooms. After the Chapman Valve site had
3 ceased production and the scrap and waste had
4 been shipped away, the site had to be washed
5 down several times. Even with this washing,
6 residual contamination remained embedded in the
7 building.

8 For the above reasons, we have serious
9 questions about NIOSH's conclusion that the
10 handful of production worker bioassays is
11 representative and from this that it is able to
12 develop a plausible upper bound dose estimate.
13 In light of these concerns, we respectfully
14 urge the Board to carefully review this SEC
15 evaluation report and the raw data relied upon
16 by NIOSH. Again, in reviewing the technical
17 issues we urge the Board to assign a review of
18 the evaluation report by audit contractors, as
19 it did in the SEC petitions at Iowa Ordnance
20 Plant, Mallinckrodt Chemical, Rocky Flats, and
21 Oak Ridge Y-12.

22 Sincerely, Edward M. Kennedy, John F. Kerry,
23 and Richard E. Neal.

24 **DR. ZIEMER:** Thank you very much for reading
25 that into the record for us. Now I'll give Mr.

1 Miller an opportunity, if he has additional
2 comments on behalf of the petitioners, to add
3 to the information. And then we will open the
4 floor for Board discussion.

5 **MR. MILLER:** Thank you, Dr. Ziemer. This is
6 Richard Miller from the Government
7 Accountability Project. I won't restate any of
8 the arguments that have been made here. I just
9 wanted to supplement several technical points,
10 the first of which is dealing with the enriched
11 uranium. What the origins of that enriched
12 uranium are are unknown. What we do know is
13 that the dose reconstructions that have been
14 done to date do not account for enriched
15 uranium, and so NIOSH can't really have it, as
16 the petitioners said, both ways.
17 I think Brant Ulsh in his presentation
18 suggested that perhaps this enriched uranium
19 didn't arise out of this project, that it arose
20 out of another project. And that is a
21 possibility. The -- the contracting
22 information at this site is -- is pretty
23 sketchy, although there's some shipment and
24 receipt data of -- of the uranium coming in and
25 leaving, as well as the scrap material. If the

1 -- the enriched uranium couldn't possibly, as
2 the SEC evaluation report suggests on page 35,
3 to have been, quote, attributable to background
4 levels. I'm not aware of any enriched uranium
5 occurring in nature.

6 The second is is that if this did arise,
7 perhaps say from a Naval reactors program, and
8 I'm not suggesting that it did 'cause I don't
9 know, it's very important to note that the 2004
10 amendments to the Defense Authorization Act
11 define what a radiation dose is. And in those
12 amendments it makes clear that although Navy
13 reactor programs do not count with respect to
14 the dose at Department of Energy facilities,
15 they do count at Atomic Weapons Employer
16 facilities. And so one cannot simply bypass
17 conveniently that provision of law in
18 accounting for dose. And just to underscore
19 this knowledge that NIOSH already has, they are
20 accounting for some of that dose on sites such
21 as the Erwin, Tennessee facility where you have
22 a co-production operation involving Naval
23 reactor operations. So I just would bring that
24 to your attention, that that's not to be
25 something that can be explained away.

1 The other is is that when you're dealing with a
2 small number of data points, your -- your --
3 your curve -- if you're going to do a coworker
4 model and you're going to look at the upper
5 95th percentile, you better have a pretty
6 representative data set because the -- the laws
7 of num-- small numbers also cut against you.
8 And in this particular instance, what I've been
9 advised -- and again, I have not seen the raw
10 data and -- and I -- and I would repeat what
11 Senator Kennedy's staff urged, which is let's
12 get somebody who can look at the raw data to
13 look at it. Senator Kennedy's staff advised
14 that there is a job classification not even
15 mentioned in either the site profile or the SEC
16 evaluation report that represented the highest
17 exposed individuals from film badging, and that
18 job category was a brusher. Now I don't know
19 exactly what a brusher did, but one could
20 imagine you were running a wire brush over
21 uranium, you're generating an awful lot of
22 particulate material. And if that's what they
23 were doing, and if as Senator Kennedy's staff
24 has indicated, the most exposed individuals
25 with respect to film badge were not the people

1 who were bioassayed, how can you develop a --
2 any confidence that your upper 95th percentile
3 is in the realm of plausibility? It's just
4 simply not. And so we would respectfully
5 request that if you are going to develop a
6 model and you're going to use the most exposed
7 individuals, you better be sure you got them
8 for the bioassay and that they match up. Now
9 if they do match up, there's been nothing
10 demonstrated in the site profile or in the SEC
11 evaluation report which indicates that the most
12 exposed individuals as measured by weekly film
13 badge in any way, shape or form were
14 bioassayed.

15 In addition, I wanted to just talk a little bit
16 about the date of the fire, not that it's a
17 huge issue, but as a footnote. The -- the fire
18 -- the bioassays for the fire occurred on the
19 11th of June of 1948. The date of the fire is
20 unknown. I don't know what the date is and I
21 know that the petitioners went through some
22 exhaustive efforts to try to find this out
23 because the levels of dose for some of the
24 individuals who would have fought the fire or
25 did the cleanup work afterwards were

1 significantly elevated. They got a good --
2 they got a good intake of uranium. And so what
3 they did was they had gone through the
4 newspaper archives. They interviewed the on-
5 site firefighter workforce. They sought to go
6 to the Springfield Library to look at the
7 annual reports for Chapman Valve Company, which
8 is a very prominent employer in the area. And
9 nobody could possibly find any date, any
10 document that the fire existed other than these
11 AEC bioassay samples that had been sent I think
12 to Rochester. But we did ask NIOSH to run a
13 little intake calculation, and the difference
14 in dose -- which anybody who I guess looks at
15 an excretion curve for say a moderately soluble
16 intake of uranium -- that just merely being off
17 by a week involves a 50 percent change in the
18 amount of uranium intake for the individual.
19 So I think that it's important that if one's
20 going to use the data, you ought to assign some
21 conservatism to the date that you assume the
22 fire took place, rather than just simply say
23 well, it's in a range.
24 Oh, and then the last point is this, that with
25 respect to the -- the -- the basic contention

1 that is made here, which is is that no matter
2 what happened at the facility, bioassay would
3 have captured it. One has to look at when the
4 dates of the bioassay occurred. So leaving
5 aside the issue that the most exposed
6 individuals weren't sampled, the other question
7 is if events were there would the general
8 bioassay program capture it. And given the
9 fact that you only had a few production workers
10 in total that were sampled, of the 17 samples
11 that show detectable levels out of the 33 that
12 were taken from the routine program, the -- the
13 question is if you had an event, like an
14 operation of the incinerator, which puts out
15 profuse amounts of smoke, and you -- that took
16 place before the person was bioassayed, you'd
17 capture it. But if it took place after the
18 bioa-- af-- if that -- if that -- if that
19 operation of that batch incinerator took place
20 afterwards, it wouldn't capture it. So the
21 question is, if you know the date, you can
22 correlate it, then you can make that statement.
23 But it seems to me that there's an awful --
24 there's an awful lot being taken on faith here
25 with respect to the assumptions that the

1 bioassay automatically would have acted as an
2 umbrella and captured all of the relevant
3 events.

4 Those are my remarks. Thank you, Dr. Ziemer
5 and thank you, Board members.

6 **BOARD DISCUSSION**

7 **DR. ZIEMER:** Thank you, Richard. We're now
8 going to open the floor for Board discussion
9 and questions. I'm going to lead it off. I
10 want to ask a couple questions and Brant, if
11 you would approach the mike, could you clarify
12 for us the -- the 30 -- how many samples, was
13 it 33 -- 33 samples. It wasn't quite clear to
14 me how many individuals did -- was that 33
15 individuals or 32 individuals, or -- it was not
16 quite clear.

17 **DR. ULSH:** Dr. Ziemer, that was 33 individual
18 bioassay samples. I would have to go back and
19 count -- I'll -- I'll go with the number that I
20 think was expressed in the letter from the
21 Congressional people that it was 32.

22 **DR. ZIEMER:** Thirty-two, okay.

23 **DR. ULSH:** I'm going by what they said. I'd
24 have to actually look at the -- compare the
25 (unintelligible).

1 **DR. ZIEMER:** In the case of those that were
2 identified with the fire, we have then the -- a
3 single sample typically, is that the case?

4 **DR. ULSH:** We have --

5 **DR. ZIEMER:** When you say eight bioassay,
6 you're talking about one -- a one point -- or -
7 -

8 **DR. ULSH:** Seven bioassay collected on one day.

9 **DR. ZIEMER:** On one day.

10 **DR. ULSH:** Seven individuals sampled on one
11 day.

12 **DR. ZIEMER:** Would NIOSH not do what they do in
13 other cases where the intake date is unknown
14 and assume a worst-case scenario for the intake
15 date? That is the earliest possible date that
16 the fire could have occurred based on some
17 knowledge. You're not assuming necessarily
18 that the fire took place the day before or two
19 days -- you -- do you have an outside bracket
20 date on the earliest possible date the fire
21 could have occurred, based on either records or
22 whatever?

23 **DR. ULSH:** Yes, we do. We know that it
24 occurred in the month of June. We know that
25 the post bioassay samples were collected on

1 June 11th. Therefore we know that we have an
2 11-day window when that fire occurred, and the
3 method that you've described is exactly what we
4 (unintelligible) --

5 **DR. ZIEMER:** Right, so you would assume June
6 1st as -- or whatever date gave you the highest
7 dose --

8 **DR. ULSH:** Yes, we would.

9 **DR. ZIEMER:** -- to get the bioassay value on
10 the date of this sampling.

11 **DR. ULSH:** That is correct, and Mr. Miller
12 mentioned that -- depending on the solubility
13 of the material that's involved, in this case
14 it's uranium metal so it's a -- it's an
15 insoluble form of uranium, not a -- not a
16 fairly soluble form, but it's an insoluble
17 form. And -- but even going with the 50
18 percent difference that Richard mentioned,
19 that's still a boundable number. I mean it's a
20 significant number in terms of dose
21 reconstruction, but it's not an unknowable
22 number.

23 **DR. ZIEMER:** That was basically my next
24 question. You could assume it all to be, what
25 is it, 2.3 percent enriched or whatever the

1 value was, and get an upper bound on that.

2 **DR. ULSH:** Yes, we could.

3 **DR. ZIEMER:** Okay, thank you. Other questions
4 here? Dr. Melius.

5 **DR. MELIUS:** Yeah. I actually read this report
6 before I got also some of this background
7 information and I wasn't very satisfied with
8 the report nor with NIOSH's presentation here.
9 If you go back to our SEC review guideli--
10 evaluation guidelines, we've really asked them
11 to make an informative presentation on what
12 they can do. If they believe that they can do
13 -- they have adequate information for dose
14 reconstruction, show us, basically. And I
15 think process-wise we've tended to do more of
16 that, looking at some of the pedigree of the
17 data sets and so forth and part of our
18 workgroup sessions and so forth. But I don't
19 think they've -- they've still adequately
20 demonstrated that. They may be able to. I'm
21 not sure what to conclude on this particular
22 SEC petition, but I don't think that they've
23 made an adequate case and demonstrate us to --
24 how are they going to do the dose
25 reconstruction. Can they do it, how did they

1 do it, how are they going to handle the
2 different subgroups and -- and so forth. And
3 if you go back in time, this particular site
4 profile I think, as has been mentioned here,
5 was released the day after a public comment
6 period, the first chance that the people
7 involved with the site had a chance to interact
8 with NIOSH. Essentially the site profile was
9 done. A revised site profile has not been
10 completed, to my knowledge. It may be
11 underway, but -- but so there's a lot of
12 unknowns here and I actually think the best way
13 is -- to go forward at this point for us would
14 be to have SC&A do some evaluation of the site
15 profile and at least try to clarify some of the
16 issues and so that we can demonstrate that they
17 -- how to handle a number of these technical
18 issues. They may be able to be handled. It
19 may be possible to do dose reconstruction here,
20 but I would like to see more demonstration of
21 that before reaching a conclusion on this
22 particular petition.

23 **DR. ZIEMER:** Thank you. Other comments? Brad.

24 **MR. CLAWSON:** I -- I just had a question. I'm
25 just looking up there at a little bit of the

1 information, and basically we've got two years
2 we're working with there. How many people were
3 working at Chapman Valve?

4 **DR. ULSH:** Brad, I can tell you that there were
5 about 100 people directly involved with the
6 uranium work for the AEC. I'm going to -- Mark
7 -- Mark Rolfes is our point person on Chapman
8 Valve. Mark, do you have an idea of the total
9 employment at Chapman Valve?

10 **MR. ROLFES:** I really don't have a feel for the
11 number of total workers at the site. Like
12 Brant said, I'd like to reiterate that we
13 looked at a list of the number of people that
14 were entering into the restricted area at
15 Chapman Valve.

16 **DR. WADE:** Mark, you should come --

17 **DR. ZIEMER:** He said he could hear okay. Did
18 you hear okay --

19 **THE COURT REPORTER:** I got him, yeah.

20 **DR. WADE:** Well, we want to make sure the
21 people on the phone can hear okay.

22 **DR. ZIEMER:** Okay.

23 **DR. WADE:** Could you repeat your answer, Mark?

24 **MR. ROLFES:** Yes. We do have a list of the
25 people that actually entered into the AEC-

1 controlled area at Chapman Valve. I don't have
2 a good feel for the number of total people that
3 worked at the Chapman Valve facility outside of
4 Building 23 and outside of the restricted area.
5 Thank you.

6 **UNIDENTIFIED:** Mr. Chairman?

7 **DR. ZIEMER:** I'll ask another question. It's
8 somewhat generic, but it pertains to this -- at
9 least philosophically to one of the issues
10 here. Is it not true that the highest exposed
11 individual at a site is not necessarily the one
12 or ones with the highest external dose?

13 **DR. ULSH:** Yes, Dr. Ziemer, you've -- you've
14 identified a tacit assumption in that argument
15 that the person who received the highest
16 external dose also received the highest
17 internal dose. That is an assumption. I would
18 point out to you that -- I think it was
19 mentioned that the job category of the person
20 who received the highest external dose was a
21 brusher, I believe it was mentioned. We do
22 have bioassay results for a brusher -- maybe
23 more than one, I'd have to look -- but I don't
24 know if it's the same individual. But we do
25 have bioassay results for that job category.

1 **DR. ZIEMER:** But the obverse of my question is
2 it -- is it -- it certainly is possible that
3 the highest exposed individual on a site would
4 be someone with no external exposure.

5 **DR. ULSH:** You're absolutely right. I -- I
6 would be speculating (unintelligible) --

7 **DR. ZIEMER:** (Unintelligible) not necessarily
8 here, just --

9 **DR. ULSH:** Yes, the person that -- people who -
10 -

11 **DR. ZIEMER:** I just want to make sure that we
12 don't assume that the highest external exposure
13 is automatically the highest exposed person on
14 a site.

15 **DR. ULSH:** That is true. As you know, Dr.
16 Ziemer, the people with the highest internal
17 exposure potential would be the people who were
18 closest to the parts of the operation that were
19 generating airborne dust or smoke at -- at
20 Chapman Valve. The people that you would
21 expect to have the highest external dose would
22 be the people who spent the greatest total
23 amount of time in close proximity to the
24 radioactive material, so that is certainly
25 (unintelligible) --

1 **DR. ZIEMER:** In this case it could very well
2 coincide, but not necessarily.

3 **DR. ULSH:** Yes, absolutely.

4 **MR. MILLER:** I just want to comment that that's
5 not mutually exclusive and -- and that if, to
6 the extent that the individuals who were
7 brushers, who were basically people that are in
8 high proximity to both the physical material
9 and to airborne particulate -- I mean it would
10 seem logical that you would want to bioassay
11 those people. My understanding subsequent to
12 what Senator Kennedy's letter said is that
13 they've had further time to review this and --
14 and I want to just illuminate at least what
15 I've heard from them, and they can further
16 correct or contradict me, as appropriate. My
17 understanding is is that from having reviewed
18 the data that they have -- I don't know if
19 that's the entire data set that NIOSH has in
20 its possession or not, and again, I can't see
21 it so it's -- it's a little -- I'm -- I'm sort
22 of shadow-boxing here a little bit. My
23 understanding is that they looked at the -- the
24 full range of the weekly film badges that were
25 issued and that they took the midpoint of the

1 film badge readings and the highest was around
2 600 or so millirem per week or millirads per
3 week. So they started I think around 250 or so
4 millirads and they looked to see if anybody who
5 had more than 250 MR was bioassayed. They
6 could identify nobody based on the data that
7 they had in hand. So if nobody over even 250,
8 at 50 percent of that, the midpoint, so that
9 you're not just dealing with some outlier that
10 statistically might have fallen out of the
11 whatever, the brusher didn't show up on the day
12 of the bioassays or whatever, then you have a
13 situation here where it almost looks like this
14 is really what it looks like, cohort sampling.
15 And you -- you know, what we've learned, if
16 anything, is that if you have cohort sampling,
17 you're going to have a hard time developing a
18 representative sample here. And -- and I think
19 the burden really is on NIOSH to show what
20 Brant speculated there is demonstrated in the
21 data.

