

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

ADVISORY BOARD ON
RADIATION AND WORKER HEALTH

The verbatim transcript of the Meeting of the
Advisory Board on Radiation and Worker Health held
at The Garden Plaza Hotel, 215 South Illinois
Avenue, Oak Ridge, Tennessee, on May 20, 2003.

VOLUME II

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

(By Group, in Alphabetical Order)

BOARD MEMBERS

CHAIR

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

EXECUTIVE SECRETARY

ELLIOTT, Larry J.
Director, Office of Compensation Analysis and Support
National Institute for Occupational Safety and Health
Centers for Disease Control and Prevention
Cincinnati, Ohio

MEMBERSHIP

ANDERSON, Henry A., M.D.
Chief Medical Officer
Occupational and Environmental Health
Wisconsin Division of Public Health
Madison, Wisconsin

ANDRADE, Antonio, Ph.D.
Group Leader
Radiation Protection Services Group
Los Alamos National Laboratory
Los Alamos, New Mexico

DeHART, Roy Lynch, M.D., M.P.H.
Director
The Vanderbilt Center for Occupational and Environmental
Medicine
Professor of Medicine
Nashville, Tennessee

ESPINOSA, Richard Lee
Sheet Metal Workers Union Local #49
Johnson Controls
Los Alamos National Laboratory
Española, New Mexico

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

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

OWENS, Charles L.
President
Paper, Allied-Industrial, Chemical, and Energy Union
Local 5-550
Paducah, Kentucky

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/VENDORS

CORI HOMER, Committee Management Specialist, NIOSH
STEVEN RAY GREEN, Certified Merit Court Reporter

AUDIENCE PARTICIPANTS

ADLER, TIM
AHRENHOG, STEVEN
APOSTOAEI, A. IULIAN
AYERS, R.L.
BELL, GLENN
BILLARD, JOHN
BROCK, DENISE
DEHART, JULIA
HENSHAW, RUSS
HILL, JEFF
HINNEFELD, STU
HOFFMAN, OWEN
HOMOKI-TITUS, LIZ
HOWARD, JOHN
HOFF, JENNIFER
JESSEN, KARIN
KATZ, TED
KOCHER, DAVID
LAWSON, JACOB HOWARD
LEWIS, MICHAEL
MILLER, RICHARD
NAIMON, DAVID
NETON, JIM
POTTER, HERMAN
POWELL, STEVE
PRESLEY, LOUISE
SCARBROUGH, CARL
SCHAEFFER, D.M.
SLOVAK, ANDY
STEWART, JOHN
SUNDIN, DAVE
TABOR, BOB
TANKERSLEY, BILL
THOMAS, BRIAN
TURCIC, PETE
UTTERBACK, DAVID
WILEY, ALBERT
YIIN, JAMES
ZIEMER, MARILYN

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

2
3 (8:00 a.m.)

4 **REGISTRATION AND WELCOME**

5 **CHAIR**

6 **DR. ZIEMER:** Good morning, everyone. While the Board
7 members are finding their seats -- and I'm taking a
8 quick count to make sure we have a quorum -- wandering
9 around here a bit, but we're going to follow our agenda
10 fairly closely, if we can, to try to stay on schedule.
11 I do want to make a brief announcement, remind everyone
12 if you have not done it to register attendance. Even
13 if you did that yesterday, you should do it again
14 today. We register the attendance for each day, so
15 please do that.

16 Also members of the public who wish to address the
17 Board during the public comment period, please sign up
18 for that in the book that's back on the table.
19 We begin our session today with a presentation by Paula
20 Kocher, who's Deputy Legal Adviser in the Office of
21 General Counsel for Centers for Disease Control, and
22 she also serves in a similar capacity for the Agency

1 for Toxic Substances and Disease Registry, ATSDR. I
2 think the most interesting thing about Paula, other
3 than being Deputy Legal Adviser, she has to oversee the
4 work of 18 attorneys, and that's the -- that's the
5 biggest challenge in the job, I think.

6 Paula, we're glad to have you here today, and she's
7 going to address us on ethics for Special Government
8 Employees. Which means ethics for members of this
9 Board, is what that translates to. And this is -- if
10 you want to call it training. It's required by FACA
11 for people in our capacity, so we have to do this on a
12 periodic basis.

13 **ETHICS FOR SPECIAL GOVERNMENT EMPLOYEES**

14 **MS. KOCHER:** Good morning. First I just wanted to say
15 that I had the privilege of meeting David Kocher
16 yesterday. It's highly unusual to come to a meeting
17 with my last name and meet someone else who's speaking
18 with the same last name, but he is not my long-lost
19 second cousin, so...

20 I'm actually here today to both congratulate and thank
21 you for agreeing to be and being selected for
22 membership on the Advisory Committee on Radiation and

1 Worker Health. As is stated in the Committee charter,
2 you are charged with advising the Secretary of Health
3 and Human Services on the probability of causation
4 guidelines, the dose reconstruction and Special
5 Exposure Cohort rules, and review of SEC petitions.
6 But with these responsibilities come two sets of rules,
7 and that is what I will be primarily talking to you
8 about this morning.

9 In a nutshell, you are required to follow a standard of
10 conduct as a Special Government Employee. For
11 instance, you must not, generally speaking, accept
12 gifts because of your official position, or share non-
13 public information with outside sources.

14 For those of you with a financial interest in the
15 matters that come before this Committee, you must take
16 certain steps to avoid a conflict of interest. And as
17 a Special Government Employee you must act impartially
18 towards members of the public, and there are limits on
19 your representing others before the Department of
20 Health and Human Services or the Department of Labor
21 relating to radiation compensation claims.

22 The second set of rules is derived from the Federal

1 Advisory Committee Act. My understanding is that you
2 all received a copy of a videotape. Did any of you
3 have a chance to look at it? Wonderful. You might
4 recognize somebody. Another attorney and I put that
5 tape together -- oh, I guess it's probably about six or
6 seven years ago, and I do recommend it because not only
7 does it review some of the rules that we'll go over
8 this morning, but I think it gives a very nice
9 historical perspective about the Federal Advisory
10 Committee Act, and the importance of Federal advisory
11 committees in general.

12 FACA's overriding purpose is to make consensus advice
13 to the Federal government from people outside the
14 government as transparent as possible. That is why
15 your meeting today was announced in the *Federal*
16 *Register*. It's why minutes of the proceedings are
17 being kept, why a Federal official such as Larry
18 Elliott is present, and why this meeting is open to the
19 public. As a member, you have a responsibility to
20 ensure that your deliberations comply with FACA.
21 You can certainly communicate with each other outside
22 this public forum, for instance, to exchange factual

1 information. But you should avoid even the appearance
2 that you are conducting Committee business,
3 deliberating and reaching consensus when you're not
4 seated at this table with a Federal official present.
5 I'll go into more detail about those obligations in a
6 minute.

7 So let's begin reviewing these two sets of rules. I
8 will finish up by also talking about -- a little bit
9 about the Privacy Act and the Freedom of Information
10 Act. And we're going turn to the Power Point now, and
11 I wish to thank Liz Homoki-Titus for putting the Power
12 Point together for me.

13 Can you still hear me okay? Sort of? I'll try to
14 speak up. Almost have to be out here to see this.

15 **DR. ZIEMER:** That's fine, you're good. Stay there.

16 **MS. KOCHER:** Stay right here?

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

18 **MS. KOCHER:** Okay. Let's define what a Special
19 Government Employee is. Well, it's an officer, an
20 employee in the Executive Branch of the Federal
21 government, and you're appointed to perform temporary
22 duties, with or without compensation, for a period not

1 to exceed 130 days during the previous year. All the
2 Board members here are Special Government Employees.
3 One of the most important rules has to do with
4 conflicting financial interests. And under Title 18 of
5 the United States Code, Section 208, a Special
6 Government Employee may not act in certain matters that
7 would affect the financial interests of the Special
8 Government Employee or their spouse, minor children,
9 general partner or an entity they serve as officer,
10 trustee or employee. And just as an aside, the rules
11 have set \$15,000 or less as the amount that's not
12 considered a conflict if you own stock from one source.
13 So how do we deal with a conflicting financial
14 interest? Well, as most of you know, you are able to
15 get a waiver, and many of you here at this table
16 probably have a waiver memo, and that's available if
17 the Department determines that the need for your
18 service is actually greater than the conflict. And
19 what that waiver basically does, it allows you to deal
20 with matters of general applicability. Now there may
21 be situations where you would actually have to
22 disqualify or recuse yourself from deliberations of the

1 committee when there is a specific matter -- excuse me,
2 a particular matter between specific parties that's
3 being deliberated that would affect your financial
4 interest.

5 Let's look at the example here. If a Board member
6 owned \$30,000 of Oak Ridge Associated Universities
7 stock, he would either have to get a waiver or divest
8 that stock in order to serve on the Board. Well,
9 obviously divestiture is probably the least attractive
10 option, and that's something that we'll rarely ever
11 even have to think about.

12 What's an appearance of a conflict of interest? Well,
13 the standard is if the circumstances would cause a
14 reasonable person to question the Special Government
15 Employee's impartiality, then there is an appearance of
16 a conflict of interest.

17 The example that's given here, if four members of the
18 Board were to meet with a member of the public for
19 lunch during a Board meeting, there could be an
20 appearance of a conflict of interest to other members
21 of the public who do not receive such personal special
22 access to the members of the Board. And we look to the

1 standards of conduct found at Title 5 of the Code of
2 Federal Regulations, this handy little book right here
3 -- this is not all the rules. Okay? Just a small
4 portion of this deals with these rules today. But this
5 one says that an employee shall act impartially and not
6 give preferential treatment to any private organization
7 or individual.

8 Gifts, illegal gratuities and bribes. Well, may you
9 accept a gift? In most instances not. Certainly when
10 the gift is given because of your official position,
11 and we look to see whether or not the giver of the gift
12 has a connection with the agency seeking action,
13 seeking to do business, already conducts business
14 regulated by the agency or has interests affected by
15 how you perform your duties. But it is okay to accept
16 occasional gifts, as long as they're valued under \$20
17 and the aggregate does not exceed \$50 from one source
18 in a year.

19 There are other exceptions that are listed in the
20 standards of conduct that I won't go into -- fairly
21 common sense sort of things, where you have a personal
22 relationship with someone.

1 Here's our example. Mr. A, who's president of XYZ
2 Corporation, offers the Advisory Board member a new set
3 of golf clubs, if -- if -- if the Advisory Board member
4 will support XYZ's bid for the contract to assist the
5 Board in its work. Now obviously Dr. B cannot accept
6 the gift, and this is an easy one.

7 But sometimes there are situations that come up that
8 are not quite as clear as that, and so what I would do
9 is I would urge you to contact Larry or David or Liz
10 and talk some of these issues over with them. We also
11 have an attorney in Washington D.C. who only deals with
12 ethics issues, and sometimes we'll -- I mean we'll be
13 able to consult with him, as well. Of course what this
14 is all about is a criminal matter found in Title 18.
15 Use of non-public information. This is an important
16 one. Information that's learned due to your government
17 position that is not publicly available may not be used
18 to further your, or anyone else's, financial interests,
19 or be shared with outside sources for any reason.

20 Here's our example. The Board is told that, once
21 again, XYZ Corporation has been selected for a contract
22 to review dose reconstructions, but the public

1 announcement will not be made for a couple of weeks.
2 Board members may not use this information for anyone's
3 financial gain, nor tell non-members this information
4 for any reason, and the authority for this is found in
5 the Code of Federal Regulations, Title 5, which states
6 that employees shall not allow the improper use of non-
7 public information to further his own private interests
8 or that of another, whether through advice,
9 recommendation or by knowing, unauthorized disclosure.

10 (Pause)

11 All right, moving right along. Outside activities.
12 This really just means that you cannot accept
13 compensation for being a Board member here today. Of
14 course you're -- may of you are employed. You will
15 continue to receive that salary. You will do so while
16 you serve as a Special Government Employee for the
17 government. There's an exception that's made for
18 Special Government Employees who do serve on advisory
19 committees. But the only compensation that you can
20 receive for serving as a Board member is from the
21 Federal government.

22 Now in the second bullet it talks about compensation

1 being allowed for activities that are related to your
2 Board service, and you can of course continue to write
3 or make speeches where you have a brief discussion of
4 the work that you do here on the Board.

5 Let's look at the example. Dr. C on the Board is asked
6 to speak at the annual meeting of a private
7 organization. He cannot get paid to discuss his work
8 on the Board, but he can speak, for a fee, if he is
9 discussing his own private research and only briefly
10 discusses the publicly available information about the
11 Board's work. And we look for authority again to Title
12 5 of the Code of Federal Regulations where it states
13 that an employee shall not use his public office for
14 his own private gain, or for the private gain of
15 friends, relatives or persons with whom the employee is
16 affiliated in a non-governmental capacity.

17 There are some employment restrictions placed on
18 Special Government Employees as to their work on the
19 Board, so a Special Government Employee cannot work on
20 matters that would affect the financial interests of a
21 current or future employer. And this goes back to what
22 I was saying before dealing with conflicts of interest

1 and seeking a waiver. But there are instances where
2 you literally cannot get a waiver and again you have to
3 recuse yourself from the discussion that was going on.

4 And what I would suggest everyone do is, prior to
5 coming to a Committee meeting, check the agenda, look
6 it over, see if there's anything on there that would
7 make you believe that there's going to be something
8 that will definitely affect your financial interests.
9 And again, seek counsel from Larry, who can then talk
10 with David and Liz, and we can figure out how best for
11 you to approach the situation.

12 Post-employment. So you leave the Board and you think
13 well, that's it; I'm done, I don't have to worry about
14 these silly standards of conduct anymore. Well, that's
15 not entirely true. There are still restrictions on
16 your being able to represent another person -- not
17 yourself, but another person or entity back to the
18 Federal government. But it's in a -- it's in a very
19 narrow area where there's a particular matter involving
20 a specific party in which you participated personally
21 and substantially while you were serving the
22 government.

1 There are a couple of other rules related to limits on
2 representation, and this one has to do with when the
3 United States is a party or has a direct and
4 substantial interest. And again you will have had to
5 have participated personally and substantially. You
6 are also once again urged to contact the Department.
7 If you have any kinds of questions we'll be happy to
8 help you through this. Many of these issues are very
9 fact-specific. We really need to understand the facts
10 in order to be able to advise you.

11 But the example that's given here, a Board member may
12 not represent a petitioner for the Special Exposure
13 Cohort, even on an unpaid basis.

14 This is yet another one that basically just points out
15 that -- here the example is that not even the business
16 partner may represent a petitioner when compensation is
17 being offered.

18 Okay. Let's move from the standards of conduct to the
19 Federal Advisory Committee Act. And again, the most
20 important thing to remember about FACA is that it
21 promotes open and public meetings. And as you know,
22 each advisory committee meeting shall be open to the

1 public.

2 Now there are instances where meetings have to be
3 closed because there will be deliberation about non-
4 public information. But even so, that still has to be
5 announced in the *Federal Register*. The public has to
6 be notified that that meeting is going to take place.
7 And as you well know, interested persons -- or non-
8 interested, for that matter -- shall be permitted to
9 attend, appear or file statements with any advisory
10 committee. And it seems to me that what's happening
11 here is that there's a public comment period every day
12 of a Committee meeting, which is wonderful.

13 Also the documents that were made available or prepared
14 for by each advisory committee shall be available for
15 public inspection and copy. And as I learned
16 yesterday, many of the things are being placed on a web
17 site, so it's really made available to the public. You
18 don't even have to file a Freedom of Information Act
19 request.

20 Minutes of each meeting of the advisory committee shall
21 be kept, and one thing many people don't realize is
22 that the Chair must review those minutes for their

1 accuracy and certify that they are in fact accurate.
2 And very importantly, advisory committees shall not
3 hold any meetings except at the call of or with the
4 advance approval of the committee's designated Federal
5 official, Larry Elliott in this case.

6 I'm going to talk a little bit about the Privacy Act
7 because it will be implicated in the work that you all
8 do here. The Privacy Act prohibits disclosure of
9 personally-identifiable information to any third party
10 without the written consent of the individual to whom
11 the record pertains, unless one of several statutory
12 exceptions applies. I won't get into those other than
13 to say they're things like audits that are being done
14 by the Inspector General, if there is actually a court
15 order issued -- a court that has what's considered
16 competent jurisdiction over the matter, but otherwise
17 you've got to have consent.

18 It is the policy of the Department to protect the
19 privacy of individuals to the fullest extent possible,
20 while at the same time permitting the exchange of
21 records so that you all can do your business. And it's
22 also the policy that the Department be as open as

1 possible and fully comply with the Freedom of
2 Information Act and the requests that are made under
3 that Federal statute.

4 Here's the bottom line rule for the Privacy Act. Do
5 not discuss individual claims with any non-government
6 employees or with government employees who do not have
7 a need to know the Privacy Act-protected materials.
8 And please understand that there are both civil and
9 criminal penalties that apply to this Federal law for
10 any knowing violations.

11 Let's look at a couple of -- I thought we had an
12 example. I guess we don't here.

13 Privacy Act rules. These are not just rules for the
14 Privacy Act, but these are also, just generally
15 speaking, good rules for Special Government Employees.

16 Don't speak for the agency or the Board. Avoid
17 discussing or disclosing the merits of individual
18 claims -- and I cannot emphasize that enough, and let
19 me just say also, you need to be very careful when you
20 do have claims information that's personally-
21 identifiable to make sure that it's locked up at all
22 times, that it's -- it's not something that you should

1 carry around casually. I wouldn't put any of that
2 information in an e-mail -- e-mails are not secure. So
3 you really do need to be vigilant when it comes to
4 handling Privacy Act records. Stick to public
5 information and refer requests to OCAS. Avoid
6 speculating about the identity of a claimant. Avoid
7 speculation about dose reconstruction issues. Don't
8 try to predict future agency or Board actions. You
9 need to avoid assisting with individual claims, but you
10 -- under the standards of conduct, you are able to
11 serve as a fact witness for some of these claims if you
12 happen to have been an employee at the time with this
13 coworker who's filing a claim.

14 Here are my examples. So here's two. So we have two
15 Board members who are talking about someone's dose
16 reconstruction and the gentleman's office is open. His
17 coworkers can overhear his conversations. This would
18 be considered a violation of the Privacy Act because
19 that information may not be shared with non-government
20 employees.

21 Another example is where an Advisory Board member has
22 been reviewing information on the computer tracking

1 system and he goes ahead to print some files to review
2 later. He leaves them on his desk. Again, this is a
3 violation of the Privacy Act because the information
4 must be protected to ensure that only government
5 employees with a need to know have access to that
6 information. That would be easy to take care of. Just
7 put it in a file drawer and lock it or lock the door
8 when you leave.

9 Just a short statement or two about the Freedom of
10 Information Act. It is a disclosure statute. It is a
11 way that people are able to get access to government
12 documents. There are some statutory exemptions. One
13 of the ones that we're finding to use more and more at
14 CDC now has to do with security issues, which you can
15 understand. But records are available to the public
16 under the Freedom of Information Act. Again, what I --
17 what's happening more and more is that the government
18 is putting things on the web site and making things
19 much more accessible to people so they don't have to go
20 ahead and file that FOIA request. But the Department
21 does answer all written requests for records.

22 With regard to media and Congressional inquiries, here

1 are just some guidelines to be thinking about. You can
2 always refer media inquiries to Fred Blosser, who is
3 with NIOSH. And Congressional inquiries -- I mean
4 Larry loves to get them, don't you, Larry? Yeah, he
5 lives for those Congressionals. You know, if you do
6 choose to speak to the media, you know, make clear that
7 you're speaking as an individual and not for the agency
8 or the Board. And please limit yourself to public
9 information. Remember the standard of conduct I talked
10 about, not disclosing non-public information. And it's
11 always a good idea to say that's what you're doing.
12 You know, I'm telling you what is already publicly
13 known, this is it, so it's very clear to the media that
14 that's what you're doing. And again, you know, Fred --
15 this is what he does for a living. And Larry, I think
16 this is what he does for a living, so you know, feel
17 free to contact them and see if you can coordinate any
18 response you're going to make -- be making with the
19 agency. And here's some contact information that I
20 think you all have as part of the Power Point slides
21 that were given to you.
22 I think that's it. Thank you very much for your time.

1 **DR. ZIEMER:** Thank you very much, Paula. I suspect
2 there might be some questions.

3 **MS. KOCHER:** Sure.

4 **DR. ZIEMER:** Let's see if there are. I'm going to ask
5 one. Let me ask it in the form of a hypothetical
6 situation. Let's suppose that the Florida chapter of
7 the Health Physics Society invites Dr. Roessler to come
8 down there and give a talk to their chapter about the
9 work of this Board. She can't accept any payment for
10 this. Can they cover her travel expenses?

11 **MS. KOCHER:** We have what are called travel
12 regulations. I would have to look at those, and I
13 would be happy to do that because they're very
14 specific. So without having the rules with me, I
15 wouldn't want to, you know, guess --

16 **DR. ZIEMER:** Well, it would seem to me that that's a
17 fairly likely scenario for some members of this Board,
18 as opposed to a payment or honorarium --

19 **MS. KOCHER:** Well, let me ask you this. Are you going
20 down to do things other than just talk about your Board
21 membership and --

22 **DR. ZIEMER:** If she were invited to Florida, she would,

1 but --

2 **DR. ROESSLER:** This actually hasn't happened, but it is
3 -- it's a really likely scenario, and I -- I would ask
4 you to look at it from the point of view that there is
5 nothing else. It would just be to attend the meeting,
6 because I think it's a reasonable --

7 **MS. KOCHER:** No, what I mean is your attendance at the
8 meeting, are you being invited because you're an
9 Advisory Board member and you're expected only to
10 address issues --

11 **DR. ZIEMER:** That -- yes.

12 **MS. KOCHER:** -- related to the Advisory Board, or
13 because of your other expertise or other research or
14 writing that you've been doing?

15 **DR. ROESSLER:** Let's assume that it's just as an
16 Advisory Board, and let's also assume that if I
17 couldn't go, Dr. Ziemer would go.

18 **MS. KOCHER:** Okay.

19 (Laughter)

20 **DR. ZIEMER:** And if I couldn't go, Wanda would go. No,
21 I think it's -- I think it's --

22 **MS. KOCHER:** Yeah.