22 **DR. ZIEMER:** Thank you. Let's see, Dr. Lockey.

23 **DR. LOCKEY:** You had mentioned that the total
24 work duration was seven months. Is that right?

25 **DR. ULSH:** Yes.

1 **DR. LOCKEY:** At this facility? Do you -- can
2 you compare this data to similar processes and
3 break it down into number samples obtained per
4 worker per time? How does it compare if you do
5 that?

6 **DR. ULSH:** Off the top of my head, I couldn't
7 do that in terms of -- if you looked at other
8 facilities that conducted similar types of
9 operations, Bethlehem Steel, Simonds Saw comes
10 to mind. I don't know exactly what the
11 correlation would be between the scale of the
12 operation and the amount -- the number of
13 bioassay samples that were taken in those
14 operations. I don't have those at -- at my
15 fingertips.

16 **UNIDENTIFIED:** Mr. Chairman?

17 **DR. ZIEMER:** Brad, did you have another
18 question?

19 **MR. CLAWSON:** Yeah, I just -- to go on from
20 where I was going, you say that this has been
21 in the seven-month period -- that the bioassays
22 were -- and we've got a two-year period op--
23 I'm not understanding that. I'm --

24 **DR. ULSH:** Again I might call on Mark, but we
25 have indication that the actual machining

1 operations occurred from May to November in
2 1948. Now the radioactive material, the
3 uranium, could have been on-site as early as
4 January of 1948, but that doesn't mean that's
5 when they started actually machining that
6 material. There's also some indication -- and
7 again, the rec-- the record here is a little
8 unclear as to when the last shipment of uranium
9 scrap was sent from the site. It -- there's
10 some indication that it was all gone by the end
11 of 1948. The weight of the evidence suggests
12 that. However there's also, I believe -- and
13 I'm going to ask Mark to correct me if I'm
14 wrong -- the possibility that it remained on-
15 site for a few months into 1949. And to
16 account for that possibility, Brad, we have
17 extended the covered -- the period for this
18 class to be all of those two calendar years.

19 **MR. CLAWSON:** Do we have any time when this --
20 the furnace was supposedly running? Was it
21 just during the -- the melting processes or --
22 or -- or what?

23 **DR. ULSH:** Well, let me tell you what we do
24 know. The purpose of a chip incinerator or a
25 cracking furnace is to treat uranium chips, to

1 oxidize them so they are less pyrophoric and
2 they don't present as much of a hazard when
3 you're shipping that material. So it would be
4 logical to assume -- and this, I would readily
5 admit, is an assumption -- that that type of
6 process occurred near the end of the -- the
7 machining period. But that -- I've got to
8 admit to you, Brad, that is an assumption.

9 **MR. CLAWSON:** Okay. Another one that just kind
10 of interests me, we've got a time period then
11 and then we've got basically about 40 years
12 later, and this was the D&D process?

13 **DR. ULSH:** Yes.

14 **MR. CLAWSON:** What was going on in this
15 facility the rest of the time?

16 **DR. ULSH:** Mark Rolfes, please approach the
17 microphone. Chapman Valve did continue with
18 their -- their other operations, but I think
19 Mark can maybe...

20 **MR. ROLFES:** Chapman Valve was a valve
21 facility. They produced valves of several
22 different types for several different
23 organizations. One of their major products
24 were fire hydrants and valves for the fire
25 hydrants themselves.

1 **MR. CLAWSON:** So 40 years later we deconned it?

2 **DR. ZIEMER:** I think his question basically is
3 did they continue to use that part of the
4 facility for other work which it was in a
5 contaminated state. I assume that's your
6 question, Brad.

7 **MR. CLAWSON:** Yeah, I just -- I just find --
8 I'm just trying to understand it. Did they
9 close this facility off and then 40 years later
10 or something clo--

11 **DR. ULSH:** Yeah, let me give you a little bit
12 of information, Brad. At the conclusion of the
13 AEC work, they did make some efforts at
14 decontamination. They washed down the
15 facility. In -- in preparation for this work
16 they constructed walls inside this building to
17 wall off this area from the rest of the
18 building. And at the conclusion of that work,
19 those -- there was some dismantlement that went
20 on and they did attempt to wash down the
21 surfaces. They had to make several attempts at
22 that. I think what we're talking about here in
23 terms of the D&D effort that occurred in the
24 '90s occurred under the FUSRAP program. Now
25 Mark, am I correct in that?

1 **MR. ROLFES:** (Unintelligible)

2 **DR. ULSH:** Okay.

3 **DR. ZIEMER:** Yes, Richard.

4 **MR. MILLER:** Mr. Chairman, I think Aaron Wilson
5 from western Mass. (unintelligible) -- he just
6 sort of buzzed me and asked if he could be
7 heard 'cause I think he's quite familiar with
8 the history of Chapman Valve. Aaron, are you
9 there?

10 **MR. WILSON:** Yes, I am.

11 **DR. ZIEMER:** Okay, proceed.

12 **MR. WILSON:** Mr. Chairman, I've interviewed
13 dozens of family members and former workers,
14 and I just wanted to make a quick comment about
15 the total number of employees. I have a
16 payroll register sitting here on my desk from
17 1948 and '49 from Chapman Valve. There were --
18 it was one of the largest employers in -- in
19 the area with more than 1,000 employees. And
20 in fact when you look at the chip burner -- the
21 smokestack for that going up the side of the
22 building was venting a lot of this material
23 into the air throughout the whole facility.
24 And I'm not sure that a sample of 33 workers is
25 really representative of the number of people

1 who were exposed as they were walking back and
2 forth underneath the smokestack.

3 One other point was it was asked about what
4 other type of radioactive materials might have
5 been used at Chapman Valve. I've -- like I
6 said, I've talked to many former workers.
7 Other than the uranium that they processed in
8 Building 23, the only other material that's
9 ever been mentioned was radium pills which were
10 used in an X-ray process to look at the valves
11 that were being sent to the United States Navy.
12 And incidentally, the enriched uranium sample
13 that was taken, it's my understanding that that
14 sample was taken from the ground which was
15 directly underneath where the smokestack from
16 the chip burner exited Building 23.

17 **DR. ZIEMER:** Okay. Thank you. Yes, Mike --
18 oh, Mark.

19 **MR. GRIFFON:** Good to meet you. I had a
20 question, Brant, or maybe a clarification. In
21 your presentation I think you mentioned that
22 urinalysis is at the top of the hierarchy for
23 approaches in terms of calculating internal
24 dose. I don't dispute that, but I think your
25 assertion was that you have urinalysis records

1 to do dose reconstruction for these claimants.
2 You're really using coworker models.

3 **DR. ULSH:** You're absolutely correct, Mark.

4 **MR. GRIFFON:** How many of these 124 have
5 individual urinalysis records, or do -- you
6 probably don't know that off-hand. I don't
7 know --

8 **DR. ZIEMER:** Thirty-two.

9 **MR. GRIFFON:** No, of the claimants, I'm saying.

10 **DR. ULSH:** So you're asking of the 33 non-fire
11 urinalysis results, how many people does that
12 represent is what you're asking?

13 **MR. GRIFFON:** How many claimant -- how many
14 claimants have individual (unintelligible) --

15 **DR. ULSH:** Oh, how many --

16 **MR. GRIFFON:** -- data.

17 **DR. ULSH:** -- claimants.

18 **MR. GRIFFON:** And you may not know that or --

19 **DR. ULSH:** I think you're right. I think
20 you're right, I don't know that off the top of
21 my head.

22 **MR. GRIFFON:** Yeah, I'm guessing -- my point
23 is, I'm guessing at this point you -- you've
24 relied on a coworker model to assign internal
25 doses for any -- any dose reconstructions that

1 have been done for those -- for the -- out of
2 the 124.

3 **DR. ULSH:** Certainly what we would do, Mark, is
4 if we have actual individual bioassay results
5 that relate to a claimant, we would use that.
6 But for individuals for whom we do not have
7 individual bioassay results, we would rely on
8 coworker data in this case.

9 **MR. GRIFFON:** I guess the other thing that --
10 that I just wanted to pursue a little bit, in
11 the letter that was read to us, one out of two
12 samples were done for isotopic analysis of the
13 uranium and one came up as -- as slight-- as
14 slightly enriched. I guess the other thing --
15 I don't -- I don't dispute that you could
16 modify the site profile -- modify your
17 methodology slightly and recalculate doses
18 based on enriched uranium. I guess what it
19 raises in my mind is were there other processes
20 that we're missing at this -- at this facility
21 that -- that involved other materials coming
22 in, enriched uranium use, et cetera. That -- I
23 guess that would be the bigger concern I would
24 have is, you know, are we missing some
25 production that went on over -- over a time

1 period there. And I know you probably --
2 you've looked and you haven't found, but it
3 raises a question in my mind, I guess.

4 **DR. ULSH:** Of course, let me state from the
5 outset, we can't prove a negative, as you know.
6 However, and you're correct, Mark, that we have
7 seen no indication of other operations that
8 occurred during that time frame. However, you
9 are echoing some of the concerns that were
10 expressed in the SEC petition. Those concerns
11 dealt with accounting for the cracking furnace
12 and for other smaller fires. So your concern
13 echoes some of the concerns expressed by the
14 petitioner.

15 **MR. GRIFFON:** One -- one final before Richard
16 gets up. On your air sampling slide you
17 mentioned that there was some air sampling
18 data, did -- did NIOSH make any attempt to look
19 at that in terms of -- of assessing whether you
20 were in the same ball park as your conclusions
21 for your urinalysis data? In other words, did
22 it -- did it -- was it consistent with -- I
23 know you're not going to get the same kind of
24 intake numbers exactly, but were the air
25 sampling levels consistent with what you found

1 in your urinalysis samples?

2 **DR. ULSH:** I believe the answer to that is yes,
3 Mark. I know that we looked at the air
4 sampling results and compared those with
5 numbers that the Health and Safety Laboratory
6 produced for other facilities. Now these are
7 air samples compared to air samples from other
8 facilities. In terms of your question, though,
9 you're asking if we estimated an intake based
10 on the air sampling data at Chapman Valve and
11 compared that with the urinalysis data that we
12 have there. I don't know the answer to that.
13 Mark, are you -- I -- has he dis-- oh, there
14 you are. Did you do something like that, Mark,
15 or --

16 **MR. ROLFES:** What was the question again?

17 **DR. ULSH:** The question --

18 **DR. WADE:** You'll have to come to the
19 microphone. You might as well stay here.

20 **MR. GRIFFON:** It sounds like it wouldn't have
21 been -- well, go ahead, I'll let him answer it.

22 **DR. ULSH:** The question that Mark asked -- that
23 Mark Griffon asked, Mark, was did we compare
24 the intakes that we would have estimated from
25 the air sampling, the one day of air sampling

1 know this is data as of May 1st, 2006, but it
2 says here that of 106 cases who met the
3 proposed class definition criteria, which means
4 that -- that's 106 there, that's -- 106 is more
5 than the Building 23 100 that we heard earlier,
6 but whatever it is, five of those had internal
7 dose data. So everybody else, I would assume -
8 - and correct me if I'm wrong -- either relied
9 on OTIB-4 or relied on your site profile. I
10 assume you're using OTIB-4 in part for this
11 facility. Is that correct?

12 **DR. ULSH:** I can't answer that with certainty.
13 I could check on that. I don't know what
14 methodologies were applied for the -- for the
15 92 dose reconstructions that we have completed.
16 I don't have a handle on what methodologies
17 were employed for that.

18 **MR. MILLER:** The point is is that of -- of five
19 even out of 91 shows that you're largely
20 relying either on a coworker model of some sort
21 here.

22 **BOARD DECISION**

23 **DR. ZIEMER:** Board members, I don't know if you
24 have -- oh, Jim, you have an additional
25 question?

1 **DR. MELIUS:** I don't have an additional
2 question, I was going to make a motion, but if
3 you have --

4 **DR. ZIEMER:** Okay. Well, before you make your
5 motion, I was going -- simply going to instruct
6 you that you have probably three possibilities
7 for action. One is to support the petition,
8 one is to deny it, the other is to seek some
9 additional clarification of some technical
10 information, perhaps with or without the help
11 of the contractor. So Plan C has some subparts
12 as well. Perhaps Dr. Melius has a -- a
13 recommendation that we can react to.

14 **DR. MELIUS:** Yeah, I would make a motion that
15 we defer action on this petition -- SEC
16 petition and that we ask SC&A to do further
17 evaluation and then -- I'm not sure whether
18 their action should -- that evaluation should
19 be under sort of the site profile task or under
20 their SC&A (sic) task. I think it's really a -
21 - maybe a mixture of both, to some extent, but
22 that they then come back to us with a report
23 and we make -- take the steps from there.

24 **MR. ELLIOTT:** The revised site profile will be
25 out in a matter of days --

1 **DR. MELIUS:** Okay, that was --

2 **MR. ELLIOTT:** -- next week, I (unintelligible).

3 **DR. MELIUS:** -- one of my --

4 **MR. ELLIOTT:** It should have been here this
5 week, but we didn't make it.

6 **DR. ZIEMER:** In any event, let me interpret
7 your motion. I believe that in the context of
8 what we're doing, we would ask them to do this
9 as a site profile task --

10 **DR. MELIUS:** Yeah.

11 **DR. ZIEMER:** -- so I'm going to interpret your
12 motion in that manner, if there's no objection,
13 and ask if there's a second.

14 **MR. CLAWSON:** Second here.

15 **DR. ZIEMER:** And second. And now the motion is
16 open for discussion. Do you have a question?

17 **MR. MILLER:** Just a question. You know, if --
18 if the site profile review criteria were the
19 same as the SEC evaluation criteria that the
20 Board had adopted, it would be I think of no
21 consequence. But the criteria are so specific
22 in your guidance that the Board promulgated
23 back I think in January or March -- I guess you
24 approved it in March -- I would respectfully
25 ask that -- that that criteria be the -- the

1 criteria against which the SEC evaluation
2 report be looked at and that both be considered
3 as part of an aggregate of the whole. How you
4 want to deal with the contracting matter is
5 immaterial to me, but I -- I think people would
6 like to see this SEC evaluation report
7 evaluated under that litmus test.

8 **DR. ZIEMER:** The Chair's suggestion that it be
9 done as an SEC task I think automatically
10 brings those criteria into play.

11 **MR. MILLER:** Okay, but I thought Dr. Melius's
12 proposal --

13 **DR. WADE:** You said site profile.

14 **MR. MILLER:** -- was site profile.

15 **DR. MELIUS:** Oh, did I?

16 **DR. WADE:** You meant -- you misspoke, that's
17 all.

18 **DR. ZIEMER:** Okay. I didn't even hear what I
19 said 'cause I knew what I meant.

20 **DR. WADE:** He meant SEC.

21 **DR. ZIEMER:** I -- I had intended to say SEC.

22 **MR. MILLER:** Oh, I apologize.

23 **DR. ZIEMER:** That's a senior moment. That's my
24 story and I'm sticking to it.

25 **MR. MILLER:** Thank you, Dr. Ziemer.

1 **DR. ZIEMER:** I sometimes hate to admit it, but
2 we may have actually been on the same
3 wavelength there, Richard.

4 **DR. WADE:** This is a good thing. This is a
5 good thing.

6 **DR. ZIEMER:** So discussion on the motion. The
7 motion, if approved, would delay action in
8 terms of a recommendation from the Board. And
9 I think this has no impact any longer on the
10 time clock because the Board's action is not
11 under a time clock, I believe, so we're not
12 compelled, I don't believe, Lew, to complete
13 this in a certain period of time, but we do
14 want to move ahead expeditiously so that if the
15 motion is approved it would include tasking the
16 contractor to do an evaluation on our behalf.
17 Okay, Wanda Munn.

18 **MS. MUNN:** Only one observation relative to an
19 earlier statement with respect to having NIOSH
20 show us that they can in fact do a dose
21 reconstruction of one sort or another. This is
22 the identical question that has arisen in
23 working groups on more than one occasion. We
24 have consistently asked that that rock be
25 brought back to us, and the agency has

1 consistently brought the rock that we asked
2 back to us. If we are going to ask our
3 contractor to review this SEC petition, I hope
4 that it is not inherent in that request that we
5 again ask the agency to continue to prove that
6 they can do what they have said they have done
7 and have shown us repeatedly that they can do
8 in other circumstances. I recognize Chapman
9 Valve was not at issue when these prior
10 requests were made. However, there's no
11 question that the process involved requires the
12 same type of information and the same type of
13 assumptions, so far as can be determined by
14 what we know now.

15 **DR. ZIEMER:** Okay, thank you. Dr. Melius.

16 **DR. MELIUS:** I'm not sure whether I'm agreeing
17 or disagreeing with Wanda, but my -- I think
18 what I said to start with was I did not think
19 that NIOSH had made that demonstration to us.
20 And I was disappointed by both the report and
21 more importantly by the presentation today that
22 we didn't get a more thorough demonstration of
23 what they believe they can do, but I didn't
24 think adequately showed us that they can do it.
25 Instead we heard what was wrong with the

1 petitioners' questions and then a simple
2 statement that we can do it and -- we can do
3 dose reconstruction. And I think what we've
4 asked for -- it was -- like I said before, was
5 demonstrate it to us, and it wasn't
6 demonstrated today, I thought, adequately. And
7 so I think we're trying to reach the same end
8 and I think the question is whether -- sort of
9 where's the -- the right format and process for
10 doing that and it may be a question of timing.
11 This might have been started -- done before our
12 guidelines were out and things like that so I'm
13 not --

14 **MS. MUNN:** We have done it --

15 **DR. MELIUS:** -- necessarily faulting --

16 **MS. MUNN:** We have done it in working groups
17 before and -- and they've always demonstrated
18 that they did --

19 **DR. MELIUS:** And I think we've got a good
20 process for the working groups, but it hasn't -
21 - for various reasons, it didn't work here.

22 **DR. ZIEMER:** Okay, Mark.

23 **MR. GRIFFON:** I just -- I just do have to
24 respond to that 'cause I think I do disagree
25 with that. You know, we have asked for that

1 and I think that the workgroups have really
2 provided a good vehicle in that sense because
3 they -- they've -- the process has worked. In
4 the case of Cyclotron workers it was presented
5 to us that they could reconstruct doses at Y-
6 12. At the end of the day, they realized the
7 data they thought was there and was available,
8 when they tried to demonstrate to us that they
9 could do it, they could not do it. So I think
10 there are -- were certain subsets, at least,
11 that when they dug deeper they realized -- so I
12 think that's why we go down that route a little
13 bit. I think -- my sense for Chapman Valve is
14 that it's a very short time period, it's a --
15 you know, I -- I can't imagine as lengthy a
16 process, but I think we need to at least
17 investigate a few of these questions of -- of
18 the -- of this data and -- and the -- and the
19 approach they're going to use to reconstruct
20 (unintelligible).

21 **DR. ZIEMER:** Thank you. Board members, if the
22 motion passes, then I'd just give you a heads
23 up that we will need to add a workgroup for
24 this particular site to work with our
25 contractor and with NIOSH to address whatever

1 issues emerge.

2 Mr. Presley.

3 **MR. PRESLEY:** I'd like to hear from John Mauro.
4 What's -- if we do pass this, what's the time
5 frame that you all can jump on this and get
6 this done? I mean I hate to see this drug out
7 over the next year or so.

8 **DR. MAURO:** Absolutely not. The wheels are
9 turning as I was listening and I think the
10 folks did a very nice job in identifying all
11 the issues. The questions that Brad has raised
12 and everyone else are exactly the ones that I
13 was thinking about. I've already reviewed the
14 case where I looked at all the data, and as I
15 reviewed it, all the questions came to mind,
16 that is okay, given the -- it's called an
17 exposure matrix as opposed to a TBD, site
18 profile, it's a relatively small document. And
19 as I was doing the case, I said okay, we're
20 taking the information here on face value --
21 you know, I have -- I had (unintelligible)
22 questions that came up and -- and I wrote my
23 critique. What I'm getting at is this is an
24 easy one. Okay? Assuming that we can get
25 access to all the measurements, how they were

1 done, when they were done, questions like
2 relative to when the fires may have been, big -
3 - good one, and the results, whether they were
4 fluorometric or they were gross alpha or
5 isotopic -- I mean this is a -- an easy -- I
6 hate to say --

7 **DR. ZIEMER:** But you're prepared to move ahead
8 --

9 **DR. MAURO:** We could start -- I'm sorry --

10 **DR. ZIEMER:** -- without delay.

11 **DR. MAURO:** I'm sorry. The answer is, we could
12 start immediately and we're talking having a
13 draft report -- and I wanted to stick my neck
14 out -- oh, at the most, two months from now.

15 **DR. ZIEMER:** Thank you, John. Any other
16 comments, Board members? Anyone wish to speak
17 for or against the motion?

18 (No responses)

19 I want to make sure Mike is still on the line.
20 Mike, are you still with us?

21 **DR. WADE:** We're not hearing. Go ahead.
22 We'll get Mike's phone.

23 **DR. ZIEMER:** Board members, are you ready to
24 vote on the motion?

25 In effect, and without quoting it, the motion

1 is to delay action on the petition and to -- to
2 task our contractor to assist us in the -- in
3 assessing the issues related to this petition
4 as they've been discussed.

5 All in favor say aye.

6 (Affirmative responses)

7 Those opposed, no.

8 (No responses)

9 Any abstentions?

10 (Indicating)

11 Okay, the record will show Dr. Roessler and Ms.
12 Munn have abstained. But the ayes have it and
13 the motion carries.

14 **DR. WADE:** And the Chair's vote.

15 **DR. ZIEMER:** And the Chair -- the Chair would
16 vote "aye".

17 **MR. CLAWSON:** We don't have any conflict of
18 interests?

19 **MR. PRESLEY:** With Chapman Valve? I don't much
20 think so.

21 **MR. CLAWSON:** Just thought I'd check. I didn't
22 -- I never know.

23 **MS. MUNN:** I don't think on the Board.

24 **DR. ZIEMER:** Okay, thank you very much.

25 **DR. WADE:** Do we want to deal with the work--

1 the working group issue while it's fresh in our
2 mind?

3 **DR. ZIEMER:** Since our next agenda item is
4 Board work time -- well, maybe we should see if
5 any of the petitioners have any additional
6 comments for us. I don't know if Mary Realle
7 or --

8 **MS. REALLE:** I'm here.

9 **DR. ZIEMER:** -- or Johnny Ryan are still on the
10 line.

11 **MS. REALLE:** Mary Ann and Darlene are here.

12 **DR. ZIEMER:** Any additional comments? Any
13 additional comments from the petitioners?

14 **MS. REALLE:** Do I have any additional comments?

15 **DR. ZIEMER:** Yes. Yes.

16 **MS. WU:** This is Portia with Senator Kennedy's
17 staff.

18 **MS. REALLE:** Hi, Portia.

19 **MS. WU:** Hi. I just wanted to say thank you to
20 the Board for their thorough consideration. We
21 look forward to working with them and with
22 NIOSH as we go forward.

23 **DR. ZIEMER:** Very good. And I assume that as
24 we proceed with the workgroup and working with
25 SC&A and NIOSH that we will keep the

1 petitioners informed of workgroup meetings and
2 keep them apprised of any issues that arise.

3 **DR. WADE:** Right, we'll follow our normal mode,
4 which is the workgroup meetings will be open to
5 the public. We'll invite the petitioners and
6 will have the ability to fully participate in
7 the meetings.

8 **BOARD WORKING TIME**

9 **DR. ZIEMER:** Now we need to have a workgroup of
10 hopefully four individuals who will be willing
11 and able to work on this particular issue, the
12 Chapman Valve site. Do you have
13 (unintelligible) list?

14 **DR. WADE:** I can get it.

15 **DR. ZIEMER:** The Chair is always willing to
16 take volunteers for workgroups if there are
17 individuals that -- that wish to work.

18 **DR. ROESSLER:** May I make a recommendation?

19 **DR. ZIEMER:** You certainly may.

20 **DR. ROESSLER:** This is very much a
21 bioassay/internal dosimetry situation, and we
22 have one of the best experts in the country on
23 that, so I would hope that John Poston would
24 volunteer for this workgroup.

25 **DR. ZIEMER:** Well, John Poston -- John Poston

1 has volunteered to chair the workgroup.

2 **UNIDENTIFIED:** Thank you.

3 **MR. CLAWSON:** Way to put that.

4 **DR. ZIEMER:** Mark has volunteered to
5 participate. We'd like to get at least two
6 others. I -- I need --

7 **UNIDENTIFIED:** Dr. Ziemer?

8 **DR. ZIEMER:** -- need some balance here.

9 **UNIDENTIFIED:** I would --

10 **DR. ZIEMER:** Brad -- okay, one other person.

11 **MR. GIBSON:** I'll volunteer, Dr. Ziemer.

12 **MR. GRIFFON:** I think that Gen should
13 (unintelligible).

14 **DR. ZIEMER:** Gen Roessler, thank you. Oh, hang
15 on, Mike may be volunteering.

16 **MR. GIBSON:** Yeah.

17 **DR. ZIEMER:** Mike, are you on the line?

18 (No responses)

19 Mike, are you on the line?

20 **MR. GIBSON:** Yes, I was trying to volunteer.

21 **DR. ZIEMER:** Okay. Let's -- let's add Mike as
22 an alternate and specify that the alternates
23 can certainly participate in the meeting, so
24 basically have a five-person workgroup on this.
25 Don't want to overload people, but always like

1 to take care -- or take advantage of volunteer
2 workers.

3 Okay, did you get that?

4 **DR. WADE:** Yes, I can repeat. As I understand
5 it, the workgroup that will focus on Chapman
6 Valve SEC petition will be chaired by Dr.
7 Poston and include Mark, Brad and Gen Roessler,
8 with Mike listed as an alternate but able to
9 participate.

10 **DR. ZIEMER:** Well, we don't even have to call
11 it an alternate. Let's just make it a five-
12 person -- just make sure that we have enough
13 people. Okay, that'll be fine.

14 Okay --

15 **DR. WADE:** I'd like to, one more thing --

16 **DR. ZIEMER:** One more thing before we break.

17 **DR. WADE:** And that is to try and return to the
18 subcommittee activity relative to individual DR
19 cases six -- excuse me, 21 to 60. I -- I hope
20 now that everyone has in their possession the
21 draft of the letter to the Secretary and the
22 attachments. And I don't know, Mark, if you
23 want to walk us through this. I think we're
24 poised to --

25 **DR. ZIEMER:** I think we distributed a -- a

1 clean copy of the draft came around earlier.

2 **MR. GRIFFON:** Stu's table, same as the...

3 (Pause)

4 **DR. ZIEMER:** Okay, we have a copy of the
5 letter. Stu's table is with the -- in the old
6 -- under your old tab, so pull that out. Then
7 you have Attachment -- well, actually
8 Attachment -- or Attachment 1 is the table that
9 was in your old tab. Attachment 2 is the SC&A
10 summary, and there's two parts to that. It's
11 the summary of 18 case reviews and a summary of
12 22 case reviews. The second 20 is really 18
13 and the third 20 is really 22. And then the --
14 the final thing is the -- well, Attachment 3 is
15 the methodology for categorizing and ranking
16 the cases. And then the matrix is Attachment
17 4.

18 Does anybody find that they're missing
19 something?

20 (Pause)

21 I'm -- I'm going to entertain -- actually this
22 comes as a motion from the subcommittee to
23 accept this package to send to the Secretary.
24 I would like to add a caveat. I'm going to
25 task Mark with this. We found in the first

1 package that the numbers in the SC&A tables did
2 not match the numbers in the narrative paper;
3 that is, in the letter itself. I'm going to
4 ask Mark to double-check and make sure the
5 numbers in the narrative match the numbers on
6 the table, so this is basically the equivalent
7 of a grammatical check 'cause if they're not
8 matching up it's basically equivalent to a
9 typo. But -- and by -- by the -- by the
10 numbers, I'm looking at the bottom line, for
11 example, on the -- the 18 reviewed cases where
12 I have 113 -- let's see now, wait a minute, is
13 it 113 deficiencies, of which 103 were low.
14 And then on the second set there were 64
15 deficiencies, of which 50 were low. And it's
16 the total of those that we want to make sure
17 the narrative matches that. That'll only take
18 him a few minutes, and I guess, Mark, if they -
19 - if anything differs, just report to us, but -
20 -

21 **MR. GRIFFON:** The one thing, in the first
22 letter I -- I should point out first of all
23 that my letter was the correct numbers. SC&A
24 had the revi-- and why this happened is SC&A
25 reports comes out -- comes out first and then

1 we go through our -- our resolution process.
2 And what happened was a couple of the findings
3 were -- were changed so the rankings
4 (unintelligible) --

5 **DR. ZIEMER:** (Unintelligible) --

6 **MR. GRIFFON:** Right.

7 **DR. ZIEMER:** They were subdivided into pieces,
8 so one finding became two and so on.

9 **MR. GRIFFON:** So one thing I'm looking at here
10 in these -- in these SC&A executive summaries
11 is that there are several items that say --
12 that say "under review", and I'm not sure, some
13 of those may have -- since this report was
14 issued we may have -- have decided on those one
15 way or the other, so I'll check those numbers,
16 but essentially they're -- they're pretty
17 close.

18 **DR. ZIEMER:** So Board members, are we ready to
19 take action on this recommendation to accept
20 this package as a report to the Secretary,
21 subject to minor editorial changes?

22 Okay, all in favor say aye.

23 (Affirmative responses)

24 Any opposed, no.

25 (No responses)

1 Abstentions?

2 (No responses)

3 And Mike Gibson, I don't know if you have all
4 the stuff you need there. Is Mike still on the
5 line?

6 **MR. GIBSON:** Yes, I'm still here.

7 **DR. ZIEMER:** Is Mike on the line yet?

8 **MR. GIBSON:** Yes. Based on what I've heard, I
9 vote "aye".

10 **DR. ZIEMER:** Okay. Thank you, Mike. Thank
11 you. Motion carries, thank you very much.
12 Board members, I want to alert you to another
13 thing. You have in the back of your booklet
14 three sets of minutes that we will need to take
15 action on tomorrow. So what that means is that
16 you're just going to have to stay out of the
17 casinos tonight, out of the shows, and read
18 minutes. But I did want to alert you to that,
19 that we have three sets of minutes that we'll
20 want to act on during Board working -- working
21 time tomorrow.

22 The other reminder is that we are going to
23 reconvene this evening at 7:30 for the public
24 comment period. And with that, we will recess
25 for dinner.

1 **DR. WADE:** Okay. Well done.

2 (Whereupon, a recess was taken from 4:50 p.m.
3 to 7:30 p.m.)

4 **PUBLIC COMMENT**

5 **DR. ZIEMER:** I'll call the session to order.
6 This is the public comment session of the
7 Advisory Board on Radiation and Worker Health.
8 My name is Paul Ziemer. I'm the Chairman of
9 the Advisory Board, and I want to take just a
10 couple of minutes here at the beginning to tell
11 you a little bit about what this Board does and
12 what they do not do, because often we find that
13 at these meetings people don't always realize
14 what the role of this group is. Much as they
15 would like to think so, they are not all-
16 powerful. They actually have somewhat limited
17 roles in the program, and I want to sort of
18 define for you what those are.

19 Let me tell you first of all that the group
20 here -- and the full Board is not here tonight.
21 Actually one of our members is not here this
22 week due to illness. Another may not be here
23 tonight. He just learned that his father had a
24 heart attack and I don't know if he's having to
25 leave or not, but Mark may come in in a little

1 bit.

2 But in any event, this group is a group of
3 independent individuals. They're not working
4 for NIOSH. They don't work for Department of
5 Labor and for the most part -- I say for the
6 most part -- not for the Department of Energy,
7 but rather are appointed by the President of
8 the United States to serve as an independent
9 Advisory Board for NIOSH's part of the
10 compensation program. And specifically they
11 have a responsibility to advise the Secretary
12 of Health and Human Services on certain issues
13 dealing with the compensation program.
14 Those issues are the following. They are to
15 advise the Secretary on the quality of the dose
16 reconstructions that are done. And this is
17 done by sort of audit procedure. This Board
18 does not do dose reconstructions. They are not
19 a review board for folks who have not been
20 successful in a compensation case. Rather they
21 are an overseeing group that tries to audit the
22 quality of dose reconstructions. And part of
23 that audit process is learning from folks such
24 as yourself what your issues are. We -- we
25 don't get into the individual cases as a Board,

1 but we do, from the -- the various incidents
2 and various experiences that people have, learn
3 something about how -- how things are working,
4 or from other people perhaps not working, as
5 the case may be. But that is one of our
6 functions, auditing the quality of the dose
7 reconstructions.