1 **DR. ZIEMER:** -- a fairly likely expectation that
2 members of this Board might be asked to tell what the
3 Board's doing -- it would be analogous to our
4 colleagues from Great Britain coming here to talk to
5 this group. Maybe not analogous 'cause I don't know if
6 they're -- who paid for their transportation, but --
7 but an invitation of that sort, tell us about what the
8 Board does.

9 **MS. KOCHER:** It's a great question --

10 **DR. ZIEMER:** We could always say Larry will come and
11 tell you.

12 **MS. KOCHER:** It's a great question, and what I'd like
13 to be able to do is talk with David and Liz and we'll
14 get an answer back to you. And we can do that so it's
15 for the entire Board then.

16 **DR. ZIEMER:** Thank you, that would be helpful. Other -
17 - other questions or comments?

18 **MS. KOCHER:** And if you have any individual questions
19 that you don't want to raise now, you know, you can ask
20 me on the break, as well. Okay. Thank you.

21 **DR. ZIEMER:** Hold on, Paula, just a second.

22 **MR. ELLIOTT:** I'm just going to let the Board know that

1 because the overhead -- or the slides that were placed
2 in your booklet are a little hard to read, some of the
3 fonts small, we will send this by e-mail to you all so
4 that you have a copy that you can read from.

5 **DR. ZIEMER:** Good, thank you. Thank you again, Paula.

6 **MS. KOCHER:** Uh-huh.

7 **EPIDEMIOLOGICAL RESEARCH OF DOE WORKERS - STATUS**

8 **DR. ZIEMER:** Okay, we're going to move ahead on the
9 schedule. We're pleased to have two individuals
10 actually, and Dr. Utterback is going first, I
11 understand. Mary Schubauer-Berigan has been with us
12 before, but who -- who's going first?

13 **DR. SCHUBAUER-BERIGAN:** Dr. Utterback.

14 **DR. ZIEMER:** Okay. Well, Dr. Utterback is Chief of the
15 Health-related Energy Research Branch at National
16 Institutes for Occupational Safety and Health in
17 Cincinnati. He really originally was an industrial
18 hygienist, and maybe still is in that regard, but he
19 has responsibilities on the U.S. Department of Energy
20 Occupational Epidemiology studies at Idaho National
21 Engineering Laboratory and other DOE sites, and he also
22 has been involved in a number of these epidemiological

1 studies that have been funded through DOE to Health and
2 Human Services.

3 He has been very active in a number of professional
4 activities related to this, and I'm not going to read
5 his whole biographical sketch, but there is a copy of
6 it on the table and you can avail yourself of that.
7 We're pleased to have Dr. Utterback with us today to
8 speak on the epidemiological research of DOE workers.
9 Dr. Utterback.

10 **DR. DAVID UTTERBACK, NIOSH**

11 **DR. UTTERBACK:** Thank you for the introduction, and
12 thank you for the invitation to be here. It's truly a
13 pleasure to be here and talk about our research program
14 at the National Institute for Occupational Safety and
15 Health that evaluates the health of workers who have
16 been employed at Department of Energy sites.

17 With me today is Mary Schubauer-Berigan, and we've
18 divided this presentation up. Mary's presentation will
19 follow mine and I'll try to set the stage for her, and
20 she is to go through our research program and describe
21 it in such a way that it addresses some questions that
22 we understand that this Board had concerning the way

1 that the NIOSH research program addresses the issues
2 related to compensation of workers.

3 The NIOSH program on the health-related energy research
4 came into existence in 1991, and our group -- at that
5 point in time a core group was on board, beginning to
6 get things organized, and in 1992 they were able to
7 hire a number of additional scientific staff to get a
8 number of things underway. We are a group that
9 conducts analytical epidemiologic studies of workers at
10 Department of Energy sites. And we also get involved
11 in a number of other activities related to these sites
12 from time to time. The core of our mission is to
13 conduct the analytic epidemiologic studies.

14 We do this both through intramural and in extramural
15 research program. The balance between the two
16 historically -- it varies from year to year and it's
17 certainly at one end of the spectrum right now, but
18 about one-third of our dollars have gone out for
19 extramural research grants and contracts and
20 cooperative agreements. So we try to emphasize
21 extramural research because we think it's a very
22 important way to allow the broadest range of intellects

1 to address these very complicated problems.

2 Our average funding over the years has been about \$5
3 million. We're once again kind of at a low point here,
4 substantially below that \$5 million right now and have
5 been for the last couple of years. And currently we
6 have 27 FTEs available to us within the Branch to, you
7 know, do the things that are necessary to have a
8 program of this nature.

9 We came into existence -- actually the responsibilities
10 for this type of research were transferred to HHS and
11 the CDC as the result of a secretarial panel for DOE.
12 This is the so-called SPEERA panel. You may have heard
13 of this in the past; maybe this is a new acronym. It's
14 the Secretarial Panel for Evaluation of Epidemiologic
15 Research Activities at the Department of Energy. And
16 at that point in time, in the late 1980's, there was
17 quite a bit of concern about these studies that was
18 coming out and the Secretary of Energy, Admiral Watkins
19 at that time, convened this panel to try to address
20 this issue. And they made a number of recommendations.
21 One is that the epidemiologic program -- studies needed
22 to be made independent of the Department. There is

1 some -- questions that were coming out about the
2 credibility of these studies given that they were
3 conducted by contractors to the Department of Energy,
4 and there was a group at that time, the Physicians for
5 Social Responsibility, that published a very thorough
6 analysis, if you will, of these studies -- programs
7 called *Dead Reckoning*. So the decision was made to
8 transfer the responsibility for the epidemiologic
9 program to the Department of Health and Human Services,
10 and through that process it came to CDC, and NIOSH does
11 the occupational studies. National Center for
12 Environmental Health has been involved in the studies
13 of populations around these sites.

14 They believed that by doing this they could restore
15 public trust in the studies, and that it was the means
16 to try to assure the highest scientific credibility or
17 quality of these studies to put them into a research
18 program, a research-oriented program where, you know,
19 there was opportunities for peer review, thorough
20 analysis of proposals that were written and those types
21 of activities associated with research programs and
22 HHS. And they were especially trying to ensure the

1 independence of the investigators, that these people
2 could have the ability to request information and get
3 the information necessary to do these studies and not
4 be subject to some of the limitations perhaps that a
5 contractor directly to the Department of Energy would
6 have to prevail.

7 And we considered all these to be very important
8 issues. Public trust, scientific quality, independence
9 of investigators, stakeholder input, we want this to be
10 an open process, and it is an open process. And you
11 know, our studies go through peer review. CDC has
12 recently instituted a policy now that every five years
13 the research projects have to go through another round
14 of peer review if they have not been completed in that
15 period of time. So these are things that we take very,
16 very seriously in the way that we organize and conduct
17 our research program.

18 Here is our staff, and our scientific staff is on the
19 left, the information technology staff in the upper
20 right, and then our support staff in the lower right.
21 Now we have a number of industrial hygienists, health
22 physicists, epidemiologists that work with our program

1 and conduct a lot of the science that gets done within
2 this group of studies. In the upper right is our
3 information technologists, and again, these people are
4 vitally important to us and our success. We are very,
5 very information system rich. It takes a tremendous
6 amount of data and data manipulation and testing and
7 evaluation in order for these studies to be successful,
8 and so we have an excellent staff of information
9 technologists that are really at the leading edge in a
10 lot of this kind of research and putting together
11 information systems necessary to conduct it. And of
12 course our support staff, we wouldn't be here without
13 them, so this is a great group of people that I work
14 with. I'm truly very honored to be associated with
15 them.

16 The research purpose is -- I've kind of paraphrased a
17 few things here to make them fit on a slide, but this
18 was something that we did together under Larry
19 Elliott's leadership when he was the Branch Chief of
20 this group, and we went into a strategic planning
21 process and developed a mission statement, purpose and
22 some research goals associated with that, and these

1 have been very helpful to us in trying to keep us on
2 beam, keep us focused on what's important.

3 And overall we're primarily interested in understanding
4 the risk of radiation in the occupational setting on
5 worker health. How is it that the various forms of
6 radiation that exist within the occupational
7 environment, how do those impact a worker's health over
8 their lifetime. And of course cancer is a primary
9 response that we were concerned about, given the types
10 of impact that it has on a person that suffers from one
11 of these various types of disease. Grouped together
12 they're called cancer. So we're interested in
13 evaluating the significance of the health effects in
14 the radiation-exposed workers. And by significance
15 we're not just talking about, you know, the number of
16 incident cases to the number of prevalence -- you know,
17 the prevalence of the disease. We're interested in the
18 impact it has on the individual and the worker's life
19 and how that -- change is brought about in that
20 individual's life as a result of that health effect.
21 And we think it's very important that we have an
22 informed public and an informed group of workers that

1 understand our studies. We work very hard with the
2 communication effort to get our word out to the workers
3 so that they can understand what the study is saying
4 about their health and how their health may be affected
5 in the future.

6 And it's important to recognize that it's not only
7 radiation that we study, but also chemical and other
8 stressors within the work environment. And we look --
9 as you'll hear more about today, that there are a
10 variety of studies that try to look at multiple
11 exposures, not just radiation.

12 Research goals. Again paraphrasing, trying to collapse
13 these down into some succinct statements here. Again,
14 to evaluate the relationships between work place
15 exposures and diseases. And we wish to use and we try
16 to use and we do apply the best available analytical
17 methods with this. In order to apply the best
18 analytical methods, you've got to have a top quality
19 staff. And you know, we have many, many people in our
20 group -- although it's a very, very small group, we
21 have many, many people in our group that are very high
22 quality scientists and we feel that, you know, we've

1 got the intellect necessary to try to determine which
2 path to follow and how to get there, but it is
3 something that requires, you know, input from our staff
4 and their discussions that they have with colleagues in
5 the scientific community and the like to try to build
6 towards that goal.

7 We do want to analyze combined populations for rare
8 cancers where, you know, one single population -- this
9 is something I heard mentioned yesterday in one of the
10 discussions about trying to get populations large
11 enough for statistical analysis to be meaningful. And
12 one of the ways that we've gone about this is to
13 combine studies across sites so that we look at
14 different populations, bring them together in order to
15 have sufficient numbers to try to determine if there is
16 an effect associated with an occupational exposure.

17 And we've really become specialists at this.

18 This is no simple task. When you talk about, you know,
19 eight or ten data systems from each site that you're
20 trying to bring in to apply to a study, and then you
21 multiply that times the number of sites, all that
22 linking and matching and testing and evaluation, it all

1 gets very, very complex and difficult to achieve. But
2 we've really become specialists. This is our -- this
3 is our cup of tea. This is the way that we try to
4 address studies and try to bring meaningful results out
5 of the research that we do conduct.

6 Again, we want to examine the relationships --
7 exposures and worker health. I mean anybody that's
8 worked in this field of environmental/occupational
9 health for a period of time realizes that this has been
10 an issue at the top of the agenda for decades. You
11 know, I hate to speak like I have that much experience
12 in this, but I'm afraid to admit that I do now, having
13 been in this field for 25 years. But the question has
14 always been toxicologically epidemiologically well,
15 this is what one compound does, but nobody gets exposed
16 to one compound. So we're working trying to address
17 that, look at multiple exposures, radiation in
18 combination with other chemicals, chemicals in
19 combination with other factors and stressors in the
20 work place. But it takes very large datasets and
21 systems and a good deal of time to get this
22 accomplished.

1 And again, our bottom line is that we want to complete
2 the epidemiologic research, which increases our
3 understanding of the effects of low levels of exposure
4 in the work place to ionizing radiation to DOE workers
5 and others. There are -- research does have impact,
6 meaning for other workers beyond the DOE sites, and we
7 want that to be very clear, as well. There's a large
8 impact that we feel we can have within the occupational
9 health community because of the types of records that
10 are available to us and the investment that's being
11 made in this, and has been made in this program.
12 There are a number of previous occupational radiation
13 studies that have been completed. We've assembled a
14 bibliography, an annotated bibliography, if you will,
15 of studies that we feel are directly pertinent to the
16 work that we do. You know, the previous studies at the
17 weapons sites that go back, you know, into the sixties
18 with Mancuso* and his colleagues at University of
19 Pittsburgh, the DOD studies of shipyard, the nuclear
20 Navy studies that are out there. And again, we heard
21 some comments yesterday about the atomic veterans
22 studies and compensation program. There's

1 international studies. There's a lot of attention and
2 effort being focused on workers at Mayak, the plutonium
3 facility in the former USSR. There's a very large
4 multi-national studies being conducted by the
5 International Agency for Research on Cancer under the
6 leadership of Elizabeth Cardis*. Both Mary and I, you
7 know, serve on subcommittees within that study and we
8 are contributing data to that study. And then also
9 there's been various studies of medical workers -- X-
10 ray technologists, radiologists and various physician
11 specialties within the health care setting.

12 Our purpose here today is, you know, to talk about the
13 status of the HERB research program and to talk about
14 how it fits into the questions that you've raised as a
15 Board for us to address. And you know, basically what
16 we're going to be driving towards is discussing the
17 uncertainty in the current knowledge and how that has
18 an impact on the models that are driven, trying to
19 understand probability of causation for compensation of
20 workers at these sites. So we want to further identify
21 any research areas that you may have related to the
22 compensation of these workers.

1 And I think all of us kind of join together in
2 realizing that, you know, the work is not done here.
3 There's a lot of current workers in the audience out
4 here I believe, and I think all of us want to join
5 together and work as hard as we can to try to protect
6 the health of those current workers, and there's even a
7 few current workers on the Board here. So I mean it
8 really is a commitment that NIOSH has to try to protect
9 the health of the American work force, and the DOE
10 workers are a very important part of that and we
11 consider that part of our mission, as well.

12 So with that, I'll turn it over to Mary Schubauer-
13 Berigan and she will begin to discuss -- present the
14 status of our research program and talk about how it's
15 related to the questions that you raised. Thank you.

16 **DR. MARY SCHUBAUER-BERIGAN, NIOSH**

17 **DR. ZIEMER:** While Mary is coming up -- she's there
18 already, but let me just mention that she is the lead
19 epidemiologist with the Health-related Energy Research
20 Branch, division of surveillance, hazard evaluation and
21 field studies within NIOSH. And she's been involved in
22 conducting epidemiological studies of cancer and other

1 health effects among U.S. nuclear workers for a number
2 of years now. So Mary, we're glad to have you back
3 with us today.

4 **DR. SCHUBAUER-BERIGAN:** Thank you very much, Dr.
5 Ziemer. I'd like to reintroduce myself to the Board.
6 It's been about a year since I've been up here speaking
7 before you, and now I'm wearing a different hat. I've
8 been back for the last year or so working with the
9 Health-related Energy Research Branch, continuing to
10 conduct epidemiologic research on DOE cohorts.
11 What I'm going to do, as Dr. Utterback mentioned, is to
12 talk about our current epidemiologic research program
13 and to try to place it into the context of what we
14 understand to be the main issues that were raised by
15 this Board in your last meeting in February. I'll
16 start with a discussion of some of our current studies.
17 And the first slide illustrates several studies that
18 are ongoing that are being conducted by our
19 cooperators, either through contracts, grants or
20 cooperative agreements. And these are listed primarily
21 in the order in which we expect them to be completed.
22 The first study that I'll mention is a study of Rocky

1 Flats workers. This is a cohort study conducted
2 through a cooperative agreement with the Colorado
3 Department of Public Health, Welfare and Environment,
4 and through a grant that they have to Dr. James
5 Ruttenber as lead investigator. Several studies have
6 been completed and are near completion to date.

7 We recently attended a communication of Dr. Ruttenber's
8 results for a cohort mortality study and a lung cancer
9 case-control study in Denver. And several of you may
10 have heard some of the initial findings of that study.

11 The report is available or shortly will be available
12 on our internet web site. This also includes dose
13 assessment of plutonium doses to lung, using the most
14 current ICRP-60 methodology, and we're eagerly
15 anticipating the findings of that study, as well. That
16 is not quite as near to completion, according to our
17 understanding.

18 There's also currently a grant through the University
19 of North Carolina, Dr. Steve Wing, to study -- to
20 further study the Hanford cohort mortality experience.

21 As many of you know, this is a very important cohort
22 that's been studied quite extensively over a period of

1 decades. And Dr. Wing and colleagues anticipate their
2 update to be completed and a report available sometime
3 we believe this summer.

4 We also have a grant with the University of Cincinnati.

5 Dr. Susan Pinney and Richard Hornung, who many of you
6 are familiar with as well, are studying additionally
7 radon, cigarette smoking and their interaction on lung
8 cancer risk among workers at the Fernald facility in
9 Ohio. We anticipate -- we've been in contact with
10 these researchers fairly recently and we do anticipate
11 a study report sometime before the end of this fiscal
12 year. We believe this will be a very important study
13 as it uses new techniques to try to address missed
14 information on cigarette smoking that could help
15 address issues of the interaction between radon
16 exposures and smoking in producing lung cancer risk.
17 We have a contract through ORAU with Janice Watkins,
18 who is subcontracting with Ed Frome, to further
19 evaluate time-related factors that are of importance in
20 evaluating cancer risk. Right now this is primarily
21 restricted to the Oak Ridge National Lab cohort. We
22 anticipate the final report will be finalized sometime

1 before the end of this fiscal year, as well. And this
2 contract is looking further into some of the issues
3 regarding age at exposure, time since exposure and just
4 how one models complex epidemiologic data to
5 disentangle the various effects of time-related
6 factors.

7 We have a new grants program, as well, that has funded
8 two studies, one of which is listed here, a grant with
9 Dr. David Richardson, also of the University of North
10 Carolina. And this is looking at susceptibility, time-
11 related risk factors and occupational radiation risks
12 at the Savannah River site cohort. This was just
13 recently funded and data has begun to be processed, we
14 understand, by these researchers. We anticipate the
15 completion date therefore will be sometime within the
16 next several years.

17 Not on this slide but of great importance to us are
18 several other projects that I just wanted to mention.
19 There's a very large ongoing study now of the Paducah
20 workers, and this is being conducted by the University
21 of Kentucky and the University of Louisville. Also
22 recently funded through our grants program was a grant

1 to researchers at the University of Washington, who are
2 looking at multi-stage modeling for lung and colorectal
3 cancer in the Canadian National Dose Registry workers,
4 and they also anticipate using data from CEDR, as well.
5 We also have a grant that is closer to completion on
6 dosimetry errors with Roy Schorr* and colleagues at the
7 University -- or at New York University.

8 Next I'd like to talk about some of our current
9 internal studies that are being conducted by the
10 researchers that Dave mentioned on one of his slides.
11 First we'll try to illustrate some of the cohort-based
12 studies, what they're trying to evaluate and when we
13 expect them to be completed. And again, these are
14 listed approximately in the their order of expected
15 completion.

16 We have several studies ongoing at the Portsmouth Naval
17 Shipyard, and although this is not a DOE facility, it
18 is of historic importance and of great current
19 importance for several reasons. It's primarily a group
20 of workers who were exposed to high energy photons, and
21 so it's a great cohort to study issues related to that
22 particular exposure. We don't tend to see a lot of

1 internal exposures and tritium and other factors, so it
2 does provide -- in terms of radiation risk -- a fairly
3 singular exposure, but yet it's a classic occupational
4 setting in which exposures are received in a chronic
5 rather than in an acute basis.

6 We have several reports soon to be issued for this
7 cohort. I'd like to mention that several of the -- my
8 colleagues, in addition to Dr. Utterback, are with us
9 today in the audience, and if you have questions about
10 them, I may defer to some of the investigators
11 themselves who are with us, but I did want to
12 acknowledge they're here, too.

13 We also -- I'll mention a couple of other studies that
14 are of real importance in answering some of the key
15 questions that we believe the Board has, and some of
16 them pertain to this PNS facility, so please keep that
17 study in mind.

18 We also have a large cohort study for a group of
19 workers that we believe to be very important. It's a
20 group of more than 60,000 workers at the Idaho National
21 Engineering and Environmental Laboratory, and as Dr.
22 Ziemer mentioned, both Dr. Utterback and I are

1 investigators, as well as Greg Macievic, in this study.

2 These worker -- this work force is a very diverse work
3 force consisting not only of radiation workers, but of
4 workers who may have had more incidental access to the
5 site, such as ranchers or farmers. We have workers who
6 were involved in the construction of the facility, as
7 well as processors and researchers, so it is a very
8 diverse cohort. Approximately a half to a third of
9 them do have radiation monitoring data, so we will be
10 able to conduct dose response analyses. These analyses
11 are underway and we expect to have a final report
12 before the end of September for this cohort, as well.
13 A third cohort-based study that I'd like to mention is
14 a study of the chemical laboratory workers at four
15 facilities within the DOE complex. These are the three
16 facilities in Oak Ridge and workers at the Savannah
17 River site. As your briefing document mentioned, very
18 few studies have been conducted of workers in chemical
19 laboratories, and this study we hope will address some
20 very important issues with regard to interactions
21 between chemical exposures. And the chemical exposures
22 of primary concern here are workers who were employed

1 in inorganic, organic and organic mist labs, and Dr.
2 Utterback is a primary author of that study, as well,
3 and will be able to address any questions you have
4 about that. This study is a little farther behind and
5 we expect that to be completed sometime before the end
6 of this calendar year, or perhaps in late winter.
7 Lastly we have a cohort study of Fernald workers, and
8 this has been driven by questions related to uranium
9 exposures across the complex. We do expect this study
10 to address issues related to radon and lung cancer, as
11 well. Dr. James Yiin, who is with us today, is the
12 lead epidemiologist on that study. That is really in
13 its early phases and we don't expect that to be
14 completed for several years.

15 In addition we have several case-control studies, and
16 for those of you who are not epidemiologists, in
17 occupational settings we typically study cohorts, and
18 we also study -- use a study design that is designed to
19 be very efficient and yet very thorough in studying
20 specific diseases. These are conducted in a case-
21 control setting in which you take all of the cases that
22 you see in a cohort and you select randomly from

1 eligible workers who didn't have the disease to study
2 exposures in those two groups to determine if there's a
3 difference between those with disease and without.

4 It's a very efficient design because instead of
5 studying 60,000 people, you can address the same issues
6 by studying 1,000 or 2,000, which makes the exposure
7 assessment much more thorough and much more cost-
8 effective.

9 Several case-control studies are currently ongoing to
10 address specific important questions. We have a
11 leukemia case-control study in the Portsmouth Naval
12 Shipyard which is being conducted by Travis Kubale as
13 part of his dissertation program, and he is with us
14 today. We do expect this to be fairly close to
15 completion, sometime before the end of this calendar
16 year, and I know Travis would be very happy to have
17 that sooner rather than later.