8 A second responsibility this Board has is to
9 advise the Secretary of Health and Human
10 Services on the petitions for Special Exposure
11 Cohort. And of course here in Nevada you do
12 have a petition that is in process. And on
13 those petitions we have the responsibility to
14 review the petitions and to review the -- the
15 advice given by NIOSH and make a separate
16 determination or a separate recommendation to
17 the Secretary of Health and Human Services as
18 to whether or not such a petition should be
19 granted. So those are two main things that
20 this body does.

21 We also get involved in advising the Secretary
22 on anything related to that, such as the
23 quality of the site profiles that are developed
24 in connection both with dose reconstruction and
25 with the Special Exposure Cohorts.

1 Again, we don't -- we don't deal with
2 individual cases. We're not a review board or
3 act in that capacity.

4 We do appreciate the public comments that we
5 get that give us insight as to how the system
6 is working. Perhaps where there are issues
7 that you have, in some cases, in a generic way,
8 we can help solve those. Or if you have a
9 particular problem, we're often able to point
10 you to the right people to help you. And I
11 might tell you that there are a number of NIOSH
12 staff people here, many here in the room
13 tonight that will be able to help in individual
14 cases if there's -- if there is something that
15 you have a concern about or need to talk to one
16 of them, we'll -- we'll try to link you up with
17 the right person.

18 Let me tell you a little more about the
19 individuals here. I'm not -- their names are
20 on the table. But we have a mix of folks, and
21 this is specified in the law that has
22 established the compensation program. This
23 Board is, under law, required to be made up of
24 some physicians -- occupational health
25 physicians, mainly; some health physicists or

1 technical people, mainly health physicists or
2 nuclear engineers; individuals representing the
3 worker community or the labor community, and so
4 that is the kind of mix of folks we have here.
5 Some of these are retired, such as me. I'm a
6 retired professor of health physics from Purdue
7 University. Let me point out here we have Dr.
8 Poston, who is a Texas A&M professor; should be
9 retired, but hasn't. He's in health physics.
10 Dr. Gen Roessler, retired, health physics,
11 University of Florida. Wanda Munn has a
12 nuclear engineering background. Bob Presley
13 over here, who has spent most of his career at
14 Oak Ridge in the weapons program and spent much
15 of his time here in Nevada at the Test Site
16 installing and putting together weapons -- and
17 I can't tell you what he did or I'd have to be
18 shot afterwards. Dr. Lockey is a public health
19 physician. Who did I miss here? Brad Clawson
20 is an operator -- let's see, give me the right
21 title, Brad.

22 **MR. CLAWSON:** I'm a senior (unintelligible).

23 **DR. ZIEMER:** Senior operator, Idaho National
24 Laboratory. I mentioned Dr. Lockey. Dr. Wade
25 is what's called the Designated Federal

1 Official. A board such as this is required to
2 have a fed sit there and be our -- our -- what
3 do you do for us? He makes sure we follow the
4 federal regulations that we act under. He's --
5 he's great, and helps keep us on track in terms
6 of our agendas and so on.

7 The other fella, who some people think has a
8 breathing problem and is on oxygen, is actually
9 our court reporter. And I should tell you Ray
10 Green, for several years, has been credentialed
11 as the top court reporter in this country, so
12 we're glad to have Ray with us.

13 Okay, so that's the group here and Dr. Melius
14 may be able to join us in a little bit. He
15 also is an occupational health physician and is
16 not able to be here right at the moment but
17 hopefully will be able to come in later.

18 So that's the group. We -- and I have to be
19 careful 'cause I get to talking too much.

20 We're going to go right down the list as I have
21 it, and people have indicated what their times
22 were. I'm not real nasty. Monitor your own
23 time and try to stick with it. We're going to
24 start with John Funk, and John did address the
25 Board yesterday and he's back. John -- and any

1 of you are welcome to use either this mike or
2 the podium, but this is probably better.

3 **MR. GIBSON:** Dr. Ziemer, just for the record,
4 I'm on the line. This is Mike.

5 **MR. FUNK:** Dr. Wade, other Board members, I'd
6 like to expound a little bit on my testimony
7 from yesterday.

8 **DR. WADE:** Hold on for a second. We have --

9 **MR. FUNK:** (Unintelligible)

10 **DR. WADE:** Okay. Thank you. Mike Gibson, you
11 might say is on the line, a Board member, and
12 say who he is.

13 **DR. ZIEMER:** Oh, okay, thank you. I neglected
14 to mention that Mike Gibson, the Board member
15 who I mentioned was not here due to illness, is
16 with us by telephone. Mike is basically a --
17 background in representing the unions and
18 currently is a private consultant, but that's
19 his background. So Mike, I hope you're on the
20 line and able to hear okay. So -- okay, we'll
21 proceed.

22 **MR. FUNK:** Is it all right to go ahead? Can
23 you hear me?

24 **MR. PRESLEY:** No, turn that...

25 **MR. FUNK:** Can you hear me now?

1 **MR. PRESLEY:** No, I don't think that mike's --

2 **MR. FUNK:** I'd like to expound on some of the
3 things I talked about yesterday that we didn't
4 get a chance to cover, and one of the main
5 issues is the practice of reuse at the Nevada
6 Test Site. It has never been mentioned
7 (unintelligible) I can't find it anywhere, but
8 we used all the equipment on that site, all the
9 test trailers, the office stations which were
10 buildings that were designed to
11 (unintelligible) the coaxial cables and moni--
12 send signals (unintelligible) equipment. These
13 were large, 100,000-pound buildings -- excuse
14 me -- yeah, 100,000-pound buildings. They had
15 ten shock mounts on them and they just -- the
16 shock mounts we built would withstand ten Gs of
17 force.

18 The reason I mention this, 'cause all too often
19 if you say you worked in area three carpenter
20 shop, you get tagged as a shop carpenter. It
21 goes back to NIOSH and the way they look at it,
22 you never left the shop so how could you
23 possibly be exposed? Well, the shop area was
24 merely a staging area. The iron workers had a
25 shed; that was their staging area. The

1 operators had a yard; that was their staging --
2 (unintelligible) so forth and so forth. So we
3 got to take away these titles being tagged to
4 us and we have to understand that these -- when
5 we say area three carpenter shop, we really
6 mention this as a staging area and not an area
7 where -- we worked there sometimes when we had
8 shop work to do, but the majority of the time
9 people spent in the field. There's not just
10 carpenters, there was laborers, there was all
11 craft-- there was exactly 13 crafts on the Test
12 Site which covered 22 jurisdictions. And there
13 was I believe 26 separate collective bargain
14 agreements out there, so that shows you how
15 complex this really is. And every craft had
16 their own welder. So you have a carpenter, you
17 have electricians, you got pipe fitters -- and
18 then again, on top of that, you have a welder
19 representing each one of them crafts. This is
20 no -- nowhere (unintelligible) out of my
21 understanding.

22 Now the work that we did down there we did not
23 call standard construction work like downtown
24 when you're building a building. The work was
25 generally supportive work supporting the users

1 -- well, which we referred to as users. It's
2 the scientists out of the United States Energy
3 Research Developers. Our job was to go down
4 there, do the mechanical work that they would
5 do and they would supervise it. So we were
6 essentially partners with the users. So for us
7 to get tagged in the crafts and for us to be
8 identified with the crafts is not a correct
9 assumption of what we did.

10 And I'd like to go further along and get up to
11 the tunnels. I look in a dictionary's
12 definition of a tunnel, it's a hole through a
13 mountain where it goes in and comes out. Well,
14 yeah, that's a (unintelligible). These were
15 not the case out there. These were cavities
16 that were cut into the mountains by miners.
17 Once they were cut into the mountains, other
18 crafts came in. You had carpenters came in,
19 you had pipe fitters, you had electric, you --
20 every craft there was was inside them tunnels,
21 and they all had a certain job to do.

22 Now these people should be referred to as
23 underground workers, not miners. And all too
24 often you say you worked a tunnel; well, what
25 craft are you in? Well, I was in another

1 craft. Well, you couldn't have been in there
2 because only miners went in there. That's not
3 the truth. That's not the case. There was all
4 crafts -- in fact, the miners, once the tests
5 got underway, were the minority in there. And
6 less than probably eight percent of the people
7 inside the tunnel was actually miners. The
8 rest of them was from all sources. So the
9 tunnel was essentially a laboratory carved out
10 of the mountain and it was -- the only needs
11 that were developed in there was for laboratory
12 needs. This was -- no creature comforts in
13 there. There was no running water and no
14 toilet system or no sewerage system. You built
15 it big enough to put what you had to put in
16 there, test equipment. That's all you did.
17 As far as the air supply coming in there, it
18 was minimum. In fact, I showed some of the
19 people here today from Sanford Cohen and some
20 of the others what the -- the air lines --
21 there was four air lines went in there 36-inch
22 diameter, and they had roughly, my calculation,
23 about -- it come out 21 feet a minute, but I
24 don't have my figures or my mathematic figures
25 here, but it translated to three air changes a

1 day. In this room right now there's six air
2 changes an hour at the least and ten at the
3 maximum, so that tells you what the air flow
4 was like in there. The oxy levels would have
5 been far below anything accepted in any other
6 area.

7 And not only did you have this bad air, but you
8 had a lot of ambient toxics, especially diesel
9 exhaust. Not till 1986 was a catalytic
10 converter put on a motor that went in them
11 tunnels, and they had to buy -- even had to go
12 overseas to get that. They bought Dukes*
13 diesels after that, but the old American
14 Plymouth diesels -- that's what they were,
15 Plymouth -- that worked back in there. They
16 had nothing more than a box of soapsuds that
17 the exhaust would pass through and exit into
18 the tunnel and that was supposed to be
19 (unintelligible). All it did was make it smell
20 better, but it didn't catch anything, and there
21 was a lot of diesel exhaust in there.

22 I don't have it with me today, I'm going to
23 give it to you tomorrow, but I've got a Peter
24 (unintelligible) underground book which I was
25 given when I worked at Yucca Mountain and I'd

1 like to make note of that, that a catalytic
2 converter's not even mentioned that, and that
3 was in 1994 -- '95. They don't even mention
4 catalytic converters even then, so this was a
5 practice to use diesel exhaust in them tunnels
6 without catalytic converters.

7 One other thing I'd like to touch on, there's
8 been some discussion on it, there was records
9 that were buried out there, 1997. I talked to
10 Dr. David Michaels from -- when he was
11 assistant secretary to Bill Richardson when he
12 was at the Flamingo Library in November of
13 2000, and one of the questions I asked him is
14 what would it take to get my hands on material
15 safety data sheets, because with NIOSH's plan
16 Part E you've got what, where, when. Well,
17 you've got to know what you were dealing with,
18 when it happened and when (sic) it happened,
19 and the only way we can do that is we have to
20 get the MSDS sheets 'cause that has the toxins
21 right -- listed on it. And he said well, all
22 you've got to do is ask for them. I said
23 that's not true because I filed freedom of
24 information and still didn't get them. So he
25 asked Dr. Luke Pepper* who was sitting in the

1 office -- or sitting in the audience with Sandy
2 Medina* and two DOE executives, and the DOE
3 executives said that the tunnels
4 (unintelligible) T, P and N had filled up with
5 water, all the records had gotten damaged and
6 they'd been taken to the landfill and that they
7 were attempting to reconstruct them records.
8 Now DOE's (unintelligible) right now so them
9 records were of no significance. I don't agree
10 with that. Those tunnel logs, those materials
11 safety data sheets in there, there was air
12 sample reports, there was a lot of things --
13 there was individual log books. I think them
14 log books could be -- have some bearing on the
15 -- what went wrong in them tunnels for your
16 dose reconstruction, and I would say -- I'd
17 leave it up to somebody else to decide how
18 significant them records are rather than taking
19 somebody's word. There were records buried.
20 They've admitted it. So I'd like to see that
21 looked into if you wouldn't mind.
22 That's about it, I -- thank you.

23 **DR. ZIEMER:** Thank you very much. The tunnel
24 that you mentioned, is that -- have a specific
25 designation --

1 **MR. FUNK:** Excuse me?

2 **DR. ZIEMER:** The tunnel that you mentioned,
3 does that have a specific designation, a number
4 or --

5 **MR. FUNK:** I left my hearing aid in the car.
6 Ask me again.

7 **DR. ZIEMER:** The tunnel that you mentioned,
8 does it have a specific number or designation -
9 -

10 **MR. FUNK:** Yes, there's three of them, P, T and
11 N.

12 **DR. ZIEMER:** Okay, thank you.

13 **MR. FUNK:** They said tunnels, plural. They all
14 filled up with water, the blast doors were open
15 on all of them. All the records were damaged
16 (unintelligible).

17 **DR. ZIEMER:** Thank you.

18 **MR. FUNK:** There's probably a couple more out
19 there but I can't remember now.

20 **DR. ZIEMER:** Next we'll hear from --

21 **MR. FUNK:** P, T and N.

22 **DR. ZIEMER:** Okay -- Jan, and I am having a
23 little trouble with -- it looks like G-a-u-n-c-
24 - last name --

25 **MS. GAUNCE:** Gaunce, Gaunce.

1 **DR. ZIEMER:** Okay, Jan, thank you.

2 **MS. GAUNCE:** Okay. Can you hear me? Okay. My
3 name's Jan Gaunce. I'm addressing this panel
4 for two reasons. One, I want to ask about the
5 22 kinds of cancer that is part of the Special
6 Exposure Cohort group. Since this is about
7 radiation, why doesn't the cancers -- why isn't
8 it all radiogenic cancers? So that's my first
9 question.

10 And then the second one is the 250-day
11 residency requirement for the NTS Special
12 Exposure Cohort group. My husband was in his
13 early 20s when he went to work for ACF
14 Industries in Albuquerque, New Mexico. He
15 worked for -- he was a contractor for LANL and
16 they did work for NTS. He worked on the Rover
17 project as an engineer and he came to NTS for
18 the test sites -- for -- when they did the test
19 shots. He did the post mortem on them. And
20 when the work got critical, he was told to take
21 his dosimeter badge off, leave it outside while
22 he went inside to do the work. That's just
23 some background stuff, not anything I'm asking
24 you to address.

25 NTS is a different kind of site than most, and

1 the health endangerment was different. Most
2 people who worked at NTS came to the test site
3 for the shots, then left after a few days.
4 Only a small core of necessary employees lived
5 at Nevada and worked full time there. The job
6 the employee did at the site determined the
7 amount of radiation they received, not how many
8 days the employee lived there.

9 If you're standing next to a terrorist one
10 second before he pulls the cord, that's the
11 wrong second to be there. And I feel the same
12 way about the residency requirement.

13 You on the panel can treat NTS special cohort
14 group differently if you choose to, and waive
15 the 250-day requirement. Presence is
16 sufficient for criticality.

17 **DR. ZIEMER:** Thank you, Jan, for those
18 comments. And in terms of your initial
19 question, we could probably give you -- maybe --
20 - maybe one of the NIOSH people would give you
21 the answer to that. For example, on the 22
22 kinds of cancer which is specified in the law
23 and so in essence we are bound to that --

24 **MS. GAUNCE:** Can you help change it? What
25 (unintelligible).

1 **DR. ZIEMER:** The 22 types of cancer which are -
2 - basis of -- they -- they are -- that's in the
3 legal framework in which we operate, can this
4 Board change that? No. There -- there are --
5 there are certain things that could be changed
6 legislatively.

7 The 250-day issue is one which this Board is
8 actually looking at in terms of how one
9 interprets that. For example, how do you
10 treat someone who may have been assigned to the
11 Test Site and was say living in Mercury 24/7 or
12 something like that, so they may have had more
13 than eight hours a day of exposure, can you do
14 a weighted average. For example, is that
15 equivalent to 80 days of -- of continuous
16 exposure and this Board is actually looking at
17 those issues and perhaps will have a
18 recommendation. We recognize some of the
19 problems, even with a -- starting with the 250-
20 day, which looks to many to be somewhat
21 arbitrary.

22 But that -- the current law that we operate on,
23 which follows some other laws which set that
24 precedence, are the starting points. There
25 would appear to many to be a sort of

1 arbitrariness to it, but that's what we're
2 operating under from the legal framework at the
3 moment. But we understand the point and have
4 struggled with that to some extent ourselves,
5 so -- but maybe -- maybe after the meeting one
6 of the NIOSH people can also give you
7 additional details on both of those issues if
8 you wish.

9 Let's proceed with Dianne -- it looks like
10 Rudnicki -- Rudnicki? Dianne, you might have
11 to lower that mike a little bit there.

12 **MS. RUDNICKI:** Can you hear me?

13 **MS. MUNN:** Yes.

14 **MS. RUDNICKI:** My name is Dianne Hanna Rudnicki
15 and I'm here tonight to talk to you about my
16 husband of 49 years, Gordon Hanna. He started
17 working at the test site in April, 1962 and
18 continued his work there through 1968. To go
19 back to the 1962 period, I realize that my
20 being here tonight is because he did not work
21 250 eight-hour days in 1962. What I'd like you
22 to consider is that in that period he remained
23 at the Test Site 24 hours a day. He didn't
24 commute, as they had a great deal of overtime
25 and we lived in Henderson, which is quite a

1 ways. I would also bring to your attention
2 that the employment records from that period
3 are incomplete because I was told they are
4 missing. Because of the tests they are still
5 conducting at -- they were still conducting at
6 the Nevada Test Site through 1962, he
7 sacrificed many hours away from his children
8 and our home. He was very proud of the work he
9 was doing for his country, but was very closed-
10 mouthed about it. That is why I don't know a
11 great deal of what he did out there, very
12 little. He did participate in the Sedan
13 Crater, and I knew that because he brought home
14 a certificate that he had been involved.
15 He began to question the safety of his workers
16 when -- of the workers when his coworker and
17 friend, Keith Prescott, was carried off the job
18 and diagnosed with bone cancer. My husband
19 remarked that he wondered why they wore
20 exposure badges because nobody really bothered
21 to read them or check them. I realize now that
22 he was concerned because he worked in the
23 tunnels at ground zero, building up the
24 bulkheads both before and after the bombs were
25 detonated. Another indication that things

1 weren't quite right is that many of our friends
2 that worked with him -- Alvin Shoemaker, Lester
3 Richards, Keith Prescott and Ronald Bowden --
4 all died of cancers.

5 I'm here tonight to provide you with
6 information that my -- I feel that my husband's
7 death was directly related to his employment at
8 the Nevada Test Site. I can only relate to you
9 the deterioration of his body that began in
10 1996.

11 In August of '96 he was diagnosed with squamous
12 cell carcinoma of the right ear. August 29th,
13 '96 he was diagnosed with basal cell carcinoma
14 of the right temple. March, 1997 he was
15 diagnosed with carcinoma of the parotid gland.
16 September 26th, 1997 he was diagnosed with
17 myelofibrosis with myelotoid (sic) metaplasia.
18 And January 29th he was diagnosed with squamous
19 cell carcinoma of the left lung.

20 I have been advised that the criteria for the
21 participation in the Special Cohort Status is
22 that the employee has at least one cancer. My
23 husband had all five of these and they are all
24 on the compensable list. Clearly I'm not a
25 scientist or a doctor, but I know that what he

1 was exposed to was not limited to 250 days in
2 1962, and that our family and his suffering was
3 immeasurable. Perhaps due to the devastating
4 effect of the traumas his body sustained during
5 the periods of this, he suffered from a femur
6 bypass, an aorta replacement, colonostomy, an
7 aneurysm which was ruled inoperatable (sic)
8 because he had a blood disease. With all of
9 this in mind, we were unprepared for what
10 happened in 1990 -- 1996.

11 The myelofibrosis diagnosis was probably the
12 most devastating time in our lives, as that
13 brought with it the prognosis that he had two
14 years to live. We were also told that the --
15 by his doctors that the only probable link to
16 the cause of this disease was exposure to
17 radiation. Myelofibrosis, for some of the
18 folks here, is an insidious form of blood
19 disease and loss of bone marrow function which
20 causes the liver and the spleen to attempt to
21 replace production of blood function. In turn
22 it causes an extremely painful enlargement of
23 the spleens -- spleen. Patients are kept alive
24 eventually with transfusions, but that's a
25 short period and death occurs. He fought with

1 everything he had and lived another two and a
2 half years until he died. And when he was died
3 -- and when he died -- at the end of January,
4 he was diagnosed with lung cancer, which had
5 metabolized into his bone -- bones, and his
6 oncologist/hematologist said he had two weeks.
7 At that time he was being kept alive by blood
8 transfusions, undergoing radiation therapy for
9 enlarged spleen, and would be dead by the rapid
10 advance of the myelofibrosis within a month.
11 On February 11th, 1999 at 10:00 p.m. he took
12 his last breath and Gordy was finally set free
13 from the horrible pain and agony he suffered.
14 In the year 2000 I began the process of filing
15 a claim for survivor benefits under the EEOICPA
16 Act of 2000. In January 2002 my claim was --
17 what I led to believe was verified employment.
18 However, DOE was unable to provide the correct
19 work days and they admitted that part of the
20 records were un-- just were missing. But we
21 also had verification for the five compensable
22 cancers was for-- and this was all forwarded to
23 NIOSH for dose reconstruction. It is now
24 September 20th, 2006, four -- four years and
25 eight months later and the dose reconstruction

1 activity reports I've received throughout the
2 years have not indicated any prog-- progress
3 whatsoever. My most recent call to NIOSH,
4 which was about a month ago, revealed that they
5 had halted all work on his dose reconstruction
6 due to the possibility of my claim being
7 approved -- might be approved for Special
8 Cohort status.

9 Tonight I have finally had the opportunity to
10 present his story to a board that understands
11 and has the power to maybe help us do a --
12 right a terrible wrong that was committed 44
13 years ago. For my family and the others who
14 have lived with this for years, I pray that
15 you, as an Advisory Board, will have the
16 courage to do the right thing and recommend
17 that these brave Americans receive the
18 recognition that they deserve. Thank you.

19 **DR. ZIEMER:** And thank you, Dianne, for sharing
20 with us what I know is a very difficult task to
21 do.

22 Robert Kromrei -- Kromrei? Yes, Robert.

23 **MR. KROMREI:** I worked for the building
24 department out there at the Test Site from '60
25 through to -- well, excuse me, '76, I guess

1 (unintelligible) crane (unintelligible). When
2 I worked in the building department I was re-
3 entry on the -- on the explosions, and a lot of
4 times I was sent out -- I was what they called
5 burnout, had too much radiation, be out three
6 or four hours, sent back in, burnout again.
7 Dosimeters were removed, replaced, and all this
8 stuff went on all the time when I was working
9 out there and a lot of my friends are dead and
10 that's why I'm here right now in this chair,
11 but that's basically the way that thing was
12 operated out there. And I -- I've -- working
13 one night (unintelligible) and something went
14 wrong and we pulled out, it was -- the hole was
15 so hot it melted the steel pipe right off, and
16 then we had to go out and back off and leave it
17 go for a month, but things like this went on
18 continually, day and night, and people --
19 sometimes we had to run for about a half-mile
20 up the road to get away from radiation and
21 everything else, but -- and above-ground
22 explosions, I spent two days in there one time
23 'cause I couldn't get out because of them
24 explosion above ground. And I just wanted to
25 let you see that all the -- we get from --

1 well, for the records and everything else is
2 not exactly right. It's not -- it can't be
3 right. And I know that I've -- I've had to --
4 well, I can't complain myself 'cause you guys
5 take pretty good care of me but -- so far,
6 anyway, but anyway, other people I know of that
7 -- there are a lot of them that are suffering,
8 just like I am, and they're getting no help at
9 all, so -- and I know a lot -- it's got to be a
10 lot of this at the Test Site and so that's
11 about all I got to say is that there -- on this
12 reconstruction, it's -- it's way off from our -
13 - my opinion because I can tell you hundreds of
14 times that this went on through -- you know,
15 through them years, and there's a lot of other
16 guys will back that up, too. Thank you very
17 much.

18 **DR. ZIEMER:** Robert, would you -- could you
19 clarify one point that you made. If I heard it
20 correctly, you indicated that -- what you
21 described as burnout, which I assume meant that
22 you reached --

23 **MR. KROMREI:** I reached maximum radiation --

24 **DR. ZIEMER:** -- your (unintelligible) for that
25 job --

1 **MR. KROMREI:** -- yeah.

2 **DR. ZIEMER:** -- and you were pulled out, and
3 then were put back in what, the same day?

4 **MR. KROMREI:** Same -- four hours later.

5 **DR. ZIEMER:** With a different film badge or --

6 **MR. KROMREI:** Yeah, I -- they took my dos--
7 they took everything away from us and sent us
8 back in. I don't know -- we don't know what --
9 our film badges, we never did hear nothing
10 about them. We don't know what happened to
11 them.

12 **DR. ZIEMER:** I see.

13 **MR. KROMREI:** Dosimeter we could look at
14 ourselves, but I've seen mine peaked out
15 hundreds of times and they -- they'd take it in
16 to rad safe, that's what the radiation -- they
17 just give you another one and tell you to, you
18 know, carry on. They'd check you over, you
19 know, actually, but that don't mean nothing,
20 either, but --

21 **DR. ZIEMER:** Okay, thank you.

22 **MR. KROMREI:** -- that's -- yeah, that's what it
23 is, is just -- burnout means that you're burned
24 out, you know, pretty --

25 **DR. ZIEMER:** Right.

1 **MR. KROMREI:** I don't know the year, the day or
2 what it was. I'm -- I thought it was for the
3 whole year is what I thought it was.

4 **DR. ZIEMER:** Well -- yeah, that -- that
5 obviously is a question I think many of us have
6 experienced that they're -- typically on many
7 jobs were daily and weekly limits, so -- yeah,
8 uh-huh.

9 **MR. KROMREI:** Thank you.

10 **DR. ZIEMER:** Thank you. Okay, let's go next to
11 Patricia Niemeier.

12 **MS. NIEMEIER:** I have a copy here for you guys.
13 I (unintelligible) make enough, but --

14 **DR. ZIEMER:** No, that's fine --

15 **MS. NIEMEIER:** -- (unintelligible) two of
16 these.

17 **DR. ZIEMER:** -- we just need one, that's fine.

18 **MS. NIEMEIER:** Okay, great. Hello, my name is
19 Patricia Niemeier, daughter of Richard Favela.
20 I am a survivor and witnessed my father's
21 death. I now have the burden of proving his
22 exposure to toxic radiation due to working at
23 Nevada Test Site, and in turn died due to his
24 exposure. Let me state in advance that
25 lymphoma of the stomach and esophagus was

1 considered rare at the time of his death. Now
2 it is my job to explain what happened to my
3 father.

4 Richard Favela was employed at the Nevada Test
5 Site with start dates of 3-16-1960 through 9-
6 31-1969 (sic). There were several start and
7 end dates.

8 There are indications of an unreported incident
9 that may have occurred that kept my father from
10 working. My mother, Josette Favela, married my
11 father in 1962. She was from France and knew
12 very little English. She recalled moments when
13 I was too little to remember what was going on
14 with my father while he worked at the Nevada
15 Test Site.

16 She does recall his job being extremely
17 secretive and remembers a time that he had
18 circular red spots on the middle of his back
19 and vomiting during his time of employment at
20 Nevada Test Site. Many times my father would
21 not speak of his vomiting, rashes or pain to my
22 mother. He had also taken off time from work
23 due to stomach pain. I witnessed depression
24 and hopelessness.

25 We are talking about a man who served in two

1 branches of the armed services to our great
2 country. He did not give in to pain easily.
3 In April 1964 he was hospitalized for stomach
4 pain. Years later my father died well before
5 he should have at age 62 in 1998 of cancer that
6 was listed fourth on the radiation-caused
7 cancers. According to NIOSH site profile audit
8 findings, ingestion -- ingestion of large
9 particles due to oro-nasal breathing may
10 increase GI tract doses to workers who re-
11 entered weapons and reactor testing areas
12 shortly after tests. Radiation badges doses
13 unreliable due to misuse. The Nuclear Rocket
14 Development Station where Richard Favela, my
15 father, worked had no method of addressing hot
16 particle doses.

17 The NTS contaminated my father, Richard Favela,
18 and it is known even by the DOE that the level
19 of monitoring was inconsistent, irregular and
20 overall untrustworthy. This is why I, Patricia
21 Niemeier, have to stand up for my father who
22 was exposed to radiation that eventually killed
23 him.

24 Prior to my involvement with the EEOICP since
25 July of 2001 under that program, I received a

1 deficiency letter in October of 2000 under the
2 Radiation Exposure Program. Since then I've
3 received two denial letters under the EEOICP.
4 The latest for consideration dated May 6th,
5 2006 which I have not heard back from the
6 program. Upon hearing about the July 2006
7 special cohort of 250 days or more of
8 employment was great, however Richard Favela
9 falls short of approximately 20 days.
10 Let it be known that I received a letter in
11 2004 addressing Mr. Carlson denying him of his
12 skin cancer. My father's Social Security
13 number was on that letter. I called for an
14 explanation and I was told someone would get
15 back to me, and that never happened. That said
16 to me right away that the ability to make
17 decisions and a cohesive knowledge of what is
18 going on throughout the department is poor at
19 best. A mistake as simple as a cover letter to
20 the wrong person sends a signal of incompetence
21 in the department and researchers.
22 In February 2004 NIOSH requested medical
23 records. Margo Hornback reviewed these records
24 and said the diagnosis was B-cell lymphoma.
25 Medical records indicate D-cell. She stated

1 that the typo mistake was from the doctor.
2 This typo is on three pages, over and over on
3 my father's medical records. We cannot accept
4 this.

5 My father had a painful death along with
6 treatment for two years. The doctors had
7 removed his stomach. He became weak and as
8 thin as a rail. With the chemo and radiation
9 he needed, he did not have the financial
10 resources to fight. The cancer eventually
11 metastasized to his spine. He could not move
12 his legs. The hospital told me they were not
13 care-oriented but cure-oriented. They moved
14 him to a dirty, old convalescent home where he
15 died alone and scared, and I will never, ever
16 forget his death and his pain.

17 He is not here to stand up for himself. I am
18 his survivor, along with my sister Claudia,
19 representing him today. Richard Favela was an
20 American hero, a son, a brother and a father,
21 but never a grandfather to our children.

22 Thank you.

23 **DR. ZIEMER:** Thank you, Patricia, for sharing
24 that.

25 Next we'll hear from Lori Hunton.

1 **DR. WADE:** Lori wants to have someone come with
2 her, I think.

3 **DR. ZIEMER:** Lori, did you ask for someone else
4 to participate with you or...

5 **DR. WADE:** No.

6 **DR. ZIEMER:** No? Okay. I got a mis-message
7 then, okay. Proceed.

8 **MS. HUNTON:** Thank you for allowing me to speak
9 to you once again. My name is Lori Hunton. I
10 had the privilege of testifying before the
11 Board in June 2006 in Washington, D.C. on the
12 behalf of myself and my other workers and
13 survivors who worked at the Nevada Test Site.
14 As you remember, my father, Oral Triplett*, was
15 employed at the Nevada Test Site from January
16 30th, 1962 through September 30th, 1970. My
17 father was diagnosed with lung cancer in August
18 of 1975 and passed away on November 20th, 1975.
19 I was only 16 years old. My father left behind
20 four children, a widow and a grandchild.
21 During the time my dad was ill I remember
22 coming home from school, opening the front door
23 and there was dad, lying in a hospital bed in
24 the front room. He could hardly see, he could
25 hardly move. He had lost so much weight from

1 the chemo and radiation it was terrible.
2 Imagine being 16 years old and seeing your dad
3 suffering like that. It was devastating.
4 As you remember from my testimony in D.C., one
5 night when I was very young my dad came home
6 from work with little red welts on the side of
7 his face. I remember saying Daddy has cheerios
8 on the side of his face. These marks were
9 caused by radiation exposure at the Nevada Test
10 Site. I believe it can only take one time to
11 receive a deadly exposure from radiation, only
12 seconds. It doesn't take 250 days to be
13 exposed to radiation. Remember those little
14 red cheerios. I ask you to please add those
15 with less than 250 days to the pre-1963 SEC.
16 Acute exposures deserve compensation, as well.
17 I would also like to take and add on March 15th
18 I went to the Resource Center located at 1050
19 East Flamingo for my hearing. I gave them
20 copies of my dad's work records that show that
21 he worked at the Nevada Test Site from January
22 30th, 1962 through September 30th, 1970. They
23 have dose readings of my dad until 1975. He
24 passed away in 1975. The NIOSH readings are
25 incorrect. If someone does not work there, how

1 can you give them dose readings? And if they
2 give you a higher reading when they do the dose
3 reconstruction, this is still not an accurate
4 reading. I was told that NIOSH was getting
5 paid millions of dollars for the dose
6 reconstruction program. With all of the
7 hundreds of inaccurate readings, they should
8 have paid the workers and survivors years ago.
9 It has been six months and we still haven't
10 received any information on the hearing from
11 March 15, 2006. Over a year ago I called to
12 check on the status of our case. I called the
13 Department of Labor at the Seattle office and
14 spoke with an employee there. He said that he
15 needed additional information, a copy of my
16 mother's marriage certificate showing her name
17 had changed -- she remarried -- so my
18 stepfather faxed him a copy. The next day I
19 called and I asked him if he'd received the
20 fax. He said yes, he did, but he was
21 recommending denial. I asked him why. He said
22 that the dose reading levels were too low. I
23 said after all these years, it takes one phone
24 call to be denied? We have been seeking
25 compensation for 29 years. He asked if I had

1 children. I said yes, I have three. He told
2 me that my children could carry on the claim.
3 How many more years and generations is it going
4 to take before the Nevada Test Site workers and
5 their families are compensated?