18 We have a second case-control study at the PNS facility
19 which is looking at lung cancer risk. This was driven
20 by observations in the first studies that had been
21 conducted in this cohort in which excess risks of lung
22 cancer were observed, but because of the rather high

1 asbestos exposures, and perhaps exposures to welding
2 fumes that occurred at the facility, we anticipated the
3 need to do a lung cancer case-control study to evaluate
4 those three factors in addition to smoking.

5 This study is approximately a year and a half away from
6 completion, and several of the researchers on the PNS
7 team are also involved in that case-control study.

8 My second study is a multi-site leukemia case-control
9 study. We've had this ongoing for several years now,
10 and it combines workers from six different cohorts at
11 five different DOE and DOD facilities, including
12 Hanford, Savannah River site, Los Alamos -- including
13 ZIA* workers, the Oak Ridge National Laboratory and the
14 Portsmouth Naval Shipyard. This study has almost 260
15 cases of leukemia, which makes it one of the largest
16 studies of its type ever conducted. But as you can
17 imagine, conducting an exposure assessment at six -- or
18 five different facilities is quite complex, given the
19 number of potential confounding exposures to things
20 like benzene that we need to address. We're also
21 looking at the potential to evaluate plutonium dose to
22 the bone marrow for workers, particularly at Oak Ridge,

1 Savannah River site, Hanford and Los Alamos.

2 A fourth case-control study is a study of K-25 workers
3 who have multiple myeloma. Again, this is a very large
4 study, one of the largest of its kind, and it follows
5 Steve Wing and colleagues in their investigation of
6 multiple myeloma across the DOE complex, and hopes to
7 explore further some of the important exposures,
8 particularly to internally-deposited uranium and
9 multiple myeloma risk.

10 Lastly we have a multi-site lung cancer case-control
11 study that is right now pretty much on hold because of
12 all the other higher priority studies that had been
13 currently underway. We don't yet have a health
14 physicist assigned to this project, but Sharon Silver
15 and Dennis Zaebst are working on this from an
16 epidemiologic and industrial hygiene perspective. This
17 study is also quite complex in that it's studying a
18 number of different facilities across the complex, and
19 it's attempting to get around the issue of confounding
20 by other exposures like asbestos by restricting itself
21 to workers in the reactor areas, and it's hoped that
22 the exposure assessment for that group of workers would

1 be simplified.

2 Now I didn't mention it in each case, but as Dave
3 mentioned, virtually all of these studies have to take
4 into account not only the radiation exposures, but also
5 exposures to other factors that could be either
6 confounders that somehow are obscuring the relationship
7 between radiation risk and cancer, or they could be
8 effect modifiers, in which they're changing somehow.
9 Different levels of exposure to those factors change
10 your sensitivity to radiation or change the risk of
11 actually getting cancer. And so in many of these
12 studies, we're looking not only at evidence of
13 confounding, but also for effect modification or
14 interaction, which I'd like you to have a grasp on
15 because it really is the heart of many of the questions
16 -- the complex questions that this Board has asked and
17 will continue to ask, in our opinion.

18 I also wanted to mention a few other key projects that
19 are really instrumental in telling us where we're going
20 to be heading in the future. The first -- well, really
21 the sole one on this slide is the systems which we call
22 HEDS, which stands for the HERB Epidemiological Data

1 management System. It's a complex database of
2 Department of Energy and Department of Defense workers,
3 all of which have been studied by HERB in some way or
4 another.

5 This study is linked by -- well, it contains
6 demographic and work history data for Department of
7 Energy workers. It also contains radiological exposure
8 data, as well as non-radiological exposure data such as
9 chemical exposures, physical hazards other than
10 radiation. It could contain noise exposure or anything
11 that we measure that isn't related to radiation.

12 The data, very importantly, are linked by something we
13 call a master roster, and every time we put a new
14 cohort into HEDS, we have to match it against everyone
15 else that's already in there so that we can find
16 workers who went from facility to facility. And this
17 linkage is what allows us to do multi-site studies and
18 to carefully take into account exposures that occurred
19 across the complex, because we do know that workers did
20 move from site to site.

21 The key staff on this project are clearly our IT
22 specialists, but we do have input as well from

1 epidemiologists, exposure assessors and others.

2 I wanted to touch briefly on some of our high priority
3 future research projects. These include -- and really
4 are based in some degree on our success in putting
5 together the HEDS system. We would like to be able to
6 conduct more multi-site studies because we really
7 believe that they allow us sufficient power to overcome
8 the problem we have in doing these low-dose chronic
9 radiation epidemiology studies.

10 Some of the cohort-based studies we've considered are,
11 for example, studies of the neutron-exposed workers
12 across the complex. As I learned several years ago in
13 sitting on a panel that IARC put together that was
14 evaluating risks of exposure to gamma and neutron
15 radiation, there really are no cohort -- human cohort
16 studies of neutron exposures and risks directly from
17 neutrons. We do believe that the DOE work force offers
18 an opportunity to evaluate neutron risks directly
19 instead of relying on animal studies or on studies of
20 chromosomal aberrations or other lab-based studies.
21 We're also very interested in studying plutonium as a
22 hazard across the DOE complex. We've -- I've told you

1 about a number of studies that involve plutonium
2 exposures, and the most effective way we believe to
3 study them is to combine them through our epidemiologic
4 database system and to be able to evaluate, complex-
5 wide, the hazards faced -- or brought by plutonium
6 exposures.

7 A few of the other exposures that have received
8 slightly lesser priority, just because of the primacy
9 given to plutonium and neutron, are perhaps uranium-
10 exposed workers. A number of researchers -- and you'll
11 see discussions of this in your briefing packet -- have
12 looked across the complex at uranium exposures, and we
13 believe the exposure assessments could be improved in
14 that assessment and would like the opportunity to study
15 that. We've also discussed conducting tritium and
16 polonium exposure-based cohort studies.

17 As you may have noticed as you've gone through the
18 briefing book, most of our studies are studies of
19 cancer mortality, simply because those -- mortality
20 data systems are well established for epidemiologic
21 research and we know how to use them on a national
22 basis. However, we do understand that these are not as

1 efficient for studying cancer incidence for disease
2 that have low mortality rates, like skin cancer,
3 prostate cancer or breast cancer. Now this is not to
4 say that these aren't serious, deadly diseases, but
5 compared to other cancers, it's -- you tend to see
6 fewer of them if you only study mortality, and we
7 believe it is important to study cancer incidence for
8 these types of diseases. The problem, though, is that
9 the U.S. doesn't have a good system for monitoring
10 cancer incidence on a nationwide basis, and so it's
11 difficult to find comparison statistics across a
12 population. And it's even difficult to find incident
13 cancer cases in a defined population, so we do view
14 this as a high priority to develop and to evaluate such
15 an incidence study system, but we're in the process of
16 looking into that right now.

17 And for many reasons we believe that it's important to
18 start assessing the information that we already have
19 about occupational cohorts with respect to radiation
20 exposure. One way to do this, if we can't combine
21 cohorts using the raw data that's in our system, we
22 would have to use information from studies that are

1 published in the literature. This is a common thing to
2 do epidemiologically, and it's a way that
3 epidemiologists can make sense of data from studies
4 that give you conflicting information. It's a
5 formalized research process called meta-analysis, and
6 it allows you to incorporate results of studies when
7 perhaps all you may have is the study design
8 information, information about the risks and confidence
9 intervals about them. And we believe that it is
10 possible to begin doing these types of analysis, given
11 the information we already have about DOE cohorts and
12 that which we're about to get from these studies that
13 I've mentioned recently.

14 Lastly, and very importantly, we believe that current
15 worker exposures and health effects are of great
16 interest from a public health standpoint. We have
17 primarily been studying workers who were formerly
18 involved in DOE production -- the era of DOE
19 production. As you know, most DOE facilities have
20 moved into a decommissioning and decontamination era,
21 and we believe that studies of hazards of health
22 effects faced by these workers is a very important

1 direction for us in the future.

2 Now I'd like to turn to what we learned from reading
3 transcripts. Unfortunately, none of us were attending
4 your February meeting, but due to the excellent minute-
5 taking, we were able to understand what you discussed
6 and agreed on as priorities in terms of research needs.

7 And these are in no particular order. Russ Henshaw
8 really helped us try to distill your discussion into a
9 couple of different priority levels. The first I
10 called level one and the second level two.

11 The first is the incorporation of occupational studies
12 into risk models, which you expressed as a level one
13 priority. The smoking adjustment for lung cancer,
14 which we've already heard discussed over the last day,
15 was expressed as well as a level one concern or
16 research priority. The incorporation of background
17 cancer risks into the risk models was identified as a
18 high priority item, as well as the grouping of rare
19 types of cancer and prostate cancer, which isn't
20 necessarily a rare cancer, but which -- of which little
21 is known about risks from radiation exposures.

22 Some of the lesser priority levels -- items were age at

1 exposure issues and the interaction of radiation with
2 other workplace exposures. Now I don't know if this
3 reflects your current thinking. This is what we were
4 able to glean from, again, what we read from the
5 February meeting.

6 So I'd like to go through, if I have time, our current
7 research agenda and how we believe that it addresses
8 several of your most important priority areas, as well
9 as a few others that we thought of ourselves or that we
10 learned through discussions with many of you in other
11 settings.

12 First is the incorporation of occupational studies into
13 risk models. And to us, this is a simple thing to say,
14 but when you try to identify how a study fits into it,
15 you really need to break it apart into its component
16 parts. Because as you know, IREP itself is very
17 complicated and doesn't have just a single model that's
18 used to evaluate risk.

19 The first issue that we felt really touched on one of
20 the major concerns is that we feel it's important to
21 establish -- just as the atomic bomb survivor data is
22 considered a gold standard of exposures that occur

1 instantaneously, we believe it's important to establish
2 an occupational gold standard against which risk
3 coefficients could be based and evaluated.

4 Because of the different flavors of radiation and the
5 different effects that they may have on tissue and on
6 cancer risk, it's simplest to break this up into
7 exposure types. So starting with high energy photon
8 exposures, we have several studies that have either
9 been completed or are soon to be completed that are
10 looking primarily at high energy photon exposures and
11 don't have a lot of other exposures that make the
12 picture much more complex. These include the cohort
13 mortality study of Portsmouth Naval Shipyard workers,
14 the study of INEEL workers, the cohort mortality study
15 -- we believe the best study of that will be the most
16 current study since it takes into account more recent
17 cancer mortality. And this, as I said, is a grant that
18 we expect to be completed sometime this summer.

19 The new grant that we've just funded with Dr.
20 Richardson to look at cohort mortality among Savannah
21 River site workers we believe will also answer some key
22 questions with respect to high energy photon exposures.

1 And yet it's important to remember that each of these
2 studies could give us very different estimates of risk
3 on an individual basis. This is why we believe the
4 combined cohort studies that allow you to not just pool
5 results from a risk estimate basis, but also combine
6 the basic data that's used to derive risk coefficients
7 could be very important.

8 As Dave mentioned, though, there are many researchers
9 who are also doing important research on this area.
10 For example, studies of X-ray technologists that are
11 being conducted by the National Cancer Institute are
12 also occupationally-based and also are concerned with
13 relatively low, chronically-received doses. They're
14 not instantaneous high-dose exposures. So it's
15 unlikely that we'll get raw data with which to pool DOE
16 data. However, we could conduct meta-analyses that
17 incorporate not just DOE and DOD cohorts, but also
18 other occupational cohorts that could give us very
19 valuable information on higher energy photon risks.
20 Another obvious one is the study of cancer among the
21 international nuclear workers, which is one of the
22 largest studies ever to be conducted I think of

1 anything epidemiologically. It has over half a million
2 people in it.

3 A second question that we feel is extremely important
4 is not only to look at high energy photons as a gold
5 standard, but to directly assess the risks of exposures
6 to internal emitters and to neutrons. As I've
7 mentioned, several of our studies, including the Rocky
8 Flats cohort study as well as the Rocky Flats lung
9 cancer case-control study, the Fernald lung cancer
10 study looking at radon exposures, the Savannah River
11 cohort mortality study which is looking not only at
12 photons but at tritium exposures, the study of multiple
13 myeloma among K-25 workers, neutron-exposed cohort
14 study which has yet to begin, and again combined cohort
15 studies like the plutonium, uranium workers and other
16 studies based on radionuclide exposures. Again, we
17 also need to consider incorporating, through hopefully
18 meta-analysis or some other technique, data from non-
19 DOE cohorts such as Mayak worker studies, although the
20 dose ranges for that study are far greater than most
21 DOE workers have experienced, so the relevance is not
22 quite as good as it is studying this in the population

1 of DOE workers themselves.

2 We've identified a few other issues related to exposure
3 assessment, and you may ask why this is being
4 considered in the HERB setting rather than in the dose
5 reconstruction setting of OCAS. We also think it's
6 very important in producing accurate risk estimates to
7 work with the best exposure data possible. And to do
8 this, we need to address key errors that may exist in
9 dosimetry in conducting our epidemiologic studies. One
10 of these is the direct assessment of organ doses from
11 internal radiation exposures. As we know, commissions
12 like the ICRP and other international and national
13 bodies continually update and improve their dose
14 assessment models, and we would like to be able to
15 incorporate these as much as possible into our
16 epidemiologic studies. We're doing this in a grant
17 setting through the Rocky Flats lung dose assessment
18 project. We're also looking, as I mentioned, at
19 plutonium bone marrow doses in the multi-site leukemia
20 study, which could help us address the issue of RBE in
21 leukemia for alpha emitters. As you saw, that is a key
22 question that still remains in the IREP program.

1 The multiple myeloma K-25 case-control study is looking
2 at direct organ doses to uranium -- enriched uranium
3 exposures. And we're also looking at radon and -- lung
4 doses to radon in the Fernald cohort mortality study
5 and in the lung cancer case-control study being
6 conducted by our grantees.

7 In addition to internal emitters, we're also concerned
8 about organ dose characterization for neutron
9 exposures, and so as we move into the phase of studying
10 neutron work-- exposed cohorts across the complex, a
11 very important aspect of that is the exposure
12 assessment and neutron dose assessment. As Dr.
13 Kocher's presentation explained yesterday, there are
14 still key questions about transferring organ doses from
15 animal studies into human studies, and that is a
16 question that we're very concerned about, as well.

17 Oh, I skipped one, which is the additional sources of
18 uncertainty in the dosimetry in epidemiologic studies.

19 This is a well-studied phenomenon that continues to
20 advance as researchers prove their uncertainty analysis
21 techniques and dosimetry analysis techniques. Several
22 of our studies are well-suited to study these

1 particular issues, particularly the Portsmouth Naval
2 Shipyard cohort studies.

3 A second priority that received some discussion
4 yesterday was the issue of a smoking adjustment for
5 lung cancer. And as epidemiologists, the way that I
6 like to view this is in a question that can be either
7 confirmed or refuted. One of these is exactly what is
8 the interaction between smoking and radiation
9 exposures, for not only lung cancer, but for other
10 cancers as well. As poor as the data may be for lung
11 cancer, it's far better than for any other smoking-
12 related cancer, and there are many of them. We just
13 don't have a lot of information epidemiologically about
14 how smoking interacts with other exposures, including
15 radiation.

16 The Rocky Flats lung cancer case-control study, as I
17 mentioned, is specifically evaluating this and I'd urge
18 you to read that report if you're interested in this
19 topic. Several of the studies that we have underway
20 that address -- directly address this in nuclear
21 workers is the Fernald lung cancer study, the
22 Portsmouth Naval Shipyard lung cancer case-control

1 study, our multi-site lung cancer case-control study,
2 our multi-site leukemia case-control study -- which is
3 an example of another disease in addition to lung
4 cancer, and we believe it's important to conduct a
5 careful structured review of these and other studies
6 that have been conducted looking at this issue in the
7 past.

8 This is -- does pose a great challenge in DOE cohorts,
9 however, because most of our studies, as you see, are
10 case-control studies in which the case has already
11 died. And so in some cases it is difficult to get
12 smoking information. We've made great use of medical
13 records within the DOE complex in order to obtain
14 smoking information that's unbiased because it was
15 collected in advance of the person becoming a lung
16 cancer case or entering into our study.

17 The issue of incorporation of background cancer risks
18 we split into two different topic areas. One is the
19 use of adjustments for racial, ethnic and other group
20 differences, and also temporal changes, changes over
21 time. As you know, the IREP model is based on
22 background rates that are fixed at one point in time.

1 However, cancer rates have changed over time and in
2 some cases increased, in some decreased. Workers who
3 may be claimants could have become sick many, many
4 years ago, and the issue of which rate one uses to
5 adjust for background risk is of some interest.
6 Now this isn't necessarily a research question for
7 HERB. However, we do believe that the use of direct
8 risk estimates from DOE worker populations would to
9 some degree obviate the need to use a risk transfer
10 function in the IREP models, which we believe to be of
11 great importance in -- to this Board.
12 A second question is the use of adjustments for
13 radiosensitive subpopulations. Now it's been a while
14 since I read the actual enabling legislation for the
15 program, but I think I recall something about looking
16 into radiosensitive subpopulations. That's something
17 that doesn't currently exist in the IREP modeling.
18 However, we are interested in looking at risks by
19 gender, by race if we have sufficient numbers, and
20 perhaps other factors. And some of the other studies
21 that are already looking into this are listed here.
22 This is something that we note is of great interest

1 across the entire scientific community and is something
2 that may grow in interest and importance in the coming
3 years.

4 You identified another fairly high priority item which
5 is how the different rare cancer types are grouped, and
6 issues about prostate cancer. We view this as looking
7 into developing risk models for some of the more rare
8 cancer sites, or for cancer sites for which the
9 radiation risks are not well known, such as prostate.
10 Now breast cancer is well known; however, one -- male
11 breast is of concern. However, very few studies have
12 evaluated breast cancer risk in men and what the risk
13 factors are for that.

14 In order to address some of these -- we do have some
15 proposed studies. As I mentioned, it is difficult to
16 do incidence studies in the DOE work force and really
17 in any large U.S. population that's mobile, like the
18 DOE work force is. However, we've evaluated conducting
19 a skin cancer incidence study, a prostate cancer
20 incidence study. We also believe that evaluating some
21 of the rare cancers could be more feasible if we use a
22 combined cohort approach that combines data from many

1 facilities in order to increase the statistical power
2 to evaluate risk. Again, a meta-analysis or structured
3 review of not only HERB studies but of other
4 occupationally-exposed cohorts could help us address
5 this issue.

6 The issue of age at exposure is one that we've been
7 keenly interested in, as has the Board. This, we feel,
8 breaks into two different questions. One is how does
9 radiation risk depend on the age at which a person
10 receives exposure.

11 The other is really an epidemiologic problem, which is
12 that it's very difficult to study complex exposures
13 that occurred continuously over time because there are
14 so many factors that could weigh into what the risks
15 are from. One of these is age at exposure. As we
16 heard from Owen, the issue of attained age, how old one
17 is when one gets cancer, is an important potential risk
18 factor. The duration of time that occurs between when
19 exposure occurred and when disease might occur is
20 another factor. All three of these are very difficult
21 to study independently. And depending on how one
22 chooses a model, you could get very different results

1 about age at exposure if you look at these other
2 factors in -- concurrently or separately. So it is
3 epidemiologically a very -- that's, in my opinion, why
4 it's so difficult to get a firm answer on this, is that
5 there are so many other factors that are co-occurring
6 along with age at exposure.

7 As I mentioned, we have a contract and several grants
8 that are looking specifically at age at exposure
9 issues. The Rocky Flats lung cancer case-control study
10 did evaluate age at exposure, as well as several
11 cohorts, including Hanford, Savannah River site. I
12 believe the PNS cohort mortality study can address this
13 to some degree, as well as the Idaho cohort. The
14 International Nuclear Workers study is looking into age
15 at exposure, as well, combined across a large group of
16 workers. And again, to increase the statistical power
17 to detect small differences or changes that are
18 affecting other risks, as well, we believe the combined
19 cohort analysis and perhaps meta-analysis is a good way
20 to approach this problem.

21 The interaction of radiation and other workplace
22 exposures was identified as an issue of some importance

1 to this group, and as you know, IREP assumes that the
2 interaction is multiplicative. That is, it doesn't
3 matter what your other exposures were, your risk from
4 radiation is the same whether you were exposed to no
5 other chemical -- or no chemical exposures, a moderate
6 level of chemical exposure or a very high level of
7 chemical exposure. The relative increase in your risk,
8 which is what directly affects your probability of
9 causation, is the determining factor. And that's
10 assumed to be equal across categories.

11 So the question then boils down to is there evidence
12 for a departure from a multiplicative interaction, and
13 if so, which direction does it go. In some cases that
14 change could be less favorable to the claimant, and in
15 some cases more.

16 As Dave indicated, several of our studies do address
17 mixed exposures. However, no study addresses all kinds
18 of mixed exposures. It would just be too difficult to
19 study and probably not possible, given the range of
20 activities that occurred across the complex. However,
21 some of the studies that I've already mentioned are
22 looking at interactions with chemical exposures, with

1 benzene and carbon tetrachloride in the case of
2 leukemia risk, with asbestos and welding fume exposures
3 in the case of lung cancer, with -- let's see, uranium
4 with external exposures, including work-related X-rays
5 and chemical exposures in the multiple myeloma study,
6 and on and on. We really -- every study has to
7 consider how the radiation exposure interacts with
8 other co-occurring workplace exposures.

9 Some other issues that weren't raised at your February
10 meeting but which I recall being raised in the past and
11 which certainly have come up already at this meeting
12 are important, in our opinion, and we have studies
13 that will be addressing these issues. A couple of
14 these are risk models for radiation exposures in
15 chronic lymphocytic leukemia. Although the Department
16 of Labor is returning letters that say there is zero
17 probability of causation, the scientific evidence for
18 that is not that strong. And many of our studies are
19 addressing CLL risks directly. These include the
20 multi-site leukemia case-control study, the PNS
21 leukemia study, and we believe we're seeing enough
22 leukemias in other cohorts as well that some combined

1 investigations of -- across the DOE complex could
2 address this. CLL, as you know, is rare in the
3 Japanese population. However, it is fairly common in
4 western populations. And so not only are DOE studies
5 important, but meta-analysis or structured review of
6 additional western populations like the Canadian
7 workers, the British workers and several others will be
8 of some importance. And I should add that the IARC
9 study will also be looking into risk of exposure for
10 CLL, as well.

11 The adjustments for latency for radiogenic leukemia we
12 know you addressed in an administrative setting or
13 policy setting in your last meeting. However, there
14 are still important scientific issues related to this.

15 The time period that elapsed between the exposure that
16 occurred in Japan, the atomic bomb blasts, and the
17 initiation of the studies is such that they can't
18 answer that question using the Japanese data. It's
19 really incumbent on other research studies to look into
20 this issue. The standard thinking is that two years is
21 sort of the standard latency adjustment one applies for
22 leukemia risks. However, that has not been empirically

1 determined to be the best or the most accurate latency.

2 And so several of our leukemia studies are looking
3 into this issue, as well.

4 Two more issues are the direct evidence for a dose and
5 dose rate adjustment factor that occurs in occupational
6 studies. Now that -- you've mentioned some potential
7 adjustments that could occur from IREP, but this really
8 is a central topic of great concern in conducting any
9 occupational cohort study because it's inherent in the
10 design of the study that we're dealing with populations
11 that are exposed at a lower dose rate to lower levels.

12 And so any -- generally any study that evaluates risks
13 compares the findings for risk coefficients for a low
14 dose rate, low dose exposure to studies like the
15 Japanese atomic bomb survivor study. And those kinds
16 of comparisons have been done in the past and will
17 continue to be done. We think that there really needs
18 to be a careful look at this, not only in a combined
19 study basis, but reviewing what other studies have
20 found to address this issue to help us, using the
21 existing human data, to answer the question, without
22 relying on either theory or animal studies.

1 And lastly there is a minor issue related to the cut
2 points that the NCI program uses to determine what an
3 acute dose is versus a chronic dose. I don't know how
4 or if this is really applied in IREP, but it is
5 something that piqued our interests as researchers and
6 we believe we can attempt to evaluate this, to some
7 degree.

8 I wanted to leave you with a few issues regarding
9 current workers. As Dave mentioned, public health
10 issues related to current workers and the health
11 hazards that they face are of great interest to us
12 because we know that problems didn't end with the end
13 of the production era. A few of the issues that we
14 have identified and that have been outlined in some of
15 our documents that you'll see in the annotated
16 bibliography include the fact that D and D era workers
17 could face not only different hazards in the workplace,
18 but also health effects that could differ from those of
19 concern to current workers. And we have been in
20 contact -- Travis Kubale in particular has been in --
21 done an outstanding job of reaching out to current
22 workers to try to identify issues of concern to them.

1 And we are gathering this information to help us
2 develop future research and other activities that could
3 help address the hazards and health effects of concern
4 to these workers.

5 One of our very important findings is that for these
6 current workers the -- well, we're hearing concerns
7 right now about the adequacy of radiation monitoring
8 and health monitoring, even in current workers,
9 particularly in subcontractors who may have -- not have
10 access to the same level of monitoring as prime
11 contractors at a facility.

12 And lastly, we've identified the fact that information
13 quality that could support future epidemiologic studies
14 and also compensation practice is of some concern to
15 us, and we've identified this in a document published a
16 couple of years ago. We hope that DOE will be helpful
17 in responding to these concerns, but we do feel that
18 the documentation that could support future studies is
19 of great concern and something we're hoping to address.
20 For further information about this you can reach us via
21 many mechanisms. Talk to us here, call us at this
22 number. We have an excellent web site that contains

1 full reports of many of the things that you've seen
2 annotated in the listing.

3 We also encourage you to, if you'd like us to come back
4 and talk to you, we'd be happy to do so at some point
5 in the future. And with that, I'll open it up for
6 questions.

7 **DR. ZIEMER:** Thank you very much, both of you, and -- I
8 get a little amused at all the acronyms, particularly
9 when acronyms include other acronyms as part -- but I
10 am looking for the day when every letter of an acronym
11 is another one. But -- and we use that to shorten
12 things, so I'm going to call you Dr. MS-B. Dr. MS-B --

13 **DR. SCHUBAUER-BERIGAN:** That's fine.

14 **DR. ZIEMER:** -- would you identify for our group -- I
15 know you have a number of your colleagues from the
16 group from HERB here today. Could you identify for the
17 Board the other HERB individuals? I've met some of
18 them but not everybody has.

19 **DR. SCHUBAUER-BERIGAN:** Sure, I'd be happy to do so.
20 Perhaps they'd be willing to stand as I say their name.

21 The assistant branch chief, Dr. Steven Ehrenholtz* is
22 with us and he's been in HERB for quite a long time and

1 I'm sure is familiar to many of you. Next to him we
2 have Dr. James Yiin, who is an epidemiologist who's
3 fairly new to our branch and who's got expertise in
4 statistical analysis of epidemiologic studies and in
5 risk assessment, as well. Travis Kubale, who is not
6 only our help communicator and a doctoral student, but
7 a tremendous outreach asset to our group, as well.
8 Scott Hind* who is at the end is a contractor with us.
9 He's an industrial hygienist and he's helping us to
10 get these studies done and get them out the door. And
11 Dr. Greg Macievic, who I almost missed here, is a
12 health physicist who's been with us about a year and a
13 half now, who is conducting -- health physicists are in
14 very short supply in our group so we spread them rather
15 thin across the projects. He's on three of our very
16 important cohort case-control studies. Did I miss
17 anyone? Okay.

18 **DR. ZIEMER:** Thank you very much. I suspect there are
19 a number of questions and I would like to ask you to do
20 two other things before we get into general questions.

21 Early in your presentation I think you -- maybe it was
22 Dr. Utterback -- mentioned analytical epidemiological

1 studies, and would you define for the Board and for the
2 public the difference between analytical
3 epidemiological studies and descriptive epidemiological
4 studies? This is a test. Maybe we should ask the PhD.
5 candidate to do this.

6 **DR. SCHUBAUER-BERIGAN:** He's hiding and he's shaking
7 and -- no, I'd be happy to do that. It's a very
8 important question, and it is raised frequently.
9 A descriptive epidemiological study is one that
10 attempts to define disease in terms of where it occurs,
11 when it occurs. It's really defining its occurrence in
12 time and place and among people -- who is getting the
13 disease, what are the rates of disease. It also
14 includes studies that are not necessarily done on an
15 individual basis. And in the radiation community you
16 frequently see published things like what we call
17 ecologic studies that are conducted at the level of a
18 population rather than at the level of an individual
19 person. And so you might see someone comparing rates
20 of cancer in India in a low altitude environment where
21 radiation doses are low with people in Colorado who
22 might get higher doses and look at cancer. It's

1 considered non-analytic because it doesn't take into
2 account what's happening on a personal level.

3 In contrast, an analytic epidemiology study looks at
4 the level of the individual and it also tries to
5 evaluate associations between disease and some kind of
6 exposure, in this case radiation exposure. And the
7 most common designs are cohort studies, case-control
8 studies and the like, and that's -- that is what we
9 conduct.

10 **DR. ZIEMER:** And then one other item that was
11 mentioned, sort of in passing, but -- and might have
12 escaped notice was the use of CEDR, and would you
13 describe for the Board and for the public the
14 Comprehensive Epidemiological Data Resource?

15 **DR. SCHUBAUER-BERIGAN:** Surely. You've already defined
16 the acronym and for the record, again, it's the
17 Comprehensive Epidemiological Data Resource. It
18 operates by the DOE. They are the keepers of CEDR, and
19 they've contracted with -- is it Lawrence Livermoor?

20 **UNIDENTIFIED:** Lawrence Berkeley.

21 **DR. SCHUBAUER-BERIGAN:** -- Lawrence Berkeley Laboratory
22 to actually operate CEDR on their own storage systems.

1 CEDR contains de-identified information containing
2 analytic files that were used to conduct epidemiologic
3 studies. So as you go through the annotated
4 bibliography and see a study listed in there, if it's
5 been completed and it has been conducted among DOE
6 workers, the Department of Energy wants the de-
7 identified data from that study, including mortality or
8 incidence information, any other extraneous factors
9 that were used to conduct the study, and also exposure
10 assessment information in the files of CEDR. And any
11 qualified researcher who would like to have access to
12 the data to study it is eligible to apply and to
13 receive permission to use the data.

14 **DR. ZIEMER:** Thank you. Dr. DeHart has a question.

15 **DR. DEHART:** Currently there are a number of clinical
16 evaluations that are ongoing with non-DOE workers who
17 were contractor workers at some point in time at DOE
18 facilities. For example, construction workers, an
19 organization that's working with them, a union-
20 supported research activity there. What kind of
21 interface is going on between you and those -- that
22 clinical data?

1 **DR. UTTERBACK:** Just to clarify, I believe you're
2 referring to what collectively at DOE is known as the
3 former worker program of providing medical screening
4 for workers at Department of Energy sites, and there
5 are a number of these that have been underway. I think
6 the number right now is 15, maybe 16 of these programs,
7 and some sites have multiple activities.

8 We do interact with this group. We try to keep abreast
9 of changes that are going on with that group of
10 investigators and clinicians, and we are trying to work
11 with the Department of Energy in evaluating the value
12 of that information for protecting worker health, not
13 just site by site, but collectively across the sites.
14 So very recently, just this spring, we were able to get
15 copies of the questionnaires that are administered to
16 these workers as they are introduced into the programs
17 to try to determine what kind of information is
18 collected, how consistent it is across the site and
19 what the capabilities may be of collapsing the data --
20 that's a term that we use for kind of bringing
21 everything together. And just this past week we did
22 get a report from our investigator, Dave Peterson, and

1 a contractor that he's working with, Phil Beirbaum*, in
2 analyzing the content of the questionnaires. And of
3 course any time you go through that sort of a process
4 of trying to look across a variety of different
5 information sources, you know, the first result that
6 comes out of that is a whole list of additional
7 questions that you now have. So we are -- we want to
8 try to work with the program, try to evaluate the value
9 of that information for protecting not only former
10 workers, but also current workers and some of the
11 individual investigators. I know Mark Griffon's
12 involved in a program, as well. You are looking at
13 this, you know, within a site, trying to identify where
14 hazards that maybe were not recognized by the current
15 staff who, you know, people go to for information about
16 historical exposures are trying to utilize this
17 information they're getting from the workers, you know,
18 from the sites and trying to identify where hazards may
19 have exist over the lifetime of the facility. So we
20 believe that potentially it's a very useful set of
21 data.

22 Unfortunately, just like, you know, data systems vary

1 from site to site. If you look at Los Alamos versus
2 Hanford, you know, run by two different contractors,
3 they've got different data systems, different
4 organizations, different ways of running things. The
5 same occurred with these former worker medical
6 screening programs. Each site basically developed
7 their own data systems, their own set of questionnaires
8 and the like, and so it will be challenge to try to
9 bring that information together and try to analyze it
10 appropriately.

11 Thank you for the question. I think it is a very
12 valuable -- potentially very valuable resource.

13 **DR. ZIEMER:** Let me ask a question regarding plutonium
14 workers. In that -- in those studies do you have
15 access or do you use any of the database from the U.S.
16 Transuranic Registry in the...

17 **DR. UTTERBACK:** The work with plutonium workers that
18 was recently completed with, you know, Jim Ruttenber at
19 the University of Colorado Health Sciences Center and
20 the Colorado Department of Public Health and
21 Environment is -- well, as a matter of fact, I think
22 one of Owen's colleagues that was here yesterday is

1 working with that group and trying to develop a model
2 for doing lung dose estimates for the lung cancer cases
3 and controls within that study. And then they want to
4 compare -- this is based on a conversation I had with
5 Dr. Ruttenber last month, that they want to compare
6 their predicted lung doses with what they are getting
7 from autopsy tissues -- or from the tissue samples that
8 come from plutonium-exposed workers that are maintained
9 by the Transuranic Registry. So I mean we have not
10 used any of that information directly within our
11 studies, but the link is going on, you know, through an
12 external investigator.

13 **DR. ZIEMER:** I'd also like to ask about Chernobyl
14 workers, such as the liquidators. Are there any -- do
15 you have any collaborations going on? I notice you're
16 looking at Russia and the Mayak people. What about the
17 Ukraine and any of the Chernobyl-related workers?

18 **DR. UTTERBACK:** Once again, we have an extramural grant
19 that is addressing that issue. It is by Dr. Elizabeth
20 Cardis at the International Agency for Research on
21 Cancer, IARC, in Lyon, France. And she's doing the
22 dose reconstruction for the Chernobyl liquidators, as

1 they're called. It's a very large population of
2 workers who responded to the incident and over the
3 succeeding months had relatively -- well, very high
4 doses of both external -- and many of them had internal
5 exposures, as well. And we do anticipate a report on
6 that study within the next six to 12 months, I would
7 add.

8 **DR. ZIEMER:** Leon?

9 **MR. OWENS:** In regard to the study that was initiated
10 at Paducah by the University of Kentucky and University
11 of Louisville, I know that study got off to a very good
12 start. There appeared to be -- have been some
13 setbacks. Do you have an expected date on when that
14 study will be completed?

15 **DR. SCHUBAUER-BERIGAN:** I have not recently seen a
16 projected end date, you know, for that study. They are
17 preparing right now for a site visit to begin the
18 collection of the records necessary to complete the
19 study. This is a study that involves University of
20 Louisville, University of Kentucky, as well as some of
21 the staff at the University of Cincinnati who will be
22 involved in getting that work done. And they are

1 preparing, I believe within the next couple of months,
2 you know, to get to the site and begin to collect the
3 records and -- you know, initiating a cohort study like
4 this, they're doing a study of a group of workers
5 that's never been studied before. It's a large
6 undertaking. We've learned this lesson the hard way,
7 you know, doing a Denovo* cohort analysis on a working
8 population is a huge undertaking. The INEEL study is
9 one that we began early on in our group and we are just
10 now wrapping it up, you know, some ten years later.
11 That's a very large cohort. We're hoping that the
12 Paducah worker cohort is going to be -- you know, given
13 it's a much smaller work force, Idaho is a national
14 lab, have people moving in and out a lot. Hopefully
15 the work force at Paducah is more stable.

16 **MR. OWENS:** We were -- we were concerned because the
17 union was directly involved in the initial meeting that
18 was held at Paducah. We had a small group of former
19 and current workers who were assembled together to
20 assist in the information collection, and since that
21 date -- which has been about six or seven months ago --
22 we just haven't had any additional follow-up, so that's

1 why I wanted to at least find out the status.

2 **DR. UTTERBACK:** Well, I know they are working through
3 some of the business aspects of, you know, getting
4 contractors in there so that they can collect the
5 information, and that's the most recent activity that
6 I've seen there. They're just trying to get those
7 things worked out.

8 You know, there is a process of getting access to these
9 sites that oftentimes is -- is problematic. I mean you
10 wind up investing a lot of time in finding out what the
11 rules are, what the limitations are on access to
12 various things you want to look at, and then trying to
13 put together some sort of a solution for addressing
14 that particular problem at that site. So I -- you
15 know, I'm very optimistic -- an eternal optimist -- and
16 I'm very hopeful that they're going to be in there
17 very, very shortly and begin to collect the records.
18 And some of those are electronic. Some of them are
19 microfilm, microfiche and some of them are paper, and
20 that can be a very difficult problem.

21 One of the problems there is that there's pertinent
22 records to that study that are in the vault, and the

1 vault is a secure area because it also contains, you
2 know, information that's restricted for national
3 security reasons. So getting people in there requires
4 people who are cleared, and getting a clearance is
5 something that takes time, especially these days.
6 Thank you for your question, though.

7 **MR. GRIFFON:** Yeah, I was just looking in the
8 attachments and -- that you provided on summaries of
9 all the studies, current and past. And I was -- I was
10 thinking that it might be a valuable tool -- going on
11 the discussion we had yesterday, it might be a valuable
12 tool to take the matrix that you developed, Mary,
13 showing the items of interest to the Board and lining
14 up current studies that might be also useful to
15 integrate the past studies of relevance for those
16 certain factors, like the gold standard photon studies,
17 and group them by historical -- that might be a
18 starting point for us to look at how we might use some
19 of those past studies to modify uncertainty estimates
20 in the IREP model or something -- you know, at least
21 initiate discussions on that topic. I know, you know,
22 we have questions of how quickly or when we can do

1 that, but -- is that something that can possibly be
2 provided?

3 **DR. UTTERBACK:** Well, I mean I really kind of see that
4 as an initial step in pursuing some of the research
5 goals that we talked about, trying to figure out, you
6 know, what is there and where it fits into this kind of
7 matrix of -- of questions and issues that have been,
8 you know, brought to our attention by the Board and by
9 the people working with the Board. It really is an
10 analytical process to do that. It's not a matter of
11 just well, they did external exposures here and they
12 did external exposures there, because it's never clear
13 cut, and you have to be very careful about beginning to
14 sort these things out. But I do believe that it's a
15 very worthwhile analytical process, and I do believe
16 that the stage that we're at now with the occupational
17 studies presents this opportunity to us finally, that
18 we are getting cohort analyses done on these very large
19 populations in such a way -- and we've worked very hard
20 over the years to try to do these studies in such a way
21 -- that they can be combined for future analysis. And
22 it's not -- as Mary pointed out -- you know, based on

1 exposures, but also on the cohorts and looking at, you
2 know, some of the larger questions of external -- the
3 effects of external radiation, you know, particularly
4 gamma radiation in these occupational cohorts. You
5 know, it's something that we are looking at addressing
6 in the future. You know, it's something that would
7 require some change in the strategies and the way that
8 we've done studies in the past.

9 And frankly, you know, it's going to be easiest to do
10 if we are able to identify, you know, additional
11 resources to make that possible, not only, you know,
12 financial resources, but also the intellectual
13 resources, the people, you know, the most important
14 part of our program. We need to find the people that
15 have skills in this area that can bring them to bear in
16 the most efficient way. If we have to retrain, retool
17 our people, then that, you know, stretches out the
18 timeline a little bit.

19 Yeah, we believe that the stage is set and we'd like
20 very much to -- you know, to pursue that line of
21 reasoning within these studies.

22 **DR. ZIEMER:** I'd like to ask a question that, in a

1 sense, cuts across many of these studies and to
2 parallel this question with what's done on individual
3 dose reconstructions. In your studies of various
4 sorts, whether they're case-control or otherwise,
5 somebody is having to take some dose data -- DOE dose
6 data. Now in our case, there's a lot of massaging
7 done. We take the dosimetry data, there's some
8 corrections made for missing dose, there's corrections
9 made for certain medical exposures that were required
10 as part of the job and -- you're all aware of this --
11 and there's a distribution that's associated with that,
12 not just a point value. Now I'm trying to get a feel -
13 - we have a number of investigators doing these other
14 studies, these analytical epidemiological studies, and
15 I'd like to get a feel for to what extent is there a
16 somewhat common protocol in establishing what the dose
17 values -- 'cause obviously you have -- you're looking
18 at dose versus effect in a population type of
19 situation. Can you talk a little bit about the
20 uncertainties in those that are used there -- I think
21 in many studies they bin these doses; they take groups
22 of people that have doses between some lower and upper

1 value and there's a variety of bins. Right? But give
2 us a feel for what's required -- how -- how the
3 investigators are using the DOE dose data, which
4 everyone is saying is inadequate, and if it's
5 inadequate, what are they -- and we do things to make
6 it adequate for compensation decisions. How are the
7 epidemiologists making it adequate for their studies so
8 that we have confidence that the final result is
9 useful, even for our use?

10 **DR. UTTERBACK:** I mean you -- you mentioned several
11 things that are -- that are used, including, you know,
12 utilizing dose ranges instead of individual values, you
13 know, doing the categorical analysis instead of
14 analyzing continuous variables. That -- you know, I --
15 that is -- is a -- I mean how much time do I have? I
16 mean --

17 **DR. ZIEMER:** Well, I think --

18 **DR. UTTERBACK:** We could bring out some health
19 physicists --

20 **DR. ZIEMER:** I think if you could give us kind of an
21 overview of how -- I don't want to get into all the
22 detail here, but it seems to me, even if you're going

1 to do meta-analysis, you have to have some idea of
2 whether the investigators are approaching this in a
3 sort of somewhat similar way, or how do you put this
4 all together?

5 **DR. UTTERBACK:** Actually --

6 **DR. ZIEMER:** And remember you're speaking to largely
7 non-epidemiologists here.

8 **DR. UTTERBACK:** You know, we would like to come back
9 and bring, you know -- we do have a health physicist
10 here with us who could come up and talk a lot about
11 this. We would like to come back and maybe address
12 that at some point in the future, but all those things
13 you mentioned are areas that over the past decade of
14 conducting this research that we've discovered as being
15 important issues. The role that medical exposures and,
16 you know, occupationally-required medical evaluations
17 and the X-rays that are associated with that and how
18 that affects the dose estimate for the workers as
19 missed dose is something that early on was recognized
20 as an issue due to censoring within the data limits of
21 detection on dosimetry, a variety of other things, and
22 in some populations only portions of the populations

1 being monitored, and internal dosimetry presents this
2 whole sundry of uncertainties as we go through this
3 process. So you know, it is different because, you
4 know, it's not sufficient within the epi study -- and
5 I'll defer to Mary very shortly on this, but you know,
6 to do the distribution of uncertainty and assign that
7 to each individual worker. You know, instead we want
8 to come up with some estimate of the central tendency,
9 you know, what is the best estimate of exposure for
10 this worker, and then, you know, run that through the
11 analysis. So you know, these are all things that we
12 work very, very hard on. We've got some very talented
13 individuals and some very detail-oriented individuals
14 who really dig into this and find out what the records
15 will support, what is possible to do and what are the
16 best estimates that we can derive.

17 **DR. SCHUBAUER-BERIGAN:** I would only add to that in a
18 couple of sentences. One is that most -- or many
19 epidemiologic studies, not just worker studies, put
20 exposures into bins. The lung cancer study done by Dr.
21 Pierce Owen Hoffman referred to yesterday is one such
22 study of the Japanese survivors that did classify

1 workers according to the bin of radiation dose. It's
2 of course imperative that you put workers into the
3 proper bin in order to have an accurate study. And as
4 Dr. Utterback indicated, there are many methods that we
5 incorporate to try to do that.

6 We may end up not being able to entirely determine
7 which is the best estimate. And in that case, we would
8 frequently conduct what's known as a sensitivity
9 analysis to use a range of possible alternative doses
10 that could have been applied to that population and to
11 determine how risk estimates might change. And that's
12 part of the analysis one would have to do in order to
13 incorporate different cohorts into a single analysis.

14 **DR. ZIEMER:** Thank you.