6 Thank you again for the opportunity to
7 represent the Nevada Test Site workers and my
8 family. Thank you.

9 **DR. WADE:** If we have Kathleen Rozner.

10 **DR. ZIEMER:** Is -- is Katherine Rozner --

11 **DR. WADE:** Katherine.

12 **DR. ZIEMER:** Oh, okay, Katherine is --

13 **DR. WADE:** Kathleen.

14 **DR. ZIEMER:** -- in the office of Senator Reid
15 and I think has some remarks pertaining to this
16 case.

17 **MS. ROZNER:** Actually someone we're working
18 with would like me to read the following.

19 **DR. ZIEMER:** Yes.

20 **MS. ROZNER:** The following is testimony from
21 Gene Campbell, who is a driller at the Test
22 Site. He worked there in 1959 and then again
23 from 1962 to 1991.

24 (Reading) I worked from '62 through '64 in
25 tunnels and shafts as a rotary drill operator,

1 (unintelligible) classification. After a
2 nuclear detonation in G tunnel, I moved a core
3 rig inside the tunnel near ground zero and
4 drilled through the sandstone formation towards
5 ground zero. The humidity and the temperature
6 was extreme. I believe we were approximately
7 100 feet from ground zero. I worked three or
8 four eight-hour shifts at that location. I've
9 no knowledge of what the radiation exposure
10 was. I (unintelligible) in Area 12 from '62
11 from several months off and on, again, through
12 '64.

13 From 1963 through 19-- okay, I'm sorry. From
14 July of 1963 through September of '63 I drilled
15 at the Test Site near Carlsbad, New Mexico. We
16 went down a shaft to 800-foot level
17 approximately and in a room on that level set
18 up a drill rig. A nuclear device had been
19 detonated earlier. I drilled a horizontal hole
20 into ground zero and then opened, enlarged, the
21 hole. The cuttings and drilling fluid, water,
22 was circulated back into a water trough. The
23 object was to collect as much cuttings from
24 ground zero as possible. I wore rad-safe
25 protective clothing. However, there was no

1 containment equipment during the drilling
2 operations. I have no knowledge of the
3 radiation exposure that day.

4 While post-shot drilling on the Boyles angle
5 rig from 1963 to 1965, containment was non-
6 existent on the drill hole, casing or drill
7 pipe. It wasn't unusual while sidewall
8 sampling for steam, rocks and debris from
9 ground zero where we were taking samples coming
10 back up through the drill pipe and shooting in
11 the air 20 to 30 feet. We drilled many holes
12 without containment.

13 From 1965 until I retired the containment
14 equipment became very sophisticated and was
15 much more efficient than in the earlier days.
16 Post-shot, after detonating a nuclear device, a
17 rig was moved on location and a hole was
18 drilled into ground zero. With the drilling
19 assembly in this area, a plug was pulled out of
20 the assembly and a sidewall sampler was lowered
21 inside of the drill pipe and out the side of
22 the wall of the drill hole. A tube on the
23 bottom of the sampler collected a sample from
24 the drill hole and was relieved -- excuse me --
25 retrieved to the surface on a wire line. These

1 samples were taken from the bottom of the
2 cavity as neat as possible and therefore at
3 times highly radioactive.

4 The drilling operation, collecting samples and
5 handling the drilling assemblies and drill pipe
6 had a potential for workers to be exposed to
7 radiation. I was involved in most of post-shot
8 drilling for LASL and some LANL post-shot holes
9 until my retirement in 1991. At times there
10 were accidental releases during these
11 operations.

12 Note: I would like to point out during 1965 to
13 '67 approximately, a drilling fluid for post-
14 shot holes was called visbestos. The name
15 resulted from the mixture of ben-- bentonite,
16 asbestos and water. This -- I'm sorry, I can't
17 read the word -- drilling fluid was used on
18 post-shot holes to combat the very high
19 temperature encountered while drilling into
20 ground zero. At times this was mixed on
21 location with a portable mud (unintelligible).
22 The asbestos was in dry, 50-number sacks and
23 dumped by hand into hoppers, mixed with
24 benzonite and water and pumped down in the hole
25 as drilling fluid. I believe some drilling

1 personnel were exposed to asbestos.

2 I was drilling in G tunnel on the day of the
3 detonation of the Sedan experiment. Before the
4 shot everyone was cleared from underground and
5 brought to the surface where we waited for the
6 shot. We were at the portal of G tunnel on the
7 side of the mountain where we had a clear view
8 of ground zero. When the shot went off I had
9 no idea what to expect, and was very surprised
10 by the extremely loud boom, followed by a huge
11 plume of debris, dirt, dust, rocks, et cetera
12 several hundred feet into the air. We were
13 concerned the wind was blowing over our
14 direction. I don't recall if we were evacuated
15 or not.

16 After the dust settled, construction moved to
17 the Sedan crater and laid steel mats, the type
18 used during World War II on air fields, down
19 the side of the crater from the top of the
20 crater to the bottom. We then lowered the
21 Boyles drilling rig and the steel ramp and
22 drilled the angle hole in the side of the
23 crater. When the wind blew it was like a dust
24 bowl at the drill site, and small rocks would
25 roll down the side of the crater and hit the

1 sub-base of the drill. It wasn't a very good
2 environment to work in.

3 I would like to relate an incident which
4 happened on a drillback on a post-shot in the
5 early '60s. I was a driller at the time. My
6 crew and I, plus a rad-safe employee, were
7 exposed to radiation while working in the
8 cellar, which he describes as a part of a
9 containment during post-shot drilling. As a
10 result there was an investigation to determine
11 why we were exposed to radiation. It was
12 concluded that the monitoring device used by
13 rad-safe was not working because the employee
14 using the device was also exposed. As a result
15 of the exposure, my crew and I were subjected
16 to a series of screening tests for several
17 weeks in Mercury, Nevada. Sometime after the
18 tests, my crew and I -- I believe five of us --
19 were sent to a location near Nellis Air Force
20 Base. This was on a Saturday morning. There
21 was a railroad car or two on a spur off the
22 main railroad and each of us, one at a time,
23 went inside for some kind of tests. I don't
24 know what it was all about, and never knew the
25 results. I relate this to emphasize the thing

1 that we went on -- excuse me. I relate this to
2 emphasize that we went on -- what went on that
3 no one seems to know about. I have mentioned
4 this episode to many people, and have yet to
5 find one person who knows anything about the
6 railroad cars near Nellis Air Force Base.
7 Gene Campbell.

8 **DR. ZIEMER:** Thank you. Just to clarify for
9 me, the -- the claimant's name was Gina
10 Campbell?

11 **MS. ROZNER:** Oh, Gene, I --

12 **DR. ZIEMER:** Gene Campbell. Thank you. Then
13 we have Shirley Breeden -- Breeden.

14 **MS. BREEDEN:** Good evening, ladies and
15 gentlemen. My name is Shirley Breeden and on
16 April 4th, 2004 I lost my father, Willis J.
17 Abbott, to cancer. My father was employed by
18 the Nevada Test Site from September 11th, 1961
19 through January 15th, 1964. He was a mechanic
20 foreman on the drilling rigs and would travel
21 to different areas before and after the shots
22 were fired.

23 When I was in the second grade I remember my
24 brother and I asking my father why he got
25 undressed in the garage when he came home from

1 work. He said that he did not want his clothes
2 in the house. Since that was not a good enough
3 answer for us, he then told us not to touch his
4 boots or his clothes, as if we did we would
5 glow in the dark. What did that mean and who
6 really knew? Only my dad.

7 My mother told me that when she asked my father
8 about his job or his work day, he said he was
9 not allowed to talk about it. Again, what did
10 that mean and who really knew? Only my dad.

11 Yes, our family life continued and for many
12 years to come I never thought about Daddy's
13 boots, the ones that would glow in the dark.
14 I will never forget the tone of my father's
15 voice on that dreadful day in September 2001
16 when he called and asked me to fly to Boise,
17 Idaho so that I may accompany him to a doctor
18 appointment. It was then that I knew something
19 was definitely wrong. Dr. Forsythe came into
20 the room, told my father that her suspicions
21 were correct. My father had terminal cancer.
22 She showed us an X-ray of where the cancer was
23 present in my father's body, and said the
24 cancer had metastasized. He lit up like a
25 Christmas tree. It was then that I remembered

1 my father telling us about his boots.
2 My father -- my family and I were in disbelief,
3 and I was sick to my stomach. After that day
4 our life changed dramatically. My father's
5 health deteriorated. My father, so stout, so
6 strong and so courageous, became dependent upon
7 his loved ones. What a very humiliating
8 experience for all of us. My dad, the strong,
9 stout, muscular gentleman slowly withered away
10 to nothing right before our very eyes. Our
11 family was heartbroken.
12 In February of 2002 my father called and asked
13 if I would help him with a project. Of course,
14 I said. He wanted to submit his application
15 for compensation due to radiation exposure
16 while working at the Nevada Test Site. My
17 father said to me, Honey, I believe my cancer
18 was caused from radiation exposure. A couple
19 of months before my dad -- my father died, he
20 asked me to please see this process through.
21 So in his honor I will follow through with my
22 father's request. After all, I am my father's
23 daughter, strong and courageous.
24 Thank you for your time and consideration.
25 **DR. ZIEMER:** Thank you. Next we'll hear from

1 Cynthia Wilkes. Cynthia Wilkes.

2 **DR. WADE:** Not here.

3 **DR. ZIEMER:** Perhaps she's stepped out. Dee
4 Creighton? Dee.

5 **MS. CRAFTON:** Is this good?

6 **DR. ZIEMER:** Yes.

7 **MS. CRAFTON:** Good evening. My name is Dee
8 Crafton.

9 **DR. ZIEMER:** Dee Crafton.

10 **MS. CRAFTON:** My husband was Douglas Crafton.
11 Some of you in attendance and I knew him as
12 Tex. He died from a glioblastoma multiforme
13 brain tumor in 1998. My husband worked at the
14 beginning stages of the early Nevada Test Site
15 starting in the '50s. This work progress
16 continued into the '90s, so that would be from
17 the time he was in his 20s up to his 60s. He
18 casually told us several times he got to see
19 the atomic bomb go off. He felt privileged.
20 Now of course, in hindsight, we all know he
21 shouldn't have been allowed to be near this.
22 Through the years he was employed by several
23 unionized truck companies. Most of these
24 companies are no longer in operation -- Bailey-
25 Apex, (unintelligible), just to name a few.

1 The last company he worked for was Jakes* here
2 in Las Vegas. There are many friends my
3 husband regularly worked with who also visited
4 and worked at the Test Site who also died of
5 various types of cancers, all relatively --
6 relatively young ages. It is also easy to
7 determine just through memory, they had less
8 exposure than my husband.

9 During his initial visits, these unionized
10 companies would be subcontracted out to Bechtel
11 of Nevada for heavy hauling machinery moving.
12 Because he was such an expert in his abilities
13 to move equipment -- heavy equipment that
14 weighed many tons, he was requested for most of
15 the jobs on the Test Site. Because he was also
16 a heavy equipment operator, he worked many
17 hours at the Test Site. In those days a crane
18 was not hauled in one piece. It took several
19 days to haul in the boom, counter-weights,
20 tractor, runners. Then he worked several days
21 putting it together to make it functional.
22 During all this time he would be at ground zero
23 of the Test Site. There were not any qualified
24 employees at the Test Site that knew how to do
25 this type of work, so he was responsible for

1 everything working properly before he could
2 leave the Site. This at least indicates
3 several days, if not weeks, per visit.
4 He also is the man that hauled in the boring
5 machine, also called the (unintelligible).
6 This machine made the tunnel. This job took 34
7 loads, again spending days at the site. I
8 wanted to come tonight to prove that it's not
9 an accurate determination to say my husband was
10 only exposed 13 days in his life. The system
11 that made this assumption does not have
12 memories or experiences that can make an honest
13 and accurate assessment. The people that would
14 be key witnesses and could have provided
15 additional support to these statements have all
16 passed. I'm being told first he did not have
17 51 percent cancer in the brain. How much do
18 you need to die? He's dead. How can you tell
19 me he wore the badge 13 times? He worked 40
20 years at the Site, off and on -- like I said,
21 starting in the '50s. Someone wasn't counting.
22 Thank you.

23 **DR. ZIEMER:** Thank you, Dee. Then we'll hear
24 from Jane Ann Williams-Lenz.

25 **MS. WILLIAMS-LENZ:** First of all, I'd like to

1 put a face on some of these people.

2 **DR. ZIEMER:** Sure.

3 **MS. WILLIAMS-LENZ:** This is my husband, Rod
4 Williams.

5 **DR. ZIEMER:** You want us to pass these -- yes?

6 **MS. WILLIAMS-LENZ:** Yes. This is my husband,
7 this is my husband, this is my husband and I,
8 that's my husband, that's my husband, that's my
9 husband and that's what he left.

10 **DR. ZIEMER:** We'll pass these around.

11 **MS. WILLIAMS-LENZ:** Please do. First of all,
12 my name is Jane Ann Williams-Lenz. My husband
13 was an electrician. We came out here -- he
14 worked here from '58 most of the time till '77
15 when he died. He was healthy, robust, rodeoed,
16 died of cancer. Was exposed at the Test Site
17 many, many times in all those years. I've been
18 at this for 29 years. I have been to
19 Washington, D.C. three times. I didn't know
20 there was a meeting yesterday. Half the time I
21 don't hear about a meeting. I don't know what,
22 but if you do advise Mr. Bush, I wish you would
23 advise him that some of us are tired of
24 waiting. The only president in 29 years that
25 even answered a letter was Bill Clinton. He's

1 the only one that's helped us. Bush and his
2 father don't care about us. They don't care
3 about anybody. So you advise him for me that
4 his oil is not the only thing in this world
5 that's important. And Cheney and Halliburton
6 and their rebuilding, that's not the only
7 thing. There are people in this room that
8 should be important.

9 My husband served in World War II. My son --
10 my third son, I have four -- just came back
11 from raghead country. Let me tell you, we've
12 always been a patriotic bunch. My husband
13 worked at the Test Site and he asked them and
14 several of them said will this stuff hurt us,
15 and they said oh, no -- scientists, oh, no,
16 might make you sterile. Well, when you've got
17 four kids, that's not a big thing. It made him
18 dead. Dead.

19 I went to Washington and I spoke with Dr.
20 Morgan. Do any of you know who Dr. Morgan is?
21 He's the man that developed the film badge.
22 He's the man that developed it. He told me,
23 Jane Ann, it was no good. It didn't work. I
24 said then why did you develop it? He said I
25 worked for the government. You knew what your

1 -- they told me to develop a film badge; I
2 developed one. They didn't tell him it had to
3 work.

4 Now when the men were out there, I don't know
5 if any of you are from here, but if you were
6 outside today did you see the wind blow? Blows
7 pretty good here. Well, out at that Test Site
8 the wind really blows. Now that film badge
9 hung around their neck on a little lanyard
10 (sic), and it would flip up in their face and
11 this and that. Now if you're an electrician
12 and you're handling anything from 110 to a
13 streak of lightning, you might want that thing
14 to get out of your face. So most of the men
15 would put it in their jacket, stick it in their
16 shirt. So of course it didn't work to begin
17 with, so it certainly didn't work then.

18 I went to Washington with a man that they
19 called the atomic cowboy. Out at the Test Site
20 they have a big ranch. My husband, as you can
21 tell from that picture, could keep a secret.
22 He didn't tell me the things about what went on
23 at that Test Site, but believe me, in 21 years
24 I have found out a hell of a lot. They would
25 go from my house to work every day, drive up,

1 park in this one area -- he worked all over the
2 Test Site, some places that didn't even exist.
3 He would get out of his car. He would go up to
4 CP, up there -- whatever they called CP. They
5 would go in and they would put on these outfits
6 of clothing, little things on their shoes and
7 things on their heads and gloves and all this
8 stuff, and then they would go down to where
9 they had -- he worked in drilling most of -- a
10 lot of the time. They'd go to where the shot
11 was. They would do their work there, wiring
12 and putting all the things in there, whatever
13 they did. Then they would get on the bus and
14 go back to CP and they'd come home.
15 The day of the shot they would get in the car
16 at my house, drive to the Test Site, park the
17 car, go to CP in the bus, put on their little
18 outfit, get on the bus, go to the shot. Now
19 they've already had this detonation. When they
20 detonated one of those things the sand would
21 turn green and turn to glass. They would take
22 heavy equipment, break up the glass, go to the
23 hole, pull all this stuff out, work in this
24 radiated (sic) area all day long taking all
25 that stuff out of that hole, giving it to the

1 scientists. Now remember they've got their
2 little suits on to protect them. Then they
3 would get on the bus. Then they would go to
4 CP. If they detected -- with the detectors, if
5 they detected radiation, then they'd shower
6 them and they'd -- sometimes -- my husband
7 stayed there one time three days and nights.
8 That's not on the report, by the way. They
9 would put their clothes back on, get in the car
10 and come home.