15 **MR. GRIFFON:** Yeah, you know, Paul's question triggered
16 a question for me. Just -- just fro-- does the HERB
17 branch have access to OCAS records? I imagine there's
18 some privacy issues or -- or some -- but does the HERB
19 branch have access to -- specifically, instead of the
20 broader question, I was thinking of the case-control
21 studies that you have ongoing where it might be very
22 advantageous to look to some of the extensive health

1 physics work that's going on in the OCAS branch for
2 particular cases that are in your case-control study --
3 or controls that are in your case-control study.

4 **DR. SCHUBAUER-BERIGAN:** I think at many levels there is
5 a lot of interchange between HERB and the work that
6 OCAS is doing. They've discovered a tremendous amount
7 of information that's been very useful to the conduct
8 of our epidemiologic studies. So far, to my knowledge,
9 we haven't received any individual level exposure data
10 that would contribute to our studies, but the data
11 discoveries and data sources that OCAS has made to date
12 have been very useful to us.

13 **MR. GRIFFON:** But do you intend on -- on looking for
14 that data? I mean -- or would you do a parallel
15 process where you would reconstruct your doses
16 independently of OCAS or...

17 **DR. SCHUBAUER-BERIGAN:** It gets tricky in an
18 epidemiologic setting because you end up, in some
19 cases, having a different exposure assessment for your
20 cases than you would for the non-cases because clearly
21 every claimant -- the claimants who come in are most
22 likely to be cases in our studies, and so that leads to

1 problems epidemiologically in doing analysis. But we
2 would certainly take any higher level information that
3 could be useful that would help us further refine our
4 exposure estimates.

5 **MR. ELLIOTT:** Let me add to the first question that you
6 asked. There's one system of records under the Privacy
7 Act at NIOSH that -- that both the HERB research
8 studies are added to the system of records which OCAS
9 has access to, and we've utilized that information as
10 best we can. And the information that OCAS receives
11 from claimants and from our dose reconstruction effort,
12 from our interviews, all of that is under the same
13 Privacy Act system of records and HERB, in a
14 institutional review board-approved protocol study,
15 could have access to that if the study design called
16 for it and was approved for that.

17 **DR. ZIEMER:** But of course keep in mind that many of
18 the dose reconstruction values only go far enough to
19 determine probability of causation, and then you can
20 stop. So that may not be the dose. If you have enough
21 dose to get compensated, this -- the analysis is
22 carried no further. That's not the value you need for

1 an epi study, so there are two different endpoints that
2 are of interest.

3 Again, thank you very much. We appreciate a very
4 informative input to the Board on this topic.

5 **DR. UTTERBACK:** Thank you for having us here. It's
6 been a pleasure. We always love talking about our
7 research program and would welcome the opportunity to
8 come back at any time.

9 **DR. ZIEMER:** And we appreciate meeting your colleagues,
10 as well.

11 We're going to take a 15-minute break, and then we'll
12 return for working -- Board working session.

13 (Whereupon, a recess was taken.)

14 **BOARD DISCUSSION/WORKING SESSION**

15 **REVIEW PROCESS OF COMPLETED DOSE RECONSTRUCTIONS**

16 **DR. ZIEMER:** I'm going to call the Board back to order.

17 We have a number of items to take care of yet, so if
18 you'll take your seats we'll proceed.

19 We're going to move now to a work session on dose
20 reconstruction review process. I believe, Board
21 members, you should now have some handouts from the
22 dose reconstruction work group. There are I believe

1 three documents. One is called procedure for
2 processing individual dose reconstruction reviews; one
3 is task order, dose reconstruction procedure and
4 methods review; and the third is task, individual dose
5 reconstruction review.

6 Mark, is that correct? Those are the items?

7 **MR. GRIFFON:** Yeah, and then --

8 **UNIDENTIFIED:** (Off microphone) And then there are
9 some others.

10 **MR. GRIFFON:** Yeah, there's three more that I think are
11 being cop-- oh, that are -- have been handed out.

12 Right? Three more from yesterday.

13 **DR. ZIEMER:** Okay. The other items, there's a copy of
14 yesterday's slides and I see a copy of a summary review
15 for a basic review and advanced review.

16 **UNIDENTIFIED:** Correct.

17 **DR. ZIEMER:** All right. So there are six documents.

18 Make sure you have those.

19 So let me -- let me turn this over to Mark -- Mark, if
20 you would, what I'd like to do if we can do this is try
21 to limit this to 30 minutes, because we have an
22 additional item we want to discuss before the public

1 comment period.

2 Wait a minute. Are we behind schedule?

3 Okay. Well, yeah, try to limit this to --

4 **MR. GRIFFON:** I'll try -- I'll try to pick out the --
5 the big items.

6 **DR. ZIEMER:** Let's move ahead, yeah.

7 **MR. GRIFFON:** And let -- and -- yeah. What I -- what I
8 can probably do is just tell you what we did as a
9 working group last night and this morning. We -- we --
10 the three document -- the first three documents that
11 Paul mentioned to you here, the first one is a
12 procedure -- a draft, I should say, procedure for
13 processing individual dose reconstruction reviews, and
14 then the other two are separate tasks -- draft tasks
15 that we sort of extracted from the task order contract
16 itself. A lot of the language in the two tasks you'll
17 recognize. I -- we did do some additions to those, but
18 a lot of it's similar -- you know, sort of cut and
19 pasted from the original task order contract.
20 And I think what -- the process here, I think the --
21 that -- that I think might be appropriate is we -- we
22 would like -- we would like these certainly available

1 when the contract is awarded, some of this stuff to be
2 all in place. And the notion was to get some drafts
3 out today, as rough as they may be, and then by the
4 time we have our next Board meeting we would -- we
5 would get full comments from all Board members and
6 draft a final document at that point.

7 So, you know, I think -- 'cause there's a lot just to
8 throw on you for a 30-minute discussion to review and
9 give all comments, so I think the real intent is to
10 take these back with you and have more -- a full
11 discussion and -- and come up with a final draft at the
12 next meeting.

13 Having said that, I should point out some things in the
14 -- in -- I'll start with the procedure and processing
15 the individual dose reconstruction reviews 'cause I
16 think it builds on some of the points from my overheads
17 yesterday, some of the discussion items that I -- I
18 threw out at the end of that presentation yesterday.
19 You can see there are several parts of this --
20 selections of the cases for review -- I don't know, are
21 copies available for the public? I see -- okay. All
22 right. Selection of the cases for review, designation

1 of Board members to the individual dose reconstruction
2 case review. Section B there, we made some assumptions
3 in this draft about how many cases would be done, and
4 that was from the original -- the original task order
5 contract, and then I -- you know, we made a estimate
6 here that we would -- we would do 25 cases every two
7 months, just to sort of give us something to think
8 about in terms of how are these things going to be
9 processed and what is the burden going to be on the
10 contractor, as well as on the Board members that are
11 going to be involved. I note that Board members, on a
12 voluntary, rotating basis -- I -- I think that a lot of
13 people -- a lot of individuals on the Board are -- are
14 interested in participating in this, but I think
15 everybody wants a little better definition of what
16 participate means, what -- you know, what extent each
17 individual Board member will have to be involved in
18 this. So it would be -- you know, 25 cases every two
19 months, cycling through at least for the initial year,
20 based on the estimate of cases we did in the task order
21 contract.

22 The distribution of data -- this question -- Section C

1 is the distribution of data to the contractor and
2 designated Board members. I note in here something
3 that -- that I think we need -- as a discussion,
4 something that came up in the discussion items
5 yesterday, which is -- NIOSH will provide data -- all
6 data related to the individual case, which --
7 parentheses, the entire administrative record -- to
8 both the contractor and designated Board members. And
9 I've had some discussions with Larry on -- on just, you
10 know, whether this can be done, given Privacy Act
11 concerns, and I think we might want to ask NIOSH if
12 there's any more word on that -- where we stand on
13 that. I guess we should do it as we go, as...

14 **DR. ZIEMER:** Yeah, I don't know that we need the
15 answers to all of these necessarily --

16 **MR. GRIFFON:** Just to point out --

17 **DR. ZIEMER:** -- today if they don't have it, but at
18 least they need to explore that and -- and while I have
19 the mike, let me suggest that everybody on the Board
20 and those members of the public, as well, just mark all
21 of these copies as draft -- all this whole packet of
22 stuff -- none of this has been approved by the Board.

1 These are working drafts, so I think it would be
2 appropriate to label them as such, and that way you
3 will not later mistakenly think that these are
4 procedures as they will be used 'cause they're subject
5 to change.

6 Additional comment, Tony?

7 **DR. ANDRADE:** A quick question. Mark, item number one
8 on C, just so that I can go home and think about it
9 correctly, it says case numbers will be provided to
10 NIOSH. Who is supposed to provide these case numbers?

11 **MR. GRIFFON:** Right, in the -- Section A, the idea is
12 that the Board is -- is going to do the random
13 selection of the case numbers --

14 **DR. ANDRADE:** Okay.

15 **MR. GRIFFON:** -- based on a random stratified approach,
16 and then we give those numbers for them to pull the
17 records -- the language might not have been great
18 there, but that's the idea, yeah.

19 **DR. ANDRADE:** That's fine. Okay.

20 **MR. ELLIOTT:** Let me speak to the Privacy Act question.

21 I don't have an answer today. We need to understand
22 what you were proposing to do, what the process that

1 you're proposing to engage in looked like here before
2 we could get you answers about how we're going to
3 control Privacy Act-related information and maintain
4 the confidentiality of that. I think there's several
5 ways we -- we might achieve that, but we need to have a
6 better understanding of how you envision the process to
7 be before we can then come to -- come into that and
8 play the role that we need to play to support you, as
9 well as to make sure that we do protect the
10 confidential information, as we're all very much
11 interested in doing that. So...

12 **MR. GRIFFON:** The -- and the next item, C-3, talks
13 about requests for additional documents. I know that
14 at the pre-bidder meeting the question was asked on the
15 records, and I think primarily what -- what we've been
16 envisioning happening -- what NIOSH has been
17 envisioning happening is the -- for an individual case
18 the -- the administrative record will be on a CD and
19 distributed, if it's -- meets Privacy Act concerns.
20 The other question would be additional documents
21 relevant to the review of the case, and I believe
22 Larry's said in the past that's -- many of these

1 documents may be available on the web site or by other
2 means, or published papers that are readily available
3 through other means, then the contractor would have to
4 get them themselves. But there's -- there's questions
5 -- and this is worth highlighting because it comes up
6 in the -- in the individual task, also. There's
7 questions about the site profiles, the worker profiles,
8 those databases, if -- if they can be remotely accessed
9 or if the contractors will actually have to make
10 provisions for traveling and working at the ORAU or
11 NIOSH offices to do some of those activities where
12 they're required to compare a case against a site
13 profile, for instance. So we -- we just want -- wanted
14 some clarification on what -- what means might be
15 available for that.

16 Going on to the next page, D is the interface of the
17 Board and the contractors with relevant experts and to
18 the individual claimant. And I -- and understanding
19 that last issue is certainly something that we need
20 more discussion on, the access of the Board or this --
21 or our contractor, the contractor assisting us, to the
22 individual claimant to do follow-up interviewing.

1 That's something that we removed from the task order
2 contract initially until we had more time to discuss
3 it, but I think that -- that many of us on the Board do
4 want to discuss that further, and many of us are
5 interested in it, so I just highlight that. Maybe we
6 won't get to it today, but I think we need more
7 discussion on whether -- whether we want access to
8 individual claimants for the Board and the contractor,
9 and if so, how we can possibly go about that. And if
10 there is -- I don't know if there is legal restrictions
11 or --

12 **DR. DEHART:** You may recall that we had discussed at
13 what point in the system will we actually have access
14 to the record, when will we want to review this record
15 with the contractor. And it's my understanding we've
16 agreed that it would be post-adjudication. So the case
17 has been --

18 **MR. GRIFFON:** Right.

19 **DR. DEHART:** -- resolved, and now do we have access.

20 **MR. GRIFFON:** Right, that's a --

21 **MR. ELLIOTT:** Yes, for the record, let's just make sure
22 that we're all on the same page, that your review of

1 completed dose reconstructions is actually review of
2 the pool of cases that have reached final adjudication.

3 So that means if there is a case that goes to appeal,
4 it's not in that pool yet. And we have also talked at
5 length about interacting with the claimants, and you
6 know my feelings about that, so I think we're probably
7 going to end up in more discussion about that, it
8 sounds like.

9 **MR. GRIFFON:** Yeah, I think we will. So those are just
10 laid out. The other -- the other portion of D is
11 interface of the Board and contractors with relevant
12 experts, and -- experts in quotes, which may include
13 technical experts from the sites, former workers,
14 worker representatives, and we discussed that. Also --
15 you know, this -- this comes into play in the task
16 contractors, I -- these interviews may be conducted
17 over the phone, but they also may want to meet with
18 these people in person. We did talk about -- these
19 would probably be -- it may be like at the Garden Plaza
20 and not on the Oak Ridge site, necessarily. Although
21 Bob Presley did raise a question during our discussions
22 this morning that in the event that we wanted to

1 follow-up and it needed to be done in a classified
2 room, then we would have those issues to -- to attend
3 to, so -- and to get a classified room, obviously we
4 have to be on a DOE facility.

5 **MR. ELLIOTT:** And with a classified member of the
6 Board, which right now I think we only have one -- two.
7 Two, maybe -- three? Okay. Don't know who all's got
8 a clearance. We're not supposed to know that. Right?

9 But we do have to make sure that we don't send people
10 in who do not have a clearance.

11 **MR. GRIFFON:** Or, you know, a contr-- we -- we've had a
12 proviso in the contract language that the contractor
13 would have cleared people, so it may be that the Board
14 members cannot attend that portion, you know, but the
15 contractor may be able to do that.

16 Going on to Section E, inter-- interaction between
17 contractor and designated Board members and the Board,
18 this was a sort of an attempt to walk through how we
19 saw this -- these cases being processed. So the first
20 step is that the designated Board members and the --
21 and a contractor will work on a group of cases and --
22 and then -- the way we saw this sort of cycling through

1 possibly, and this is really, you know, preliminary I
2 think, and maybe best-case, but the idea would be to
3 select a group of cases -- and we said 25. Those go to
4 one contractor, possibly more than -- multiple
5 contractors, but a contractor and two designated Board
6 members, which is also open for discussion, would then
7 start a review process of those -- of those 25 cases
8 say, for sake of argument, in two months or at the next
9 Board meeting -- approximately two months was an
10 estimate -- then this -- the designated Board members
11 and the contractor would meet and discuss those
12 individual reports, which we brought up yesterday the -
13 - the individual dose reconstruction reports versus the
14 summary reports, so they'd go through all 25 reports
15 with the designated Board members. And possibly we
16 said that this could be done like the day before the
17 actual Board meeting. Then they would -- would -- and
18 they may have this compiled beforehand, obviously, but
19 they might have a summary report, also, and once the
20 designated Board members and contractor are in
21 agreement, then they would bring that summary report to
22 the full Board. And the summary report would be a de-

1 identified version and would look more at aggregate
2 results than the individual cases. So that -- that was
3 sort of the way -- and then the final step would be --
4 I think this covers E and F, too. They overlap a
5 little, as I looked at it this morning. The final step
6 would be that then the Board, on a periodic basis,
7 would report out on -- on our findings to HHS, and that
8 would also be obviously in a de-identified form. And I
9 think that sort of steps through E and F.

10 And then G is -- finally the Board recommendations --
11 this also overlaps a little. The Board recommendations
12 to NIOSH regarding the individual case or aggregate
13 findings was another one of my discussion items
14 yesterday, and we -- we did say that there may be cases
15 where the Board makes recommendations to NIOSH
16 regarding a single case, and that may be -- most likely
17 limited to a case where it would -- it would affect the
18 outcome of that -- of that determination -- or affect
19 the final outcome. On the most -- for the most part, I
20 think the Board is going to provide NIOSH with
21 recommendations on the aggregate findings and trends
22 and things like that. I also say in here the Board

1 will track the recommendations to NIOSH and NIOSH's
2 subsequent actions or responses to the recommendations,
3 and the Board will include a summary of findings,
4 recommendations and corrective actions within their
5 report to HHS. So this was sort of a way -- we
6 discussed a lot of these things in the past. It was
7 sort of a way to lay out a real rough preliminary draft
8 of how we see it maybe processing through.

9 **DR. ZIEMER:** And this requires no action today, but are
10 there additional questions for clarification purposes
11 that any of the Board members wish to ask of the
12 subcommittee -- it's not a subcommittee, it's a working
13 group. I've got to get my terminology correct.

14 Okay. Thank you, Mark. The two drafts of review forms
15 we probably don't need to go through 'cause they are --
16 they are supportive of this. They're simply a --

17 **MR. GRIFFON:** Right.

18 **DR. ZIEMER:** -- step-by-step sort of identification of
19 the issues and the findings and observations. It's
20 simply a form that would be generated in the process of
21 doing the reviews. And then what about the two -- the
22 task order --

1 **MR. GRIFFON:** The -- yeah, the task --

2 **DR. ZIEMER:** -- items?

3 **MR. GRIFFON:** -- the tasks that I've laid out here,
4 they -- they will look very similar to the language
5 we've already discussed and which was in the original
6 task order contract. On the first one, the individual
7 dose reconstruction review, at the very end of it I put
8 just a few items for us to think about, whether --
9 whether and how we have to build it into the individual
10 tasks for the purposes of the contractor being able to
11 make a bid on this. You know, their required travel,
12 access to data -- some of these same questions, you
13 know, to the extent that some of these answers would
14 affect how the contractor could bid on this task, we
15 need to flesh them out a little more.

16 Also I said -- as next steps, I think before the next
17 meeting, I would hope that we could take these two --
18 two tasks at least and work with NIOSH to -- to draft
19 them -- you know, to put the other language that we
20 need to make them an actual task -- all the other
21 contract language that needs to be included within
22 this. So that was the -- the hope was that at the next

1 meeting we could present a more formal task.

2 The other task is the dose reconstructions procedures
3 and methods review. The A through -- A through H or so
4 -- let me just say, most of these, the list of
5 procedures were in the original contracts -- task order
6 contract. There were some additions to this. The
7 additions I don't think contradict the original task
8 order contract, but someone might want to examine that,
9 too. The additions primarily were made by comparing a
10 list provided by ORAU to the working group of the
11 existing procedures that they're either -- that they've
12 either developed or they are developing, so it gave us
13 a sense of what -- you know, to -- a different level of
14 specificity, I guess, that we could add to this task.
15 And so that's -- that's about it. And I think --

16 **DR. ZIEMER:** Okay.

17 **MR. GRIFFON:** Like you said, we don't expect --

18 **DR. ZIEMER:** Now does --

19 **MR. GRIFFON:** -- action today.

20 **DR. ZIEMER:** Does the working group wish to have
21 comments from Board members and -- before our next
22 meeting, either questions or comments so they could

1 feed them to Mark?

2 **MR. GRIFFON:** Yeah, that would be --

3 **DR. ZIEMER:** We have a question here. Tony?

4 **DR. ANDRADE:** More of a comment, perhaps suggestion. I
5 looked over both of the draft task orders. It's pretty
6 standard. We've been over this stuff often enough.
7 It's procedures and methods review and then basically a
8 -- the first level -- a description of the different
9 types of reviews that might take place. I was going to
10 suggest that perhaps we turn it over either to the
11 project officer or to the contracting officer and maybe
12 get out a draft so that we can look at what one of
13 these -- or both task orders may look like in near
14 final form and that we then proceed to comment and work
15 on them during the next meeting.

16 **DR. ZIEMER:** This is -- this is a good suggestion, and
17 we -- we can probably have both things happening. If
18 there's something that jumps out at you on this draft
19 that you think should be addressed, you can let Mark
20 know. But as Mark has already suggested, he's going to
21 work -- I guess with Jim Neton or the staff people to
22 get whatever language is necessary for the final task

1 order in terms of the Federal requirements. It seems
2 to me some of the issues -- particularly this issue of
3 the interviews -- is one that we may want to think
4 about dealing with that in some way that would not hold
5 this up. I have a hard time envisioning us getting
6 into any interviews early on in this review process,
7 but I'm -- I'm suggest-- I'm asking whether it would be
8 possible to -- well, at least in the initial task order
9 -- I guess you don't have any interviews involved in
10 the initial task orders, do you, or --

11 **MR. GRIFFON:** It doesn't necessarily mean I don't want
12 any.

13 **DR. ZIEMER:** I understand --

14 **MR. GRIFFON:** It's just that we're --

15 **DR. ZIEMER:** I understand that. But -- but I think we
16 have to think very seriously about cases that are
17 closed in terms of what that means even to a claimant,
18 whether the claimant is successful or unsuccessful, if
19 -- if -- we already know that interviewing claimants
20 has been, in some cases, rather traumatic anyway. And
21 I'm not -- it's not obvious to me what we gain by this
22 at this point. But you know, I'm certainly open to --

1 if there's something in the record that makes it
2 awfully clear that we just need to get back and find
3 out --

4 **MR. GRIFFON:** Well --

5 **DR. ZIEMER:** -- you know, or say that something doesn't
6 look right, that's -- but I'm a little nervous about
7 the idea of -- of going back to a claimant whose case
8 is closed --

9 **MR. ELLIOTT:** Let me comment on that.

10 **DR. ZIEMER:** -- 'cause there's -- there's a lot of
11 personal things involved in this in terms of people
12 coming to closure, whether it's -- whether it's pro or
13 con, coming to closure with something that gets
14 reopened, that's a very -- you know, it involves
15 sickness, in some cases deaths and so on, so we need to
16 be sensitive to that part of it, as well.

17 **MR. ELLIOTT:** I'm going to jump in here again. You've
18 heard me speak about this before. I fully agree with
19 what Dr. Ziemer just said. I firmly believe that you
20 should conduct your audit looking at the informational
21 materials that support the decision. In that process
22 of your review, if you identify issues associated with

1 the interview process, that then may trigger the need.

2 You can establish perhaps the need to interact with
3 claimants. But frankly, I'm -- I'm not -- I'm not in a
4 position to say that you're going to be able to
5 interact with claimants. There are -- as I related to
6 you in the past, there are a host of issues associated
7 with that after the decision. There are materials.
8 There is -- there are documentations that support the
9 interview interaction with claimants that you'll need
10 to avail yourselves of in your review, examine those
11 materials, the way the interviews were set up, the way
12 they were conducted, the reports that were generated
13 from the interviews. All of this is information that
14 is supporting of the decision. That, in our opinion,
15 is what you should be reviewing and evaluating for
16 quality and credibility.

17 **DR. ZIEMER:** Okay.

18 **MR. GRIFFON:** Can I --

19 **DR. ZIEMER:** I don't know that we want to have an
20 extended debate on this issue today because we're going
21 to revisit these documents at our next meeting, but --
22 yeah, Mark.

1 **MR. GRIFFON:** Just one thing to think about. I know
2 it's a longer debate, but -- I mean I think there were
3 other alternatives offered on a way to maybe get at
4 this issue. And one, which is not being -- certainly
5 is not being done right now, but it would be to
6 transcribe or tape the interviews that NIOSH is doing
7 and then the contractor and the Board would have
8 something to turn to to review that -- you know, other
9 than just the final written, you know, questionnaire
10 form, so that may be one way to get a more in-depth
11 review of the actual interview itself. But I -- I
12 understand the issues, but I also -- I also reflect on
13 some of the findings in the NAS report. And
14 notwithstanding Larry's -- you know, and I understand
15 the intent of NIOSH to involve and to get information
16 from the workers, but I think we also have to keep our
17 eye on that, that that -- you know, that's one of our
18 roles is to make sure that that's being done in an
19 adequate fashion.

20 **DR. ZIEMER:** Tony?

21 **DR. ANDRADE:** Quick comment. I think in the spirit in
22 which we first decided to go forth with this auditing

1 contract that if it truly is going to be a quality
2 audit on -- on what -- on the procedures and methods
3 that we were using, then let's not forget about the
4 fact that our findings really and truly should be used
5 to continuously improve our processes. And in that
6 sense, it's a forward-looking type of audit. If we
7 find deficiencies, then those deficiencies should be
8 pointed out to NIOSH for improvement in the future.
9 And again, going -- I think going back retrospectively
10 is a mistake, so that's just something to think about.

11 **DR. ZIEMER:** Robert.

12 **MR. PRESLEY:** Bob Presley. I go along with Tony, and
13 you just go back and don't forget this. To us it's a
14 very important thing. Maybe between Larry's group and
15 the lawyers, that they can come up with some wording
16 that this would be left open, with the fact that we
17 come and, as a Board, ask if we do see fit to interview
18 somebody, but leave this as an open -- open-ended
19 thing, don't close the door.

20 **DR. ZIEMER:** Any other comments? Yeah, Roy.

21 **DR. DEHART:** A different topic. Larry, do we need to
22 have any kind of training, since we're going to be

1 working directly with the contractor? As we sit and
2 work over that, we're going to have the contractor
3 there. Do we need any precautionary instruction or
4 whatever? That -- just keep in mind that -- that
5 question. I don't know.

6 **MR. ELLIOTT:** I will keep in mind that question. At
7 this point I'm lost with what -- you've had Privacy Act
8 training, you've had -- you've had that. You've signed
9 -- you know what you're committed to in that regard,
10 and the contractor will be held accountable to that, as
11 well. But yeah, if you think of something that you
12 think merits training or you're curious about do we
13 need training to interact with the contractor, let me
14 know and we'll --

15 **DR. DEHART:** Don't misunderstand. I'm not asking for
16 training. And secondly, we did talk last time about
17 the fact that we, as a group, will need training on the
18 data access systems, and we need to keep that in mind.

19 **DR. ZIEMER:** Okay. Again, we're not taking specific
20 actions. You've heard the comments. We'll work
21 further to develop documents that we'll act on formally
22 at our next meeting, which we'll be talking about a

1 little later in terms of when that will be.

2 **PUBLIC COMMENT PERIOD**

3 Now I'd like to move on. We're just a little bit
4 behind schedule, but we have our public comment period.

5 I have several individuals who've requested to speak.

6 We're going to begin with Carl -- Carl Scarbrough, I
7 think, if I'm reading this correctly, Carl, Atomic
8 Trades Labor Council -- president of Atomic Trades
9 Labor Council, and if you'll approach the mike, please.
10 So Carl, if you'll approach the mike, we'll be pleased
11 to hear from you at this time.

12 **MR. SCARBROUGH:** For one thing, I'd like to welcome you
13 to Oak Ridge, and we appreciate having such a honorable
14 group here. What I'd like to appeal to you -- for
15 fairness on this thing. And we're dealing with people
16 that are sick. Some of them are dead. Some of it's
17 real personal. We've got people dying that, you know,
18 there's no compensation. I personally think \$150,000
19 is kind of cheap for a person's life. Of course that's
20 something to talk about later on. But what I -- like I
21 said, I'd like to appeal for fairness from you. And
22 some of the decision-making -- for instance, I

1 represent X-10 and Y-12, everybody except the guards.
2 There's different unions. And right now probably less
3 than five fingers'll be the ones that's got
4 compensation, and there's 10,000 people working --
5 current workers, and there's got to be that -- that
6 many or more retirees. And so something you can count
7 on one hand that's been going on for quite a while
8 means we're not doing a whole lot very fast. I mean
9 NIOSH, you know, is making some of these
10 recommendations on data, and then they turn around and
11 they really say they don't have complete data. And
12 then the individual has to come up with data that he
13 has no control. I mean I can't go anywhere unless
14 somebody comes up to me and says how am I going to do
15 this? Like I run into a guy last night, 11:00 o'clock.
16 Hey, he said, I know you. I didn't know him from
17 Adam, but he's -- he said I put in for this
18 compensation program, and they tell me that -- it's for
19 his father, and they tell me that I've got to find my
20 father's -- somebody he worked with, and I've got to
21 have all this information, and I don't know who my
22 father worked with. And of course obviously wherever

1 you go to ask this, they don't know who they worked
2 with. Of course I recommended he go to his father's
3 local union and maybe they can come up with something.

4 But we're really loading these people up.

5 I think one of the hardest things we're doing is the
6 expectation they're going to get paid. Other words,
7 you've got -- I don't know how many thousand people out
8 here. Do y'all know how many from Oak Ridge that's
9 signed up? It's a pretty big number. Right? You've
10 got 3,000 people, every one of them thinks they're
11 going to get \$150,000, for whatever reason, justifiable
12 or not. And at X and Y right now, that's what I'm
13 asking for the fairness, you know, they don't work in a
14 gaseous diffusion plant. What's the odds of them
15 getting -- under -- under the criteria you have now, of
16 them getting the compensation? You know, if it was
17 you, could you prove everything you need to to do all
18 this compensation program? Now if you worked at K-25
19 or a gas diffusion plant, if you got lung cancer, you
20 pretty well got -- you don't have to prove that. But
21 you see where we're coming from, and there's a lot of
22 contradictions in this data that's out here. But like

1 I said, I'd like to appeal to you all for some
2 fairness. I know you've got a big job. You've got a
3 great big ol' boy over here on the end here, and I know
4 he's going to take care of all of our business. We can
5 count on you, can't we, Bob? Okay. He said he didn't
6 have but one vote, but he had all of you in the palm of
7 his hand. But anyhow, I appreciate it and give these -
8 - play like these people are your -- might be --
9 consider it's you, your brother, sister, mother or
10 daddy and that -- take it to heart where we're just not
11 a bunch of numbers out here. Appreciate it, thank you.

12 **DR. ZIEMER:** Thank you very much, Carl. Next we'll
13 hear -- let me ask, any of the Board members have any
14 questions for Carl? Bob, I think Carl just wants some
15 barbecue ribs is what he was after.

16 Next we'll hear from Bob Tabor. Bob's been with us
17 before. He's from Harrison, Ohio. Bob, welcome.

18 **MR. TABOR:** Yeah, for the record, Bob Tabor, Fernald
19 Atomic Trades and Labor Council, and I'm pleased to be
20 here once again. I want to reiterate some comments
21 that I've made a number of times in the past, but it
22 seems like the urgency again is before us and possibly

1 it may have some bearing on an issue that Mary
2 Schubauer-Berigan -- I think that's how she pronounces
3 her name -- Mary, okay. She brought up an interesting
4 thing in one of her slides here was the issues
5 regarding current workers, decommissioning and
6 decontamination era workers may face different hazards
7 and health effects, and I definitely agree with that
8 because Fernald is a closure site that is definitely in
9 full blown closure. I mean we're just right around the
10 corner from, you know, having it done.

11 There will be some tasks that will continue into what
12 we define as completion, which is a little different
13 than closure. And there will be some post-closure
14 activities. But just about all the work that's being
15 done out there really is cleanup and totally, you know,
16 true environmental remediation and decommissioning and
17 decontamination of these facilities is something that's
18 ongoing on a regular basis.

19 Now the regular work force -- as the regular work
20 force, I'm referring to the Fernald Atomic Trades and
21 Labor Council represented folks -- those folks are not
22 highly engaged in the final decommissioning and

1 decontamination aspect of these buildings in these
2 facilities. The contractors bring in other workers and
3 other work forces to do that work, and they are short-
4 timers, as we put it, and I can't speak to possibly the
5 adequacy of the radiation and health monitoring of
6 those particular facilities. But obviously, as she
7 pointed out, this is something of great importance.
8 When it comes to facilities that my workers are
9 involved in, we're somewhat of a work force that's a
10 little bit more astute to the processes and have a
11 little bit more insight and knowledge of on-site
12 monitoring and surveillance and so, you know, we are
13 always looking at those aspects of the project to be
14 sure that they are adequate.

15 But the whole thing here, and this gets to my point, is
16 the information -- the information that may be needed
17 in the future to -- to look at the issues regarding the
18 current workers and regarding things with
19 decommissioning and decontaminating of these buildings,
20 that information -- I'm not certain, with respect to
21 how available that it will be. And I know there's only
22 so much that you folks can do as far as in the past I

1 have asked you to look into whatever avenues we have to
2 -- to have our government reissue some assurance that
3 the necessary information can be retained, and I -- and
4 this Board I believe did write a letter to that effect,
5 as I recall, and I appreciate that. But most recently
6 at my site -- and I do not have it with me,
7 unfortunately -- we had a memo that was put out that
8 concerned the retention of information and the
9 responsibility of who needs to retain what. This very
10 specifically alluded to the things that the DOE would
11 be responsible for retaining. But the interesting
12 point of that communication and that I want to tell you
13 about is that it alluded to the fact that the current
14 contractor and all the stuff that pertains to his
15 ongoings, and that may -- I don't know if that includes
16 medical surveillance and things like that; it probably
17 would not, but most of the project activities, all
18 those type of records, he is fully in charge of.
19 Now that brings me to the point of well, what is the
20 retention time, how may they dispose of those, are
21 those records going to go with the contractor, what
22 information will that contractor still have concerning

1 the processes of decommissioning and decontaminating of
2 these buildings and other things and operations in the
3 downsizing of the project overall and things that might
4 allude to, you know, the physical ongoings that might
5 have a bearing on profiling this particular site or
6 have a bearing on, you know, any information in the
7 future that would be pertinent, not just in the
8 development of what you may need as far as future
9 claimants, but in the development of studies that they
10 alluded to here. I just wanted to raise the issue to
11 put you on notice again that these are serious issues
12 at these sites that are -- have a short life now and --
13 you know, and if there's going to be -- if you
14 anticipate there's going to be information that you may
15 need in the future, there may be some avenues that you
16 may want to pursue or look at to assure that the kind
17 of information you may need in the future will be
18 attainable. So there's a major concern here. I thank
19 you.

20 **DR. ZIEMER:** Thank you, Bob, for raising that point.
21 Again let me ask if any of the Board members have
22 questions to address to Bob?

1 Thank you, then we'll move on. Owen Hoffman has a
2 comment. Owen addressed the Board yesterday as part of
3 the formal presentation. Owen, from -- with SENES Oak
4 Ridge.

5 **DR. HOFFMAN:** Hello again. The comment I have to make
6 is rather inspired by the excellent presentations by
7 David Utterback and Mary Schubauer-Berigan on the
8 worker epidemiological programs, both those completed
9 and underway. Several of us are intimately involved
10 with the beginnings of this. Paul, you as former
11 Undersecretary of DOE for environment safety and
12 health, and I think you presided over the transfer of
13 authority from DOE to HHS in this matter, and I think
14 it was at that time that you were engaged in the
15 distinction between analytical epidemiological research
16 and descriptive epidemiological research. Gen, you
17 served, as I did, on the advisory committee for energy-
18 related epidemiological research to the HHS to oversee
19 progress in both the environmental off-site and for
20 worker studies. And of course Larry, you and I go back
21 almost to the beginning of those days when I -- when I
22 would ask for the -- informing workers of the risk of

1 their exposure, even when those risks were below limits
2 of epidemiological detection or below regulatory
3 standards.

4 My concern is this, is that there is a organizational
5 disconnect between the occupational safety program and
6 the needs for epidemiological research. You're
7 Congressionally mandated in your work, but I don't know
8 the extent to which this Congressional mandate supports
9 -- has a support mechanism to ensure the right
10 epidemiological research gets conducted. The Advisory
11 Committee for Energy-Related Epidemiological Research,
12 under your initial program, no longer exists. As far
13 as I understand, David Utterback and his group, which
14 is known -- I don't like using acronyms so I -- it's
15 known as the epidemiological branch -- all that funding
16 comes from the Department of Energy, and the mechanism
17 for that funding is still under this Memorandum of
18 Understanding, but there is no constituency, there is
19 no advisory board overseeing whether or not the
20 funding's adequate or whether or not the spirit of the
21 Memorandum of Understanding is being honored, whether
22 or not there are incentives put in place to go slow in

1 these areas. And so given this legacy that we all
2 share, I thought I would take this opportunity to just
3 sort of publicly state my concerns that there is this
4 disconnect, and my concern is that these studies --
5 although they're answering the -- their attempt is to
6 answer the right questions -- whether or not they're
7 sufficiently funded to ensure that the answers come
8 forward in a timely manner.

9 Now I'll make one last comment. Paul, Gen and I, we go
10 back a long ways. The three of us are members of the
11 Health Physics Society. Gen, you gave a presentation
12 about two years ago -- two years ago this month to
13 Congress, informing Congress there is no
14 epidemiological evidence to support risk below about 10
15 rem effective dose. There are a few people who have
16 benchmarked off that information. Now in the
17 epidemiological evidence coming forward under NIOSH, is
18 there support for this, or is there new information
19 that would draw into question whether or not the limit
20 of epidemiological detection is at 10 rem. So I start
21 with more of an urge -- a plea for ensured support for
22 your programs, and with the next question, which is a

1 technical question, as to whether or not our state of
2 knowledge has improved from that of let's say two years
3 ago.

4 **DR. ZIEMER:** We may have to consider those rhetorical
5 questions, 'cause I'm not sure anyone has the answer to
6 that. They're very thought-provoking remarks, Owen.
7 We appreciate that. Again let me ask if any -- okay,
8 Gen Roessler wishes to respond or --

9 **DR. ROESSLER:** I'll respond in this way, Owen, to your
10 second comment. If I were making that presentation
11 next week, I would do research, as I did at that time,
12 and find out what the appropriate number is.

13 **MR. GRIFFON:** I would also ask if -- if Owen had an
14 answer to his own question.

15 **DR. HOFFMAN:** In -- in terms of a constituency or
16 mechanism to ensure the Memorandum of Understanding is
17 preserved, the answer to that is no, I don't think that
18 mechanism exists. It needs to be rebuilt.

19 The question in terms of evidence for risk below 10
20 rem, I believe it exists, and I believe the -- in fact
21 -- in fact, from the NCRP review of low-dose studies,
22 we know that in utero exposure at one rem will induce

1 cancer in later life, and so the lowest that I
2 currently know about is about a one rem limit to -- as
3 a limit to epidemiological detection. But I -- but
4 maybe this question goes to Mary or David as to whether
5 in their studies they are seeing evidence for effects
6 at doses substantially below an effective dose of 10
7 rem.

8 **DR. ZIEMER:** Well, I'm not sure they are zooming to the
9 mike to answer that, either. But the debate's going to
10 go on. I'm going to answer for them in the sense that
11 it's -- it's going to be a long time before
12 epidemiology answers the question, for example, is
13 there a linear no-threshold response, which is a big
14 debate nowadays. In fact, I'm -- I'm a little
15 pessimistic about whether epidemiologists can answer
16 that, and during the break I reminded some of my
17 epidemiology colleagues here -- I call them colleagues.

18 I'm not an epidemiologist, but a colleague who was
19 told me that an environmental catastrophe is one that
20 is so great that even an epidemiologist can detect it,
21 which is to say that epidemiology has a much easier
22 time at higher dose -- looking at dose effects at

1 higher incidence -- or higher doses.

2 **MR. GRIFFON:** Must be a good health physics joke.

3 **DR. SCHUBAUER-BERIGAN:** That's right. You can laugh at
4 our expense. We're tough, we can take it.

5 You're addressing very important questions, and those
6 are precisely what drives our research program. And
7 although I didn't make it explicit enough, that's
8 exactly why we feel it's important to design studies
9 carefully and to combine cohorts to increase the
10 statistical power to see low effects that might be
11 expected at doses in the range of one to, you know, 10
12 rem. Individual studies have shown suggestions of
13 effects below 10 rem, in my opinion, but in terms of a
14 consensus in the general public, you've -- you know,
15 that you've clearly touched on an issue that is of
16 great importance and one that we feel we can be better
17 equipped to address as we complete our research
18 program.

19 **DR. ZIEMER:** Thank you very much. That's all I have
20 for members of the public. Let me give the opportunity
21 -- is there anyone else who didn't sign up that --
22 thank you.

1 **MR. STEWART:** How do, I'm John Stewart. I'm PACE
2 safety rep at ETTP. I've heard enough technical, can I
3 just ramble on for a little bit? I remember back in
4 the early nineties, I guess maybe even early eighties,
5 talking to a fellow worker -- I'll use his name, Jimmy
6 Walls -- and he described in building 1131, the feed
7 plant, where the system messed up and started backing
8 up and spitting product in the floor. Of course he was
9 on evening shift and they rushed them in there with
10 buckets and shovels, no protection, shoveling this
11 product in the buckets and hauling out. The next day
12 they asked for some safety equipment. They went to a
13 sporting goods store and bought them hip waders, still
14 buckets and shovels.

15 Now I've looked and I can't find any records of that
16 except for talking to Jimmy Walls, said he was there
17 and he did it. But interestingly enough, 1131 was one
18 of the first buildings DOE tore down. It's got a
19 asphalt cap on it now where it used to be.

20 Another bit of rambling, a friend of mine -- another
21 friend of mine named Don Arp came to my office I guess
22 October two years ago, said he needed my help. I knew

1 he'd been to the company physical about two months
2 before and they'd said he -- perfect health, a little
3 overweight, maybe some onset of diabetes because of
4 that. Other than that, no problem. I said what can I
5 help you with, Don? He said well, I just came back
6 from my doctor, and he said I've got three months to
7 live. He had lung cancer, stomach cancer, colon
8 cancer, intestine cancer, just ate up with cancer. And
9 we started -- he said now if I take the chemo, which
10 I'm not going to do, I can -- they say I'll have nine
11 to -- nine months to a year. So we started and, you
12 know, you can -- if you have a letter from your doctor,
13 you can get half your life insurance in advance and we
14 set up an annuity. He was worried that his wife, which
15 had never handled the money, would be left penniless.
16 We set up an annuity where she was almost guaranteed
17 she couldn't go through the money and waste it. But I
18 guess my point with Don is -- I said what we need to do
19 after everything -- this is over with, we need to go
20 ahead and file this for this compensation, get that in
21 the works, so we did. The letter came back from DOE
22 says -- remember, he'd been there 27 years, and when

1 the letter came back he was on short-term disability
2 for cancer, said we cannot find any proof to verify
3 your claim that you've ever worked at a DOE facility.
4 A fellow worker, still had his badge, his badge number,
5 no proof. Of course we got that -- his widow
6 subsequently got the money. We worked through that.
7 That doesn't say too much for DOE, in my opinion. For
8 dose reconstruction, if they can't find your employment
9 records for someone that's there now, how are they
10 going to go back 40 years ago, Larry, and find
11 something? You know, we feel like -- almost like the
12 Israelites that have left Egypt and now we're out in
13 the desert trying to find the promised land and don't
14 know -- we have meetings and meetings and more
15 meetings. And we're using -- being used for guinea
16 pigs and they're doing studies and all kind of results,
17 all kind of studies, still got people dying.
18 I noticed in yesterday's paper Frank -- he's not here
19 now -- over in Iraq. I think President Bush said that
20 fighting war was over about two weeks ago. Set up a
21 program we're paying out pension benefits to Iraqis,
22 what -- said two crisp \$20 bills. So in two weeks we

1 can pay the foreigners, and how long has this been
2 going on? We can't have a program to where the
3 workers, they're sick and their families that are
4 suffering financial loss cannot get any compensation
5 from the government. I'm like Bubba, I think the
6 \$150,000 -- almost a slap in the face. So again, as
7 I've said at every meeting, you know, we need to get
8 off square one and get moving and get some kind of a --
9 something for the workers so they can have some kind of
10 a benefit that it won't destroy their families
11 financially 'cause they're -- when I worked at the
12 Resource Center when we first started, had such
13 overflow they had some of us up there working, I had
14 people that came in, put in for benefits, helped fill
15 out their form that I had worked with, younger than me,
16 that were so ate up with cancer I didn't recognize
17 them, didn't -- till they told me their name, didn't
18 even know them. You know, we're -- we're -- all the
19 epidemiological studies, all the meetings we're having,
20 this is all great. But the workers feel like we're
21 being guinea pigged to death. You're studying our
22 records. You're studying our health. You're studying

1 how much doses of radiation it takes to cause our
2 cancers, and meanwhile we're there dying and not
3 getting compensated for it. Thank you.

4 **DR. ZIEMER:** Okay. Thank you very much. Those are
5 sobering words, indeed.

6 Commenter here?

7 **MS. AYERS:** Good morning. I --

8 **MR. ELLIOTT:** Can you state your name for the record,
9 please?

10 **MS. AYERS:** My name is R. L. Ayers, initials only, R.
11 L., and I'm here just to ask you all a question. I
12 didn't have a prepared speech or anything, didn't even
13 know this meeting was going on until I went by the
14 union hall and he told me over there. He said you --
15 maybe you should go down there.