11 Do you see anything that would -- shower or
12 whatever, leave those little suits there at the
13 CP, get on the bus and come back to the car.
14 Does anybody on this panel see anything wrong
15 with that?

16 **UNIDENTIFIED:** (Unintelligible)

17 **MS. WILLIAMS-LENZ:** You don't see anything
18 wrong with that?

19 **UNIDENTIFIED:** (Unintelligible)

20 **DR. ZIEMER:** Proceed. This would be normal
21 practice to shots --

22 **MS. WILLIAMS-LENZ:** That's normal practice.
23 Well, why the hell didn't they wash out the
24 bus?

25 They were contaminated when they got on the bus

1 at point A, they went to point B,
2 decontaminated, got on the bus and went to
3 their car. They were decontaminated, but they
4 never washed out the bus.

5 Now when they had a shot right there, they
6 would put a yellow and black rope around it,
7 I've been told by many, hang signs on it and
8 say this area is contaminated, keep out. But
9 if Washington, D.C. said we want another shot
10 in the same hole, they took down the rope and
11 they went in and made the shot and came out and
12 put the rope back up. Does that make sense?
13 That doesn't make sense to me.

14 I have talked to people -- Stuart Udall called
15 me in 1978. Does anybody know who Stuart Udall
16 is? Stuart Udall called me and told me, he
17 said Jane Ann, he said your husband died of
18 cancer, and I said yes. And he said well, do
19 you know other people that did, and I said
20 well, you know, he's -- he's died and I -- I
21 don't see people a lot, a lot of electricians
22 or plumbers or fitters or their wives or
23 whatever. But then I would see somebody and
24 I'd say hi, how are you, and they'd say oh, so-
25 and-so died, John died or Dave died or -- and

1 I'd say why, what happened? He had cancer.
2 You know, I got to writing that down, and my
3 God, everybody that worked out there was dying
4 of cancer. So I said well, you know, Mr.
5 Udall, he died of cancer and a lot of other
6 people did, so Larry Johns and Stuart Udall
7 decided that they would help myself -- I was
8 probably the first that filed -- and several
9 others to sue the government because they
10 worked for REECO and they were a government
11 contractor.
12 Well, then the government passed a law that we
13 couldn't sue. That was not real nice of them,
14 was it? You know, I have empathy for anybody
15 that has a problem. Some things don't make
16 much sense to me, and I don't think that
17 anybody in this room would disagree with me
18 'cause a lot of them has been fighting this
19 thing for a long time. I organized the Nevada
20 Test Site people at one time. We had meetings,
21 we organized -- a lot of people died off and we
22 finally disbanded.
23 But there were terrorists that flew a plane
24 into the World Trade Center. We're all aware
25 of that. Right? The people that worked in

1 those buildings that died left families, and
2 I'm sorry for that. But not a one of those
3 people that died in those buildings kept you or
4 me from speaking Russian in the Cold War, did
5 they? I don't think so. But all of our people
6 that died from cancer, a horrible death, worked
7 to keep you and you and you and you and me and
8 all of these people from speaking Russian and
9 we won the Cold War. My husband fought, and a
10 lot of those other guys, in World War II to
11 keep us from speaking Japanese. They were
12 patriotic. But these people that died
13 instantly have gotten paid instantly. Our dear
14 old Bush paid them off like a slot machine.
15 I've been working at this for 29 years. They
16 got millions of dollars. I had never had a
17 job. I had four young sons. I had to go to
18 work. I brought my kids up. I never had
19 welfare. I've never asked anybody for
20 anything. And they tell me that my husband was
21 worth \$150,000 -- well, he didn't work at the
22 World Trade Center. He kept us from speaking
23 Russian. That don't make any sense, either.
24 I've been at it for 29 years. I was in
25 Washington, D.C. one time. I was sitting with

1 Orrin Hatch -- do we all know Orrin Hatch? --
2 and Ted Kennedy. And he said well, you know,
3 Jane, it was the downwinders that got the most
4 radiation. I said really? The downwinders?
5 It was in like April, cherry blossoms were
6 beautiful. I'd never been there before. They
7 were all in bloom, the water was running in the
8 sprinklers out on this little veranda we're
9 sitting by the -- on the Senate Building and
10 there's water running, the little sprinkler
11 hoses, and I said to Mr. Hatch, you really
12 believe that the downwinders got the most of
13 the radiation? He said yeah, I do. I said
14 well, guess what. Mr. Kennedy, you stand over
15 here and Mr. Hatch, you come over here and I'm
16 going to pick up one of these water hoses and
17 I'm going to wet you down good 'cause the
18 wind's blowing toward Mr. Kennedy, you see, and
19 we'll see who gets the wettest. He said well,
20 I don't think that's a good idea. I said well,
21 sounds like a winner to me if you think the
22 downwinders got the most of it.
23 You see, the Nevada Test Site has been -- I've
24 lived in the same house in this town for 47
25 years. Can you imagine that? And don't even

1 gamble. Well, my husband went to the Test Site
2 every day, did his work, came home, said
3 nothing. You couldn't have got him drunk
4 enough or crazy enough to tell me what was
5 going on out there. He wouldn't tell you
6 anything about Mar-- about the Masonic Lodge or
7 the Shrine or the Nevada Test Site. That was
8 him. That was the end of the hunt. He was not
9 going to say a word. But boy, I'll tell you
10 one thing. I've found out stuff in 29 years
11 you wouldn't believe.

12 I did know that you could see the mushroom
13 clouds when they had the above-ground tests.
14 Right down on Fremont Street was J.C.Penney's.
15 They built a little town out there. They took
16 (unintelligible) J.C.Penney's and a lot of
17 different people took refrigerators and clothes
18 and they put mannequins in those little houses
19 and all that stuff. Well, would you believe
20 they blew that place up? J.C.Penney's took
21 them right down across from the El Cortez
22 Hotel, put those blue jeans in the window, big
23 old sign said all this stuff went through an
24 atomic bomb blast. We're going to call these
25 Tough Skins or whatever they called those blue

1 jeans. How radiated (sic) do you think
2 Freemont Street is?
3 They had -- I told you about the atomic cowboy.
4 He told me one time, he said you know, they had
5 these cows, had two of them at one time, and
6 they had plexiglass window in their side --
7 'cause a cow has two stomachs -- and they would
8 feed them radiated feed and then they would
9 open this one plexiglass window, reach in
10 there, get the feed, test it to see how these
11 cattle could digest this radiated stuff, then
12 they'd dump it back in. Then it'd go in the
13 second stomach and they'd do that test again.
14 Well, guess what? They used to bring one of
15 these cows into town and take it to the
16 elementary schools and show the kids the cows
17 that had two windows in their side.
18 Pretty smart. Won't hurt you. Might make you
19 sterile. Scientists were really smart.
20 He told me one time he walked outside and he
21 had fed a steer, it was a Hereford steer. If
22 you're not familiar with cattle, they're kind
23 of dark brown, red, and had a little white on
24 them. He said in 30 minutes after the
25 scientists dropped off the food, picked out the

1 steer, told him to feed the steer. The steer
2 turned totally blonde, and before the next hour
3 struck, all of its hair fell out. I guess it
4 kind of looked like a Mexican hairless steer.
5 I don't know about that.

6 We have been very patient. I went to a meeting
7 at the Texas. I don't know how many were there
8 at the one -- first meeting at the Texas, and
9 they had -- because we have -- you have to
10 understand, I was with the Department of
11 Justice. Then I was with the Department of
12 Labor. And then I was with the Department of
13 Justice again. And then they decided that
14 they'd better give it back to the Department of
15 Labor. Then we had a meeting with the
16 Department of Justice and the Department of
17 Labor, and they said at the Texas Casino
18 meeting room we are going to do this together.
19 We will pay you \$75,000 and they will pay you
20 \$75,000. We said okay and I guess everybody in
21 this room probably filled out all those papers.
22 My God Almighty, we filled out papers like you
23 wouldn't believe. They said that this was
24 going to happen very soon -- very, very soon,
25 wait a minute. Well, it hasn't happened yet.

1 And then they said, when I filed with both
2 people, the Department of Justice sent me a
3 letter, you qualified; if you'll sign this
4 paper we will send you a check for \$75,000.
5 But then they dissolved their partnership and I
6 didn't accept the money because I told them
7 first of all that I felt that that wasn't
8 really what I should get. And since they
9 dissolved their partnership, if you accept the
10 money from the Justice Department -- which some
11 people did; that was another trick -- then the
12 Labor Department doesn't pay the other \$75,000.
13 You've got to file again.
14 So they called me several times. I bet you
15 they called me ten times and I finally told
16 them keep that \$75,000 and cram it where the
17 sun don't shine. I will get all of it or I
18 will get none of it. There are people that
19 will get nothing, and that's what the
20 government is waiting for. I heard that woman
21 say that she was carrying on for her father.
22 Well, her father didn't die before she was 18
23 years old so she's going to get nothing. Mrs.
24 (unintelligible) in Henderson, she passed away
25 about a year and a half ago. None of her

1 people will get one dime. He's as dead as any
2 of the others, but guess what, the government
3 saved \$150,000 on that one. They've saved
4 \$150,000 on a list of people that everybody has
5 died in the family but was able to collect
6 because they're not going to pay unless the kid
7 was under 18 or in college.

8 I have four sons. My two oldest sons have
9 cardiomyopathy. They have a leak, enlarged
10 heart. My 49-year-old son is an electrician,
11 been retired two and a half or three years. He
12 was working at the Test Site when he had his
13 heart attack. My other son's a
14 (unintelligible) finisher, worked in
15 construction, cardiomyopathy. Of course he --
16 he's still trying to get his Social Security
17 disability and his doctor keeps writing to them
18 and telling them I'm sorry, but he can never go
19 back to work, he would drop dead. He's got a
20 ICD or whatever you call it, I -- defibrillator
21 in his chest.

22 You know, I firmly believe that that was
23 because they were raised in Las Vegas, Nevada
24 and their dad worked at the Test Site and
25 brought that stuff home. I firmly believe that

1 the radiation that blows from that Test Site --
2 when that sand picks up and blows -- if you
3 didn't notice it, it was blowing yesterday and
4 today -- my pool's got that much sand in it
5 (indicating). All that radiation is still
6 there. The half-life of it is 150,000 years.
7 Now we some of us must know this. It don't
8 just go away and it didn't just go away.
9 My husband's dosimetric report for 1965 says he
10 had zero -- or close. He was out there setting
11 in a pickup truck when they detonated the shot.
12 It covered up the truck with sand. They took
13 them in. All the guys went into CP or
14 whatever. They showered them, they waved those
15 wands over them, they showered them and they
16 waved those wands over them. They called me --
17 and there were three or four women that did not
18 drive that their husbands were involved in the
19 same shot, the same event, the same radiation.
20 We had to take clothes out there. They burned
21 their shoes, their boots, their Carhartt
22 overalls, their blue jeans, their -- every
23 stitch they had on, and I took clothes for
24 about four other guys 'cause their wives didn't
25 drive, there was no way for them to get them

1 out there unless I took them and I had to go
2 anyway. And I know that was 1965 because my
3 youngest son was born in 1965 and he was two
4 weeks old, so I know when that was. And after
5 all, Dr. Morgan said it didn't work.
6 Now they told us at the Texas, you don't have
7 to have the dosimetric thing. We know that's
8 faulty. We know it didn't monitor any of these
9 guys. We know that nobody knows -- or is going
10 to tell -- how much radiation these people were
11 exposed to. Now all of a sudden, again -- then
12 we went back to the Labor Department. Labor
13 Department told us the same thing at the Texas,
14 you just have to qualify with having the kind
15 of cancer that was on this list. My husband
16 had adenal* carcinoma, cancer of the colon.
17 That's what he died of. That's what was on the
18 list. But now all of a sudden, after the Labor
19 Department took it back and we're still
20 supposed to get this \$150,000 that I'll never
21 see, now we're going through this dosimetric
22 report again.
23 Why are we doing that when our government,
24 which you can't believe a damned thing they say
25 anyway, but why do they tell us no dosimetric

1 report 'cause it's no good, Dr. Morgan says
2 that the badge didn't monitor them, that the
3 dosometer (sic) didn't monitor them, and you
4 can all go back to Washington and check that
5 out if -- I imagine Dr. Morgan's dead, but
6 somebody there must have known and he must have
7 told them. He told me and I was a total
8 stranger. So somebody ought to check on that.
9 Do any of you know who he is?

10 **DR. ZIEMER:** Most of us do, K. Z. Morgan?

11 **MS. WILLIAMS-LENZ:** Then somebody --

12 **DR. ZIEMER:** Yeah.

13 **MS. WILLIAMS-LENZ:** -- should talk to somebody
14 that he knew.

15 **DR. ZIEMER:** Let me tell you that your Chair
16 studied under Dr. Morgan, and I know that Dr.
17 Morgan is an expert -- he's deceased. I don't
18 know what Dr. Morgan told you, but it does not
19 jive with anything that he taught me. But we
20 can talk about that off-line.

21 **MS. WILLIAMS-LENZ:** Well, that's what he told
22 me.

23 **DR. ZIEMER:** I studied under Dr. Morgan.

24 **MS. WILLIAMS-LENZ:** Well, I didn't study under
25 him but he sure told me that the film badge was

1 putting away the oil that -- the new oil in the
2 warehouse. He had to hand-load all these
3 things. And the drums that had been used, he
4 had to hand-wash them and detoxify them so they
5 could go back to the -- the city. Now these
6 were hot, the majority of them were hot. And
7 as he would put those up next to his body to
8 move them around -- because they were bulky and
9 they were hard to move -- he was getting
10 radiation all the time. He was a very strong
11 man, and he lasted for about seven years before
12 he got cancer.

13 He was 35 years old and he came to me one day
14 and he had a great big lump on his neck and he
15 said what do you think this is? I said I don't
16 know, but we're going to find out right away.
17 He went to a doctor here and the doctor wanted
18 to operate and I said no. I said let's call
19 our friend who's been to Loma Linda and see if
20 we can get in there, and so we went to Loma
21 Linda and they decided that -- at first they
22 said it was Hodgkin's, then they said no, it
23 wasn't, that it was lymphoma. And so a lot of
24 the time we got it in our head it was Hodgkin's
25 'cause we didn't know what kind of lymphoma it

1 was and we didn't know how to explain it to the
2 doctors.

3 We went through to White* Memorial. He was
4 given 50 treatments of radiation, high level
5 radiation. He couldn't take the last three.
6 He was supposed to be given 50. He was
7 hospitalized for a month in a comatose
8 condition because he'd been over-radiated. Now
9 you notice that those records show no radiation
10 showing up, even in 1969. He was so sick
11 through his treatments that it -- the -- his
12 face was completely black. It was not brown,
13 it was not tanned, it was black. He lost all
14 his hair. He had to crawl to the bathroom. He
15 had to slither like a snake. There were times
16 when I was in bed with him -- we were in
17 California and we had to travel there for those
18 treatments -- that I thought he was dead and I
19 would get panicky because he had no heat in his
20 body at all and he was dead still.