16 What I want to know if -- my husband worked at K-25
17 plant. He worked there from 1971 until he retired in
18 1985, and of course he died last year in November, and
19 he died of silicosis. I've never heard anybody even
20 mention any compensation or anything for silicosis, but
21 that is a deadly disease. There is no cure for it.
22 And that's what he died of. I called Ms. Yvette Waters

1 down in Jacksonville, Florida and she told me that if
2 he worked in Alaska or Nevada that is the only way that
3 they would pay for that disease. I wonder if it will
4 ever be added to the state of Tennessee compensation
5 plan for these plants here, because he had never been
6 to either one of the places, never. And since 1943
7 he'd worked in this area. When he went to K-25 in '71
8 -- of course my husband was a concrete finisher and he
9 worked at Y-12 and X-10, helped them build it, but when
10 he went to K-25 in the plants in '71, he didn't have
11 silicosis at that time, or it didn't show up at that
12 time because they would have never hired him. They was
13 kind of strict then on hiring people, because I worked
14 down there. And now they tell me that they won't pay
15 for it. And I just wonder if anything could ever be
16 done about that. Thank you.

17 **DR. ZIEMER:** One of the Department of Labor individuals
18 may be able to address that.

19 **MR. TURCIC:** Yeah, that's correct, silicosis is only --

20 **DR. ZIEMER:** Please identify for the record --

21 **MR. TURCIC:** Pete Turcic, Department of Labor.

22 Silicosis is only covered for individuals who worked

1 mining the tunnels for the underground test sites at
2 Amchitka in Alaska or Nevada Test Site. However, and
3 Shelby had mentioned yesterday about subpart D of
4 EEOICPA, which is a -- it's administered by the
5 Department of Energy to provide assistance to claimants
6 for other toxic diseases, which would include
7 silicosis, to get State Worker's Comp.

8 **MR. STEWART:** Can I follow up? This lady's husband I
9 worked with. During the centrifuge program, when we
10 manufactured the tubes, we used silicon sand when we
11 sandblasted the inside of those tubes, every one of
12 them -- hundreds of them. No telling -- I would say
13 most everyone at K-25 was exposed to silicon sand at
14 some time 'cause it was -- from when you blast with it,
15 it made a dust. It went all over the site. Sure, we
16 can do part D. What we've got, 16,000 waiting for the
17 doctor's panel and there's I think what, 14 of them
18 gone so far? Yeah, but there's -- probably 20 years
19 from now they'll get to you.

20 **DR. ZIEMER:** Any further public comments? Okay.
21 Before we break for lunch I'm going to turn the mike
22 over to Larry Elliott to raise an issue related --

1 actually related to yesterday's public comments and the
2 issue relating to when site characterizations might be
3 completed and some related issues. Larry, if you would
4 raise this point to the Board.

5 **MR. ELLIOTT:** Thank you, before I jump in on that, I
6 would like to make an announcement for the Board and
7 for the public, at the behest of Michael Schaeffer from
8 the Defense Threat Reduction Agency so you'll all know
9 that the Department of Veterans Affairs Committee on
10 Environmental Hazards will meet in June 3rd and 4th,
11 next month, at -- let me get my cheaters on here -- at
12 811 Vermont Avenue, N.W. in Washington, D.C. The
13 meeting starts at 9:00 a.m. on both days. For further
14 information or to obtain the agenda for that, please
15 call Dr. Neil Ochin, M.D. at 202/273-8452. That's the
16 Department of Veterans Affairs Committee on
17 Environmental Hazards. I'll be attending that meeting
18 as a liaison from this Board to that Board in case they
19 have any questions. We will also have on our web site
20 a link that'll link up for this particular meeting and
21 agenda.

22 Now I wanted to raise an issue with the Board to get a

1 sense of where the Board stood. And this goes at the
2 heart of appearance of conflict. We're fortunate
3 enough in our contracting team with ORAU to have
4 several individuals who were instrumental in -- and
5 integral in development of dose reconstructions for the
6 Mound site. These dose reconstructions were conducted
7 for a different purpose than our dose reconstructions
8 for compensation, but they're very much of interest to
9 us and very applicable and these individuals are very
10 knowledgeable about the Mound site.

11 In the spirit of good management practice, good
12 management control and efficiencies that we're trying
13 to achieve in finishing claims and moving cases over to
14 DOL for final adjudication, and in our effort to try to
15 achieve 6,000 against our backlog by the end of this
16 year, I would like to be able to ask the ORAU team to
17 task those individuals with direct effort on individual
18 dose reconstructions, and still maintain the process
19 that we have put in place with the help of this Board
20 whereby the claimant still has the opportunity to speak
21 up about who is assigned to do their dose
22 reconstruction. It just seems to me that without

1 utilizing these experts, we do ourselves a disservice.

2 It goes beyond just the Mound plant. I have on my
3 staff experts from Fernald. I would like to be able to
4 see those experts be assigned to do Fernald cases. I
5 would like to be able to rely on the claimant to say
6 wait a minute, I got a problem, and according to the
7 way your operating procedures are characterized, I have
8 the opportunity here to take exception to that
9 individual and request another individual be assigned.
10 I think that gives us enough control and protection
11 about appearances of conflict of interest, and would
12 allow me to make sure that we utilize our resources
13 effectively. Right now we're a little bit concerned
14 about whether or not the Board's perception of this or
15 how you view this would survive in your audit, whether
16 or not if you saw a number of health physicists, dose
17 reconstructionists who are assigned to individual dose
18 reconstructions, working on those, and whether or not
19 that appearance of conflict is too heavy in the
20 balance. So I'd just appreciate hearing a little bit
21 of discussion from the Board in trying to get a sense -
22 - a sense from the Board as to what your views are in

1 this regard. Thank you.

2 **DR. ZIEMER:** Let's start with Tony here.

3 **DR. ANDRADE:** I really think that, for all the reasons
4 that you mentioned, especially efficiency, but more so
5 than even that, because of their -- because of the
6 expertise that they've built up having worked doing
7 dose reconstruction in the past, it would be -- it
8 would be a sad waste in not using those folks to go
9 back and help us get going and moving at a faster rate
10 in completing dose reconstructions.

11 Having said that, let me also remind the Board and the
12 public that the auditing that Mark and his colleagues
13 in the dose reconstruction working group have put
14 together are those folks who may not ever have had work
15 associated with sites previously, and so that helps in
16 going back to check fairness. It helps to go back to
17 see if there could be any -- any instance in which some
18 sort of favoritism is being placed. So I think that we
19 have checks and balances in place or that we are just
20 about to put in place that would help us out in this
21 regard, and so I really feel it's an excellent
22 suggestion to go forward with.

1 **DR. ZIEMER:** Wanda.

2 **MS. MUNN:** Failure to take advantage of known expertise
3 with respect to activities on any site can only have
4 the effect of lengthening the process, which I do not
5 feel is the desired outcome by either this Board nor
6 the claimants. If there is a perceived concern with
7 respect to the trustworthiness of the reviewers to
8 recuse themselves in cases where they may have had any
9 personal contact or even knowledge of the individual
10 case, then it appears to me that it could be -- that
11 particular concern probably could be met with a
12 statement of -- of recusement, essentially, by the
13 individual. Otherwise, there is an issue of
14 institutional knowledge that simply cannot be rapidly
15 accumulated by other individuals. It would be a shame
16 to lose that professional capability.

17 **DR. ANDERSON:** I guess it's hard to really comment
18 without looking at the specific review. I think there
19 were -- there's a set of conflicts of interest and bias
20 sorts of things set up that I think it's important for
21 us to apply uniformly across the board and not say
22 well, we're running behind. Now let's, you know, scrap

1 the procedures and we think in this case it's okay and
2 in that case it's not okay, so -- and I guess I
3 wouldn't want to rely solely on the challenge that an
4 individual can have because they may not know the
5 individual and have had no experience, and I would
6 expect there'll be very few challenges to that, so
7 they're to expect that now we put the burden on them to
8 say do you want this person or not, I think is somewhat
9 problematic. So I would say it's somewhat of a
10 slippery slope as to when does it become a significant
11 conflict and when does it not. And without knowing
12 what the work the individual did and I think that there
13 is some subjectivity to deciding should they be
14 excluded or not. I thought at one point we'd talked
15 about these individuals. We wouldn't lose their
16 expertise, but they wouldn't be the lead reviewer, that
17 they'd be available as a consultant, that if you had
18 questions about it, that individual, they'd be there,
19 they'd be available just as, you know, a set of experts
20 who, you know, aren't -- haven't been hired or are
21 workers that could be consulted as opposed to be the
22 lead constructionists. So I think we'd need -- you

1 know, I think having some flexibility in it might be
2 helpful, but I think we really do have to stick to
3 criteria that have been developed. And if NIOSH feels
4 that there isn't a conflict, just as dealing with Board
5 issues, you make that determination and I think, you
6 know, whether we would do that and then subsequently
7 through an audit disagree, that would be a thing. But
8 I think it's really up to NIOSH to decide. Do you
9 think there's -- is the balance here greater one way or
10 the other. Now if the dose reconstructions they were
11 doing, not part of this, were part of a lawsuit, you
12 know, then I think that might be something that people
13 might find suspicious. So if it was part of a research
14 project, that might be something totally different.

15 **DR. ZIEMER:** Larry, can you clarify or maybe give some
16 more concrete examples? Are we talking about
17 individuals who, for example, did dose reconstructions
18 as part of a research project from outside, as opposed
19 to individuals who were workers on that site, or do you
20 have a specific --

21 **MR. ELLIOTT:** Well, it covers --

22 **DR. ZIEMER:** Or both.

1 **MR. ELLIOTT:** -- the waterfront, and certainly at the
2 Mound site, that set of dose reconstructions, over
3 2,000, were done as part of a settlement, I believe, in
4 a litigation. We're -- I'm not proposing that we
5 change the conflict of interest plan that the ORAU team
6 developed and was part of their proposal, and then
7 further developed as the Board reviewed it and got
8 engaged in all of this, still holding up the claimant
9 opportunity and ability to take exception to that
10 individual assigned to do the dose reconstruction. But
11 we're so limited, so limited in the number of qualified
12 health physicists that we can bring to bear on this,
13 the way the site profiles will -- we're proposing to
14 get developed, I can just see a need to have the
15 ability to say -- unless it's -- the assignment is
16 challenged by the claimant, it's a good utilization of
17 resources. It's not only the individual dose
18 reconstructor, it is the reviewer who reviews on top of
19 that person's work who reconstructed the dose. It goes
20 to my staff, who some -- you know, have -- some of my
21 staff have backgrounds within the DOE system at certain
22 sites, some don't. I'm just trying to get a sense here

1 of the Board as to how best to utilize the limited
2 resources that we have and get the job done effectively
3 as possible.

4 And let's remember that what we talked about earlier is
5 zero tolerance for actual conflict of interest, where
6 somebody intentionally does something. We have no
7 tolerance for that. We're monitoring that very
8 closely. What I'm getting at is the appearance of
9 conflict. You heard about this in Paula Kocher's
10 slides to you this morning about appearance of
11 conflict. It is different than actual conflict of
12 interest.

13 **DR. ZIEMER:** Mark, did you have --

14 **MR. GRIFFON:** Really I think Henry hit most of my
15 points. I -- I just -- you know, the slippery slope
16 thought was going through my head as Larry was
17 presenting the Mound example, and then he -- you know,
18 I was thinking could this be a slippery slope, and then
19 I think he answered it by adding on Fernald. I mean
20 I'd be concerned that -- and I was under the
21 understanding that Henry was, that -- that these people
22 could still be used as resources, as tech-- so -- so

1 the team would not lose their expertise from the sites,
2 but that they would not -- I think having them
3 available as the lead dose assessor would be
4 problematic. And even -- even from the standpoint that
5 if they've done dose reconstructions already, I think
6 human nature might make it difficult for them to find a
7 very different result the next time through, so they
8 might not be so critical of their own past work, so I
9 think another reviewer to come in -- that's part of the
10 concern from -- from past activities, past studies that
11 have been done. You know, there's always been at least
12 some of the public concern about the adequacy of those
13 dose assessments that were done, exposure assessments
14 that were done, and if you have the same people doing
15 them again, I think there'd be -- that -- that
16 perception would be even stronger, so...

17 **DR. ZIEMER:** Rich, you had a comment?

18 **MR. ESPINOSA:** Well, Mark and Henry are saying that --
19 yeah, I agree with. As long as the dose
20 reconstructionist has the avenue to access somebody
21 with the expert, but I guess one of the things I don't
22 understand is the site profile. You know, somebody

1 that's from the site -- we're talking about Mound right
2 here. I guess I don't understand if they can or can't
3 do the site profile.

4 **MR. ELLIOTT:** We think they can do the site profile.
5 We didn't think that was off the table. They are
6 working on the site profile. That's how to apply their
7 expertise. And that is going forward, whether it's the
8 MJW folks working on the Mound site where they've done
9 dose reconstructions for a different purpose before, or
10 whether it's ORAU folks specifically who may be working
11 on the Mallinckrodt site profile or technical basis
12 document, but they have a -- you know, they have a vast
13 experience and expertise with the data that's been
14 collected on Mallinckrodt workers. We've felt from
15 the very start that we could utilize that expertise
16 that way. The crunch comes where we try to get 200
17 plus out the door a week, and we're limited in a -- you
18 know, we have a site profile put on the table,
19 technical basis document put on the table for Mound and
20 we're limited in the number of dose reconstructors that
21 we can assign, we're limited in the number of reviewers
22 that we can assign to get those cases processed.

1 I spoke earlier about our monitoring for conflict of
2 interest. Every one of these things that is finished
3 gets reviewed by my staff. We're very careful about
4 who we assign to review those. They cross Jim Neton's
5 desk and I personally read every one of these and sign
6 every one of these, and looking for a laundry list of
7 things that we're checking for. So I think the
8 controls are in place. I would like to be able to use
9 the experts that I have at my disposal, not only to
10 develop site profiles, but to engage in individual dose
11 reconstructions using those site profiles.

12 **DR. ZIEMER:** Roy?

13 **DR. NETON:** I'd just like to comment specifically on
14 the MJW issue at Mound. The situation is such that MJW
15 possesses almost -- most of the internal dosimetry
16 expertise on the project. It's divided between Dade
17 Moeller doing external dosimetry and MJW doing
18 internal. MJW did the bulk of the dose -- almost all --
19 - did all the dose reconstructions at Mound, and ORAU
20 has taken the very conservative approach in implying
21 that since MJW did the dose reconstructions at Mound,
22 they are organizationally conflicted, meaning no one on

1 their corporate staff or employed by MJW could do a
2 dose reconstruction at Mound. So that -- that severely
3 handcuffs us from moving dose reconstructions forward
4 at the Mound site in particular. And that's just one
5 example of a situation that I think may be an
6 interpretation that they're not organizationally
7 conflicted might help us out there.

8 **DR. ZIEMER:** And they're talking about cases where
9 there may be individuals who were not involved in the
10 Mound site, but it's a -- they're raising the issue of
11 corporate conflict, simply because the person is
12 working for them and they had other people involved in
13 that dose reconstruction, so that's a very broad, as it
14 were, interpretation of conflict.

15 Okay. Mike?

16 **MR. GIBSON:** With all due respect to the claimants that
17 are not being paid and the system being bogged down,
18 with all due respect to NIOSH and Larry and everyone
19 else, I am adamantly opposed to this in any way, in any
20 shape, in any form. MJW was brought in -- there was
21 two different dose reconstructions. One of them had to
22 do with a lawsuit, one of them had to do with a Price

1 Anderson violation where they were not monitoring
2 workers correctly. The data that they took to do this
3 dose reconstruction was old, was limited. They made
4 assumptions that it was based on gross alpha. They
5 didn't go back and do a site profile to see if it was
6 plutonium, to see if it was uranium, to see if it was
7 any other isotope. I questioned the results of these
8 dose reconstructions at the time. I had to FOIA over --
9 -- we brought this to bear. Our union was the one that
10 had Senator John Glenn get a commitment out of DOE to
11 come in and do this dose reconstruction, and it took
12 them probably six or seven years to do it. They went
13 on limited data. I -- they didn't do a site profile.
14 I question -- I'm adamantly opposed to this in any way.
15 I had to go through the -- an interview in the office
16 of the President's general counsel to get a waiver of
17 conflict for any issue to deal with Mound that I'd have
18 to recuse myself from from this Board, and yet the same
19 people that's made millions of dollars at Mound, we're
20 going to let them try to do dose reconstruct-- redo
21 dose reconstructions they've already done? How much
22 extra emphasis are they going to put into that, and how

1 much are they really going to look at people who
2 deserve compensation? Or are they going to look back
3 to what they got paid to do, and that was to make it
4 look like that they had repaired bad dose assessments.

5 I'm adamantly opposed to this.

6 **DR. ZIEMER:** Okay. Thank you, Mike. Let's see who
7 else had a comment.

8 **MR. ESPINOSA:** Actually it's not so much a comment, but
9 you know, I kind of get the feeling of where the
10 Board's at with this. I'm kind of interested in what
11 the public is thinking on this issue, as well. So
12 maybe we can get a little bit of public comment on
13 this, I'd appreciate it.

14 **DR. ZIEMER:** I don't object to getting public comment.

15 We have gone into our lunch hour. We -- and we can --
16 we can take this up again after lunch, if you wish.
17 Let me -- and Larry, you've seen there's a cross-
18 section of views here. It's obviously not clear --
19 clear cut. Well, it's -- there does not appear to be a
20 clear consensus one way or the other. I think -- I
21 think we have to, in this case, give a fair amount of
22 weight to some experiences that Mike has raised it

1 seems to me are pertinent here. I -- on the surface of
2 it, I would have not personally objected to individuals
3 simply because they worked for the company, if they had
4 never worked on the site. But there is, I think, that
5 sensitivity could be important that Mike has raised,
6 so...

7 **MR. GIBSON:** I believe most all the people at MJW
8 drafted to do this dose reconstruction did work on the
9 Mound site.

10 **DR. ZIEMER:** I was speaking in generalities, if there
11 had been -- the issue is corporate versus individual,
12 but -- well, it may or may not, but you've heard the
13 comments.

14 Let's -- let's recess for lunch, and let me tell you
15 that this is an abbreviated lunch hour. Remember, we
16 have a tour of Oak Ridge scheduled for 2:00 o'clock.
17 What we have after lunch -- we have Board review of the
18 minutes, which we can get through very rapidly. I'm --
19 let me -- let me ask if there are members of the public
20 who are -- who want to address this issue that we've
21 just -- are there -- is there -- is there anyone in
22 addition to Richard Miller?

1 Let us hear from Richard. Okay, Richard, why don't you
2 go ahead and --

3 **MR. MILLER:** Hello.

4 **DR. ZIEMER:** -- if you promise not to take too much of
5 our lunch hour -- no, we can do it after lunch if --

6 **MR. MILLER:** Look, this got brought up after the public
7 comment period. Okay? I don't know why Larry brought
8 it up then, but he should have brought it up, 'cause
9 this is such a significant question in terms of the
10 management and the tensions that the program is
11 grappling with. I don't think this is something that
12 should be hushed. I think this ought to be put on the
13 agenda for the next meeting. I think alternatives, in
14 the spirit of NEPA*, ought to be explored here. I know
15 that, just to reflect on my very first conversation
16 with Larry Elliott about this program, I was on a
17 conference call with Larry with Kathy Rest in her
18 office in November of 2000, just after the law had
19 passed. And I apologized to Larry for having worked so
20 hard to make sure that NIOSH was going to get this
21 responsibility because they didn't volunteer for it.
22 But we had a commitment, and the commitment was that

1 for those of us who were advocates of this program who
2 had specified and had convinced Congress that it was
3 completely inappropriate to have the Energy Department
4 do dose reconstruction, and there is specific
5 proscription in the statute that says neither DOE nor
6 any DOE official can do this. It was with some
7 reservation that we saw a major DOE contractor wind up
8 getting the contract to do dose reconstruction. It
9 didn't violate the law, but it sure tempted one to
10 think that this was getting awfully darned close to the
11 edge.

12 But back to this conversation, because this very
13 conflict was -- we were aware of for those of us who
14 were advocates for this program, even while we were
15 legislating. And the first suggestion that we made to
16 NIOSH was please take some of the money that the
17 Department of Labor is going to give you and put them
18 into some ERCs or ERC-like institutions -- Education
19 Resource Centers -- that NIOSH has for training
20 physicians and go find a couple of institutions that do
21 a good job training health physicists so that the
22 Department wasn't -- Health and Human Services was not

1 dependent on such a shallow pool of expertise to fish
2 from in terms of the conflict of interest problem. And
3 I repeated this suggestion to Kathy Rest when she came
4 here to visit us, and I've repeated it to Larry and
5 NIOSH on countless occasions because this very moment
6 was foreseen where we would be told that claimants
7 would not get their claims processed because they
8 couldn't manage the conflict of interest because the
9 pool of expertise was too shallow.

10 This is not a newly-discovered problem which NIOSH has
11 just encountered and now wants to try to swim through
12 these very difficult waters by saying well, let's bring
13 down the walls on conflict of interest. How many
14 people on your staff worked at Fernald, Larry? How
15 many have come to work to you from Mound because it
16 looks like brighter and bluer skies? How many of the
17 individuals who have been on your team here at Oak --
18 with Oak Ridge Associated Universities, who brings
19 terrific expertise in the DOE, nonetheless is going to
20 have to go back and render judgment on work that they
21 or their colleagues will have done in the past? Even
22 in site assessments, Oak Ridge Associated Universities

1 faces an extraordinary conflict. They did -- Betsy
2 DuPree* did the study on Mallinckrodt, just to use the
3 example you brought up, and Oak Ridge Associated
4 Universities had Bill Tankersley* working on this
5 project, as well. And here you have individuals who
6 are going to be doing site profiles which ultimately
7 are going to contradict the external dosimetry
8 potentially that were published in the Oak Ridge
9 Associated Universities studies. And we've said site
10 profiles are off the table, we're only going to look at
11 individual dose reconstructions.

12 I'm not sure, actually going the other way, that your
13 conflict of interest screening is adequate. I think
14 the question of putting it onto the claimants, who
15 don't remember names, who don't know who did dosimetry,
16 who worked in large institutions, is the wrong place.
17 They are the check and balance on the system in case
18 your conflict of interest system fails. That's why
19 you're sending them the conflict of interest reviews.
20 Conflict of interest reviews which, I would add for the
21 Board's benefit, are not even fully published on the
22 OCAS web site as we sit here today, nine months after

1 the Oak Ridge Associated University contract was
2 awarded. We don't even have all the conflict of
3 interest disclosures on the dosimetrists posted on the
4 web site, and now they want to start to tear down even
5 the public disclosure.