21 On the last treatments, he started to pass out
22 all the time. He was a six foot one man and he
23 was very large for me to try to handle, and so
24 the doctor said it -- well, we're going to put
25 him in the hospital and watch him. They gave

1 him one more shot and he went into this
2 comatose condition. Now he was there till late
3 September and then he had to stay in town.
4 He started it in May with this cancer and went
5 through late September, a young married couple
6 that had two small children. The children had
7 to be uprooted from their school and taken to
8 Los Angeles to finish their first few years of
9 school. Then they were taken -- I had to send
10 them back to Las Vegas to be with my mother.
11 My son was taken from the second grade and
12 skipped the third grade without my knowledge,
13 and it was very traumatic for him because of
14 what his father was going through. I tried to
15 get them to put him back, but they wouldn't.
16 Then he ran away when he was seven years old
17 and didn't come home till about 9:00 o'clock at
18 night. I was not in town. My mother was
19 taking care of him and she was frantic.
20 These were things that just -- besides the
21 illness, we went through many, many trials. In
22 1971 he was diagnosed with lymcytic (sic)
23 leukemia, which was a very rare thing and so
24 they called the doctor in from the City of Hope
25 and they conferred with this doctor in Los

1 Angeles and they worked it out that he should -
2 - needed a blood transfusion. His twin --
3 identical twin brother -- came to town to give
4 him this transfusion. We wanted to be just
5 person to person, but they wouldn't do it, so
6 they took the transfusion from him and they
7 took the transfusion from our friends who were
8 LDS people who did not drink, smoke or drink
9 coffee. However, ten years later, Jim was
10 diagnosed with hepatitis C and HTLV-1, which is
11 akin to AIDS, but it was not AIDS. It was a
12 disease that deteriorated all of his muscular
13 being, and he had -- was just like a skeleton.
14 His whole body was like a skeleton. When he
15 walked, he walked like this because he was --
16 he'd fall over if he didn't (indicating). He
17 couldn't lift his hands or his arms. He had to
18 walk with two canes, not just one. Then it got
19 so bad that he had to quit work and they took
20 him at the doctor and they ran another test and
21 he had bladder cancer. So this is the third
22 cancer that they had diagnosed him with. He
23 beat the cancer, but because he had hepatitis C
24 he couldn't get a liver. They looked at all
25 this cancer and they said no, he'd never make

1 it through the operation. No, he'd never be
2 able to take the medication.
3 Now his identical twin is very healthy and
4 still living. None of his family have had
5 cancer. I think this is just a good example of
6 what has happened at the Test Site, that these
7 men were told that everything was okay, they
8 were safe; you couldn't be any safer than being
9 there. You might as well be working downtown
10 at one of the casinos because it was just as
11 safe as a casino, if not safer. These were
12 things Jim told me that he repeated from what
13 was being told him.
14 He tried to bid out to a downtown job where he
15 wouldn't have any radiation, because of the
16 amount of radiation that he'd had, and they
17 turned him down -- four or five times. And
18 every time they turned him down, they promoted
19 him to keep him there. Well, the bosses that
20 he took their places both died of cancer. The
21 man that used to do -- take the -- the pictures
22 all over the test site -- and there were only
23 three people that were allowed to do that, and
24 Jim was made one of them, he died of cancer.
25 So isn't it -- just stand to reason that Jim

1 would die of cancer, too?

2 One time he came home in overalls and he came
3 home quite late that night and I was quite
4 worried, and he said they pulled me off the bus
5 and made me go take a shower and take all my
6 clothes off 'cause they said I had been
7 exposed. And he left his clothes all there and
8 they decontaminated and they gave them to him
9 later in the week. But that's not recorded.
10 There's nothing in there about it.

11 It just seems a shame that the people that were
12 paid to take care of these young men and these
13 fine citizens of our community didn't do it.
14 Thank you.

15 **DR. ZIEMER:** Thank you very much, Margaret.
16 Let's see, do we have Diane Milko? Is Diane
17 here?

18 (Pause)

19 **MS. SBROCCHI:** Hello. I'm Diane Milko
20 Sbrocchi, and these are my two sisters, Janet
21 Milko Arnkinet* and Janet -- or June Milko
22 Licorrino*. I'm just going to read the letter
23 that Lori Hunton read to you in Congress. It's
24 a short letter. And then I want to do a little
25 bit of ad lib about -- on my father's case.

1 My father was Michael Edward Milko. He worked
2 at the Test Site from October 1961 to February
3 1962 as a weather station monitor. He worked
4 in other capacities at the Test Site and NIOSH
5 tells me that they are aware that he met the
6 qualifications of the 250 days, but I don't
7 know what other jobs he did there. He was
8 removed from the Test Site weather monitoring
9 when he complained that he felt it was unsafe.
10 He often told us that his badge did not detect
11 any radiation when he was at ground zero and
12 one of the blasts went off. As a person that
13 grew up here, living here when the blasts
14 occurred, I can tell you that the people that
15 lived in Las Vegas -- I remember being a child
16 and sitting on the toilet and the water
17 splashing up on me when these bombs were
18 detonated. It was so powerful, it was like an
19 earthquake. So you know, everybody in Las
20 Vegas was affected, not just the people that
21 worked at the Test Site.
22 He often told us how his badge did not detect
23 any radiation, yet the cows in the field were
24 dropping dead around him. He quit the Test
25 Site because he believed that he was in danger

1 and that the government was not doing enough to
2 protect the workers. Unfortunately, his fears
3 became reality when he was diagnosed with
4 cancer of the stomach wall in 1972. My doctor
5 died at the -- or father died at the age of 43,
6 and his doctor said that his stomach cancer was
7 the worst he had ever seen. He left behind
8 eight children to grieve.

9 His case fits all the criteria -- length of
10 employment -- excuse me -- type of cancer, and
11 as you note by the Cohen report, there is no
12 such thing as accurate dose reconstruction.
13 It's impossible to contain the radiation that
14 came in that cloud. All of us were affected
15 that lived -- I believe, as that lady stated,
16 my family -- I was unable to have children. I
17 don't know if that's one of the reasons. My
18 sisters and my brothers have had mental and
19 physical problems, as well. My father would
20 come home and remove his coveralls outside and
21 go and take another shower, and he did not let
22 us touch him.

23 We still have no resolution, and it is
24 unconceivable (sic) to us that the government
25 has let the workers and survivors of the Test

1 Site fight like this for all these years for
2 compensation. The \$150,000 to eight children
3 is not a lot of money. And it's not the money.
4 We want the government to recognize what they
5 did to our family, and our fathers and our
6 brothers and all those people that were loved
7 and have been lost.

8 The dose reconstructions and time limits on
9 exposure are a ridiculous attempt to keep from
10 paying the claimants. One day, or even one
11 hour, of exposure may cause cancer. Scientists
12 can't predict how genes will mutate in
13 individuals exposed to radiation. Please take
14 care of the workers, the survivors of the
15 workers, and those who did their duty to
16 protect us during the Cold War. Please honor
17 the memory of our father. That is all we have
18 left.

19 And I want to add to this, we appreciate your
20 time, but we are just so frustrated with the
21 process of being shuttled back and forth from
22 committee to committee. We've written letters,
23 we've given speeches, we -- you know, again,
24 all our information is, like everybody else's,
25 secondhand. Our father is dead. We have no

1 one to go to. Our mother wasn't told,
2 everything was so secretive. We have limited
3 experience. We can't reconstruct what happened
4 out there, and nobody ever will be able to.
5 But I want to say that Hollywood understands
6 what happened out there. If any of you have
7 watched the movie that was out, a B horror
8 movie -- I happened to rent it a week ago --
9 "The Hills Have Eyes" -- everyone in here
10 should watch that movie. Hollywood knows what
11 happened at the Test Site. It's a movie about
12 Test Site workers building little homes with
13 these little mannequins that were dummies and
14 they were exposed to radiation and they thought
15 well, the mannequins are fine so it must be
16 fine for live people. That really makes sense.
17 In this movie they show all these people down
18 in the mines with their pictures that died from
19 radiation, and all their children and offspring
20 that mutated. Now again, it's a B movie, it's
21 a Hollywood movie, but they have more sense
22 than Washington does. I mean it is a fact that
23 these people have died from cancer. It's too
24 many to dis-- to ignore. It really is.
25 And I appreciate you doing something about it,

1 and we have waited way too long. And we're all
2 just, you know, so frustrated, every one of us.
3 Thank you for letting us speak.

4 **DR. ZIEMER:** Thank you. Janice Ramirez -- is
5 Janice with us?

6 (No responses)

7 Addie McLemore? McLemore?

8 **UNIDENTIFIED:** (Unintelligible)

9 **DR. ZIEMER:** She had to leave?

10 **UNIDENTIFIED:** (Unintelligible)

11 **DR. ZIEMER:** She had to leave, or do we know?

12 **DR. WADE:** It's okay, move on, William Morton.

13 **DR. ZIEMER:** William Morton?

14 (Pause)

15 **MR. MORTON:** Good evening. I am the son of the
16 late William S. Morton, former Nevada Test Site
17 worker. My name is William G. Morton. My
18 father worked at the Test Site from the dates
19 7/62 off and on, as the Department of Labor
20 showed, through 10 of '68. In 1962 I was a
21 year old. I relied on what my mother and
22 father told me about those times. I was old
23 enough to understand myself. I remember my
24 father telling me about an accident that
25 surrounded a test site, and he assisted in the

1 rescuing of several employees that were trapped
2 in some kind of cave-in. I remember my mother
3 and father talking about the breathing problems
4 he had shortly after the accident.
5 Around the time when I was eight -- eight years
6 old -- my father started getting sick. He
7 could not do normal things a father and son
8 would do because of the illness. It was around
9 this time that my father had to medically
10 retire from work and he never was able to work
11 another job again due to health issues.
12 From that point forward my mother was the sole
13 provider. She and I took care of my father as
14 his health proceeded to get worse over the
15 years. I did not have a normal childhood at
16 (sic) most of the time I was helping take care
17 of my father. There was even a point where I
18 did not get to see my father for over a year,
19 as he had an operation for throat cancer in
20 California and had to remain there. The
21 operation took over 13 hours. He had to have a
22 permanent trach tube, then received radiation
23 and cobalt treatment. Due to the financial
24 burden of traveling, I only got to see my
25 father once during that time period. During

1 the visit I was informed that my father had
2 terminal throat cancer. I was distraught and
3 decided to take a walk in a city where I did
4 not know my way around. I was robbed at
5 gunpoint. The only thing of value that the
6 robbers got was the graduation watch my parents
7 had given me. Now I'd just been informed I was
8 going to lose my father, and then I lost the
9 only material thing that he had given me.
10 Approximately two years later he developed lung
11 cancer, underwent chemotherapy. The lung
12 cancer was diagnosed too late. It was in a
13 stage where surgery could not be done. My
14 father went to the hospital as he was having
15 difficulty breathing. My father's doctor
16 recommended to my mother and me he go to a
17 hospice. On November 11th, 1989 my father was
18 prepped by the hospital to be moved to the
19 hospice. When the staff from the hospice
20 arrived to transfer him, they found him dead.
21 At the death of my father I felt angry and
22 helpless because there was nothing I could do
23 to help or save him. I feel that the Test Site
24 robbed me of my precious years with my father,
25 not only growing up, but into my adulthood.

1 Special events such as my wedding day still had
2 a little shadow of sadness that he could not be
3 there with me. It only took one exposure to
4 radiation to develop cancer. I believe my
5 father breathed in the radioactive dirt at the
6 Test Site throughout the times he spent there,
7 putting in motion throat cancer and the lung
8 cancer.

9 I think setting a minimum of 250 days is
10 inappropriate. I think that anyone who worked
11 at the Test Site for one day or 1,000 days
12 during that time period had contracted cancer
13 should be compensated. My father and other
14 employees and survivors that are here today
15 that worked at the Test Site are Cold War
16 veterans. If it wasn't for them, who knows.
17 The government owes the survivors of the
18 workers compensation. It is such a small crest
19 in the big picture. How do you put a price on
20 life? You can't. And the government cannot
21 bring our loved ones back. Therefore, to pay
22 the settlements would be a step in the right
23 direction for putting our loved ones at risk
24 without proper precaution, but ultimately took
25 them away from us and current other survivors.

1 And just something I didn't write down, I was
2 brought up that when you do something wrong,
3 you stand up like a man and you take the
4 punishment. The government made a mistake.
5 They should stand up, compensate these fine
6 people and any of the employees that are still
7 living -- do the right thing, stand up for your
8 mistake. Thank you.

9 **DR. ZIEMER:** Thank you. Let's see, Alma
10 Mosley? Is Alma here?

11 **MS. MOSLEY:** My name is Alma Lee Mosley. I
12 want to tell you nice people how I feel. I
13 lost my husband in 1978, September 25th. It
14 was a long journey. I was in my early 20s, and
15 look at me now. I'm in a wheelchair. This is
16 my baby boy (indicating). He was only 19 years
17 old when his father died. He had to go -- he
18 went to UNLV. He had to cut college short
19 because he had to help me make a living. It
20 wasn't easy.

21 Over the years I have kept this Test Site thing
22 in front of me. I did it for my children. I
23 have three sons, no girls, so it hasn't been
24 easy. But I did not stand back and hold my
25 hands. I went through interviews, countries,

1 on the TV. I kept it before the public. Mr.
2 Udall was one of our Test Site lawyers. I did
3 not know he had passed. The Foley Building --
4 the old Foley Building downtown -- was where we
5 had our first trial. There was a young man
6 that came to me. I guess I was a celebrity, I
7 don't know. All I know is I kept it before the
8 public. And so Mr. Udall and Mr. Harrison,
9 Test Site lawyers, they came to me on the steps
10 of the old Foley Building. There were many
11 people there. I didn't want the excitement, I
12 just wanted recognition, and I kept it before
13 the public and they would send people to
14 interview me -- Australia, Japan. I remember a
15 young man came over to me and he said Ms.
16 Mosley, can I shake your hand? My father died
17 such -- such a sad event. So I'm asking all of
18 you nice people that we need recognition 'cause
19 I say in my early 20s and I will be 80 years
20 old in December the 28th. I really enjoyed
21 keeping this before the public, and I will
22 still do it because there's too many people
23 that have lost recognition. I came from an
24 educational family. My mother was a
25 schoolteacher. Not that I'm so dumb, but I

1 just like the public, and these nice people
2 that have talked, they mean it from their
3 heart. I mean it from my heart. And I will
4 continue to ask for recognition for my baby
5 boy. He was only 19. And I want to thank you
6 all for listening. We need recognition, and I
7 thank you so much because there's so much I
8 could say. I would be on TV right here in Las
9 Vegas, and there are many things -- and this is
10 my younger son. He might want to say
11 something, too.

12 **UNIDENTIFIED:** I really don't have any comments
13 at this time. I'll just let my mother do the
14 talking today.

15 **DR. ZIEMER:** Thank you. Sometimes that's a
16 wise son. Thank you very much.
17 Dave Sbrocchi, I don't know if I pronounced
18 that correctly --

19 **MS. SBROCCHI:** That -- that was me already, I -
20 - Diane Sbrocchi.

21 **DR. ZIEMER:** Oh, Diane, okay, I -- okay, it
22 looks like Dave here. I thought maybe you had
23 a brother or something. Okay, thank you very
24 much.

25 I believe that completes our participation

1 tonight. I thank you all for being patient.
2 We have had a good variety of input. We
3 appreciate all of you bringing these issues
4 before us. As I told you at the beginning, we
5 can't necessarily solve all the problems, but
6 we will do what we can to address those issues
7 that are within our sphere of influence. The
8 Board is -- is quite sympathetic to the
9 concerns and, again, we will do our best to --
10 to address the issues here as they pertain to
11 this particular site.

12 Thank you again. This Board does meet again
13 tomorrow. You're all welcome to be here for
14 that session, as well.

15 **MS. WILLIAMS-LENZ:** How many meetings have you
16 had and how long have you been here? Why are
17 we not always aware of this?

18 **DR. ZIEMER:** This is our second meeting in --
19 in Las Vegas. We met yesterday here, as well,
20 and today and we'll meet again tomorrow.

21 **MS. WILLIAMS-LENZ:** And why were -- I was
22 called and told last week that you would be
23 here today, but nobody said anything about any
24 other meetings.

25 **DR. ZIEMER:** Well, I -- I don't know. I know

1 that the public announcements that were made by
2 NIOSH indicated all three days, and you're
3 certainly welcome to be with us tomorrow, as
4 well.

5 **MS. WILLIAMS-LENZ:** Did you have it on the
6 local news?

7 **DR. ZIEMER:** I -- I don't know who was
8 contacted.

9 **MS. WILLIAMS-LENZ:** I watch the news and I
10 didn't see anything.

11 **DR. ZIEMER:** That I don't know. We could find
12 out for you. Thanks for being here.

13 (Whereupon, the meeting was adjourned at 9:30
14 p.m.)

15
16
17
18
19
20
21

1

2

CERTIFICATE OF COURT REPORTER**STATE OF GEORGIA****COUNTY OF FULTON**

I, Steven Ray Green, Certified Merit Court Reporter, do hereby certify that I reported the above and foregoing on the day of Sept. 20, 2006; and it is a true and accurate transcript of the testimony captioned herein.

I further certify that I am neither kin nor counsel to any of the parties herein, nor have any interest in the cause named herein.

WITNESS my hand and official seal this the 18th day of November, 2006.

STEVEN RAY GREEN, CCR**CERTIFIED MERIT COURT REPORTER****CERTIFICATE NUMBER: A-2102**