6 I have to say this, there is a solution. There's a
7 NEPA-like solution if we want to step back from this
8 problem, because I'm very sympathetic with the delay
9 issue. The solution is to expand the pool of people
10 who you want to invite in, whether it's to issue task
11 order contracts to supplement the work ORAU is doing,
12 authorize ORAU to bring in others who don't have
13 conflicts of interest, let's allocate more funds if
14 there wasn't enough money budgeted from our friends to
15 come over from the Labor Department to you all to solve
16 that problem. But let's not tear down the conflict of
17 interest wall. Let's apply the resources where they're
18 needed so that at the end of the day there is no
19 question about the integrity of the product you put
20 out. And if you start to tank the integrity of your
21 product at the outset, what a shame this program is
22 going to turn into.

1 **DR. ZIEMER:** Okay. Thank you, Richard, certainly good
2 food for thought for us.

3 Now are there any other members of the public who wish
4 to comment? Again, we're eating -- my mind must be --
5 we're eating into our -- into our lunch hour.

6 Okay. We will take -- let's try to be back here by
7 1:15, because we have to finish up by 2:00. Okay?

8 (Whereupon, a luncheon recess was taken.)

9 **REVIEW/APPROVAL OF MINUTES, BOARD WORK SCHEDULE**

10 **& ADMINISTRATIVE HOUSEKEEPING**

11 **DR. ZIEMER:** If you haven't already done so, Board
12 members, there is a green slip that you need to fill
13 out if you're going on the tour to Oak Ridge facilities
14 today. Where it says estimated dose for the year, I
15 had all kinds of thoughts about how you might figure
16 that out -- put in a -- you know, a mean value with --
17 tell them whether it's a lognormal distribution and --
18 and the error bars. Anyway, fill everything in that's
19 highlighted there and pass that over to these young
20 ladies who are here from the Lab to help with the
21 logistics.

22 We have -- let's see, who's missing? Mike? Mike told

1 me he had to leave, and Jim isn't here anyway. Let's
2 see, Tony is -- okay. Well, I think we'll sort of go
3 ahead here anyway.

4 We have two immediate things to take care of. We need
5 to take action on the minutes of the previous meetings,
6 or some of the previous meetings, and then we also need
7 to identify some dates for our next meeting, and there
8 may be some other housekeeping things. But let's first
9 address the minutes, the first set of which are the
10 minutes for February 5 and 6. They are stamped draft,
11 5/19/03, which means they were the draft for this
12 packet, but they are the minutes for February 5th and
13 6th. Now there are -- there was a previous set in your
14 packet that is not stamped draft. That's not the set
15 we're focusing on, unless somebody wishes to revert to
16 that earlier version. But the Chair would entertain a
17 motion to approve these minutes. Is there a second?

18 **DR. DEHART:** Second.

19 **DR. ZIEMER:** Let me ask for any corrections or
20 additions, with the exclusion of minor spelling and
21 other editorial things which you can pass on separately
22 to Cori. But are there any substantive changes in the

1 minutes that anyone wishes to point out?

2 If there are none, are you ready to vote on the
3 acceptance of these minutes or what we're calling
4 summary minutes?

5 **UNIDENTIFIED:** Yes. Yes.

6 **DR. ZIEMER:** Okay. All in favor of accepting these
7 minutes say aye.

8 (Affirmative responses)

9 **DR. ZIEMER:** Any opposed say no.

10 (No negative responses)

11 **DR. ZIEMER:** Any abstentions?

12 (No responses)

13 **DR. ZIEMER:** Thank you. We have approved those
14 minutes.

15 We also have in the packet summary minutes -- this one
16 happens to be labeled summary report, for some reason;
17 I'm not sure if there's a difference -- for the March
18 7th meeting. This would be the meeting in Cincinnati
19 March 7th, and likewise the Chair would entertain a
20 motion to accept these minutes.

21 **UNIDENTIFIED:** So moved.

22 **MR. PRESLEY:** Second.

1 **DR. ANDERSON:** The only thing I would say is it's
2 helpful to have the pages numbered.

3 **DR. ZIEMER:** Yes, I noticed that myself. In fact, it
4 was my recollection that the version that I saw on my
5 computer had them numbered, you know, with the
6 header/footer business. But they somehow either didn't
7 show up in the printing or in the transmission, but we
8 will make sure that the copy that I -- I have to sign
9 off on these, and I'll make sure that those are.

10 **DR. ANDERSON:** And single-spaced, too.

11 **DR. ZIEMER:** That's why these were so long.

12 **DR. ANDERSON:** Yeah, I was going to say that looks
13 awful long, but it isn't. It's just that --

14 **DR. ZIEMER:** Actually we've already had a discussion on
15 single versus double space on future minutes and they
16 are going to be single-spaced. I had arbitrarily made
17 that decision already, so -- but the final form will be
18 single-spaced. The draft -- doesn't matter to me, but
19 --

20 **DR. ANDERSON:** I think it's helpful if it's double-
21 spaced 'cause you can write on it then -- for the
22 draft. And that can also help us distinguish between

1 final and draft.

2 **DR. ZIEMER:** Oh, you mean for the draft that comes to
3 you?

4 **DR. ANDERSON:** Yeah.

5 **DR. ZIEMER:** Okay, that would be fine. We'll -- we'll
6 do -- and our editor/writer is nodding because he's
7 going to help us with that, so we'll have the drafts in
8 double-space and the final form will go to single.
9 Are there corrections or additions to the March 7th
10 minutes? Apparently not.

11 All in favor of accepting these minutes will say aye.

12 (Affirmative responses)

13 **DR. ZIEMER:** Any opposed say no.

14 (No negative responses)

15 **DR. ZIEMER:** The minutes -- any abstentions?

16 (No responses)

17 **DR. ZIEMER:** The minutes are approved. Thank you very
18 much.

19 We actually have two additional sets that will be
20 coming to you, and we can handle them at our next
21 meeting, but those are the minutes of our two telephone
22 conferences which were I think March 14th and 28th,

1 something like that.

2 Okay. Administrative housekeeping, one of the things
3 we need to do is talk about dates for next meeting. To
4 sort of kick that off, let me identify one of the
5 issues that -- the most immediate issue I think that
6 has to come before us for action will be the materials
7 that were presented to us earlier by Mark, and that is
8 the various documents relating to the task orders and
9 the work group procedures. It would be useful if we
10 had the task orders ready to go at the time that the
11 final contract is awarded, and it's anticipated that
12 that would actually occur perhaps in September. So
13 that would suggest that we ought to meet no later than
14 perhaps August. We could meet in July. I see no need
15 to meet in June. I'm not sure we would need to meet in
16 July, but it's going to depend somewhat on schedules.
17 I know that August starts to get busy in a variety of
18 ways in terms of people's family commitments and school
19 and things like that, but -- or last minute vacations,
20 whatever it may be. But let me ask -- let me start
21 with the staff, because I think we also need to
22 recognize as the staff pushes forward in terms of their

1 activities and other commitments, what does it look
2 like from staff point of view? Is July probably not a
3 good time?

4 **MR. ELLIOTT:** Probably not a good time in July, and
5 there's at least -- I have Dr. Melius's availability,
6 as well, and I'm looking at that. And Mike Gibson told
7 me that whenever you set the meeting, he'll be there
8 since he's now enjoying his non-retir-- non-employment,
9 I guess. I don't think he's retired, per se, but
10 there's one week in August I can point to, August 11th
11 through the 15th, that would not be good. August 20th
12 through the 22nd would not be good for Dr. Melius. I
13 think Cori's got a week in there in August.

14 **MS. HOMER:** Late July/early August, yes.

15 **DR. ANDERSON:** How about the week of the 25th of
16 August?

17 **MR. ESPINOSA:** The 26th is out for me, that week.

18 **MR. GRIFFON:** I would rather have it earlier in August,
19 just so we can finalize these things. We might need...

20 **DR. ZIEMER:** Well, let's go back and just check dates
21 in August. Let's begin with the first week in August,
22 which is the week of August 4, I guess.

1 DR. DEHART: I'm out 3, 4, 5.
2 DR. ZIEMER: Three, 4, 5 is out.
3 DR. ANDERSON: And I'm out 7 and 8.
4 DR. ZIEMER: I'm out 8 and 9.
5 DR. ANDERSON: How about the week before?
6 DR. ZIEMER: Last week of July?
7 UNIDENTIFIED: Cori's out.
8 DR. ANDERSON: Oh, that's yours, yeah.
9 DR. ZIEMER: Cori's out the last week of July.
10 MR. ESPINOSA: What about the 21st of July?
11 DR. ROESSLER: That's the Health Physics --
12 DR. ZIEMER: Health Physics meeting.
13 DR. ROESSLER: There are a lot of health physicists on
14 the staff that are going.
15 DR. ZIEMER: Yeah, I'm involved there and couldn't make
16 it. You're probably involved.
17 MR. ESPINOSA: Is the 14th getting a little bit too
18 soon?
19 DR. DEHART: Week of the 11th sometime?
20 MR. ESPINOSA: July or August?
21 DR. DEHART: August.
22 MR. ELLIOTT: August 11th is out. That week is out.

1 DR. ZIEMER: August 11th, that whole week is out?
2 MR. ELLIOTT: Yes.
3 DR. ZIEMER: Okay.
4 MS. HOMER: What about the 18th and 19th of August? So
5 far I haven't heard any no's to that.
6 DR. ANDERSON: That's good for me.
7 MR. ESPINOSA: I thought that was bad for --
8 MR. GRIFFON: What was that date?
9 DR. ZIEMER: 18th or 19th.
10 MR. GRIFFON: Of August?
11 DR. ANDERSON: Monday/Tuesday.
12 MR. ESPINOSA: That's a little bit bad for me, but I
13 might be able to rearrange it.
14 DR. ZIEMER: I have a cryptic notation. I'm going to
15 ask if Mrs. Ziemer has returned from lunch. We're
16 okay? Okay.
17 UNIDENTIFIED: What's it say?
18 DR. ZIEMER: Something like check with wife before you
19 do anything. Not quite that. No, I had -- I had an
20 item which was only tentative and my wife has signaled
21 that it's clear that week.
22 MR. ELLIOTT: Could we -- instead of Monday, could we

1 look at Tuesday/Wednesday or --
2 **DR. ZIEMER:** 19/20?
3 **MR. ELLIOTT:** Yeah.
4 **MS. HOMER:** 20th through the 22nd is out.
5 **DR. ZIEMER:** Who has a conflict on the 20th?
6 **MS. HOMER:** I thought Dr. Melius might have.
7 **MR. ESPINOSA:** I think Dr. Melius did and --
8 **MR. ELLIOTT:** Yes, he has a conflict on the 20th, 21st
9 and 22nd.
10 **MR. ESPINOSA:** It's getting up to July --
11 **DR. ZIEMER:** Is the 18th bad, also?
12 **MR. ESPINOSA:** 18th and -- it's not bad, but the 19th
13 is kind of bad for me.
14 **DR. ZIEMER:** Okay.
15 **UNIDENTIFIED:** But is it possible?
16 **MR. ESPINOSA:** With this much notice, it's possible.
17 I'll just have to bring her along.
18 **DR. ANDERSON:** That's fine.
19 **DR. ZIEMER:** There you go.
20 **DR. ANDERSON:** Where would you like to meet?
21 **DR. ZIEMER:** Okay, 18th and 19th are possible. Let's -
22 - what happened on the week of the 25th? Is that --

1 **MR. GRIFFON:** I just thought that was kind of late,
2 given that I have -- you know...
3 **DR. ZIEMER:** But poss--
4 **MR. GRIFFON:** But possible for me.
5 **DR. ANDERSON:** Yeah, it's okay for me.
6 **DR. ZIEMER:** In terms of actual meeting time, is it --
7 25, 6, 7, any conflicts that week?
8 **MR. ELLIOTT:** 26th and 27th?
9 **MR. ESPINOSA:** 26th and 27th are out for me.
10 **DR. ZIEMER:** Are...
11 **MR. ESPINOSA:** The 26th and -- 26th and 27th I'm not
12 available.
13 **DR. ZIEMER:** Okay. So that means if we did it that
14 week it would have to be the 28th or 9th. Okay. So
15 the possibilities then, it appears, are the 18th and
16 19th or the 28th and 9th.
17 **DR. ANDERSON:** That's just before Labor Day?
18 **DR. ZIEMER:** Yes, that is just before Labor Day.
19 **DR. DEHART:** Let's go for 18th/19th.
20 **DR. ANDERSON:** 18/19.
21 **DR. ZIEMER:** 18/19?
22 **DR. ANDERSON:** We'll just squeeze Richard here.

1 DR. ZIEMER: Okay, 18th and 19th is where we have
2 settled. Cori --

3 MS. HOMER: I'm okay on the 18th and 19th.

4 DR. ANDRADE: Is there anything wrong with the week of
5 July 14th?

6 MR. ESPINOSA: Yeah, I was just going to say the same -
7 -

8 DR. ZIEMER: I have a conflict on the 14th, 15th and
9 16th.

10 MR. GRIFFON: I'm out the 14 --

11 MR. ESPINOSA: What about --

12 MR. GRIFFON: -- 14 through 17.

13 MR. ESPINOSA: -- the 17th and 18th?

14 DR. ZIEMER: You're out the whole week through the
15 17th.

16 DR. DEHART: I'm out the next.

17 DR. ZIEMER: Okay.

18 DR. ANDRADE: Of July or --

19 DR. ZIEMER: That was July we were looking at. So it
20 looks like we're back to August 18th and 19th.

21 MR. ESPINOSA: Getting into the 7th would probably be
22 too -- too close.

1 **MR. GRIFFON:** July 7th, you mean?
2 **MR. ESPINOSA:** Yeah.
3 **MS. HOMER:** That's not much more than a month away.
4 **DR. ZIEMER:** Let's shoot for August 18/19. We need to
5 then also decide where we should meet.
6 **MR. GRIFFON:** St. Louis? St. Louis is an option.
7 Hanford is an option.
8 **MR. ESPINOSA:** Hey, I thought it was my decision. Oh,
9 I'm sorry.
10 **DR. ROESSLER:** Las Vegas.
11 **MR. ESPINOSA:** There you go, Las Vegas. No, no, that's
12 -- that'd get me in trouble.
13 **DR. ZIEMER:** Let me ask -- I want to ask Mark, in terms
14 of the working group, is there any need for us to be in
15 Cincinnati for this meeting in terms of logistically --
16 in terms of what the work group is going to be doing,
17 to prepare or...
18 **MR. GRIFFON:** I -- I don't know. I guess there could
19 be some advantages to it. I'm not sure we need to get
20 access to the database systems or anything like that at
21 this point.
22 **MR. ELLIOTT:** It would certainly be easier on staff, I

1 can tell you that.

2 **MR. ESPINOSA:** St. Louis?

3 **MR. PRESLEY:** No, Cincinnati.

4 **MR. ESPINOSA:** Oh, Cincinnati?

5 **MR. ELLIOTT:** But I serve at your pleasure, so...

6 **DR. ZIEMER:** Other suggestions?

7 **DR. ANDERSON:** Where would you like to go, Cori?

8 **MS. HOMER:** Me?

9 **DR. ANDERSON:** Yeah, where would you like to go?

10 **MS. HOMER:** I like Santa Fe.

11 **MR. ESPINOSA:** Yeah, how about Santa Fe?

12 **MS. HOMER:** That works for me.

13 **MR. GRIFFON:** St. Louis is great in the summer.

14 **MR. ELLIOTT:** So's Cincinnati.

15 **DR. ANDERSON:** Or maybe Atlanta.

16 **MR. GRIFFON:** Warm and humid. Right?

17 **DR. ANDERSON:** Savannah. Savannah, right.

18 **DR. ZIEMER:** Well --

19 **MR. ESPINOSA:** Before we commit, does anybody have a

20 baseball schedule?

21 **DR. ZIEMER:** Let me suggest a couple of considerations.

22 The one was whether or not there is a logistical

1 reason to meet in Cincinnati. There could be some
2 staff considerations, that is one. Another possibility
3 was to go back to the D.C. area, and then the other
4 possibility would be to try to hit a city that is in
5 fact co-located with one of the sites, which would
6 argue for either one of the DOE sites or one of the
7 other sites, such as -- such as Mallinckrodt.

8 **MR. ESPINOSA:** With a -- reading some of the public
9 comments on the SEC, you know, from a year ago and the
10 stakeholders meetings and stuff like that, I would like
11 to see the Board at some time go to the Hanford area,
12 and I don't know if it's -- you know, and also a
13 consideration, Ms. Wanda Munn, she's traveled through
14 all the time zones and we haven't gone to hers.

15 **MS. MUNN:** Honey, you're welcome to come on down any
16 time. In the middle of August we are hot to trot.
17 It's -- I would --

18 **MR. ESPINOSA:** Maybe -- how is it in October there,
19 Wanda?

20 **MS. MUNN:** I really, genuinely would love to have you
21 there, but I am concerned about the overall cost of
22 transporting everybody across country like that. It's

1 bad enough transporting me across. Every time I look
2 at my ticket, I blanch. But the concept of bringing
3 this entire Board and the staff out there is -- you
4 know, I think we need to go out there at some juncture,
5 but it really is going to cost us a lot.

6 **MR. ELLIOTT:** If I might add this, I think it would be
7 appropriate when we have the technical basis document,
8 site profile for Hanford, that's when we probably ought
9 to go out there and --

10 **MR. ESPINOSA:** Yeah, that's a good --

11 **MR. ELLIOTT:** -- talk about that, deliver that, you
12 know, get the Board's input on that once we have it in
13 a state where we're ready to present it to you.

14 **DR. ANDRADE:** I would think that would be a good --

15 **DR. ZIEMER:** Are there any other locations where we're
16 approaching that, where it would be appropriate to go
17 to such a location? Any other DOE sites or other major
18 facilities?

19 **DR. ANDRADE:** Based on public comment, I think there's
20 a --

21 **UNIDENTIFIED:** Microphone.

22 **MR. ELLIOTT:** Microphone, please.

1 **DR. ANDRADE:** Based on public comment, I think there's
2 a lot of interest in St. Louis, what's going on at
3 Mallinckrodt -- the former Mallinckrodt facilities.
4 It's centrally located. It would probably be easy for
5 all of us to get to, so I -- I'd suggest that as a --
6 as a potential place for the 18th.

7 **MR. ESPINOSA:** Make it a motion.

8 **DR. ZIEMER:** Any other suggestions?

9 **DR. ROESSLER:** I'll say that since there's no place
10 that's good to go in August that we might as well go to
11 Cincinnati and save St. Louis for when we can do a
12 little sight-seeing and Hanford when it's -- the
13 weather's better. That's just my...

14 **MR. ESPINOSA:** What about Lawrence -- is it Lawrence
15 Livermoor?

16 **UNIDENTIFIED:** California.

17 **MR. ESPINOSA:** Yeah, what about California this time of
18 year? The Giants are playing.

19 **DR. ZIEMER:** Robert?

20 **MR. PRESLEY:** Larry, would it help if we came to your
21 place in August to straighten up some of our problems
22 that it looks like that we're going to be perceived

1 with our audit? That way we'll get more of the staff.

2 **MR. ELLIOTT:** I think if you could meet in Cincinnati
3 in August, it would be of benefit to everybody. It
4 would allow my staff to do the work that they need to
5 be doing in the office. It will allow us to support
6 your needs if you've got information needs on
7 developing your process or, you know, checking out the
8 technical basis documents that we might have at the
9 ready at that point. We need to figure out in this
10 process how we can get the information on these
11 administrative records to you and -- it'll travel less
12 staff if we can do it right there, but...

13 **MR. PRESLEY:** Can I make a motion we go to August -- go
14 to Cincinnati in August?

15 **DR. ZIEMER:** Sure. Hang on, we'll hear from Richard
16 and then you can make a motion.

17 **MR. ESPINOSA:** In the March meeting it was also
18 suggested -- if I'm not mistaken, it was suggested by
19 Mr. Presley here, that the rest of the Board go through
20 the -- ORAU's office, the training, and NIOSH offices,
21 as well, so we might want to make it a three-day trip
22 for the people that aren't on the working group, the

1 people that are alternates on the working group. So
2 that's something that might want to be considered now.

3 **MR. PRESLEY:** Might want to do it all for everybody
4 'cause things have changed. Everybody hears the same
5 thing at one time.

6 **MR. ESPINOSA:** And I think it -- yeah, just like --
7 everybody hear the same thing at one time. I know
8 that's a problem with (inaudible) and stuff like that,
9 but even if we broke it into two groups, one group in a
10 half-day in the morning and a half-day in the
11 afternoon, it's -- you know, this meeting might want to
12 be turned into three days instead of just the general
13 two.

14 **DR. ZIEMER:** That's a good suggestion. I think we
15 could work out the logistics on that. You want to make
16 your motion now, Mr. Presley?

17 **MR. PRESLEY:** I make a motion we go the 18th, 19th,
18 possibly the 20th to Cincinnati in August.

19 **DR. DEHART:** Second.

20 **DR. ZIEMER:** And seconded. Further discussion?

21 **MR. ELLIOTT:** Just so you know, Dr. Melius would not be
22 available on the 20th, so if you target the meeting for

1 the 18th and 19th and then the training -- the working
2 session for those who could stay on the 20th --

3 **MR. ESPINOSA:** Are you seeing a full two-day schedule,
4 Larry?

5 **MR. ELLIOTT:** Well, I was going to ask, what -- you
6 know, what other agenda items you want to see on that
7 meeting date. You know, we could certainly approach
8 Dr. Till and see if he is available those two days to
9 come in and talk to you all about the NAS report.
10 That's one thing --

11 **DR. ZIEMER:** We'd want to hear that. We need to
12 finalize these documents. Those are --

13 **MR. ELLIOTT:** This is the primary work.

14 **DR. ZIEMER:** -- the two main issues, and it may be that
15 we'd have a day and a half meeting plus the training.

16 **DR. ANDRADE:** I think beyond -- beyond the agenda
17 items, I know that there are four of us that still
18 require the training -- we're alternates -- and that
19 does include Jim, Leon, Wanda and myself.

20 **MR. ESPINOSA:** You're on there, too. Right, Henry?

21 **DR. ANDERSON:** Yeah. Well, I mean eventually
22 everybody, so it would be nice if we kind of put it

1 together, we all go through.

2 **DR. ZIEMER:** Let me suggest that we plan the following
3 -- we'll plan it to be a day and a half meeting, plus
4 the training. But if the agenda fills up, we have the
5 option of going over the extra day. Is that --

6 **MR. ELLIOTT:** Yes, you would. But I would offer this
7 for your consideration, that to have the whole Board
8 there to go through what the working group has seen --

9 **DR. ZIEMER:** Oh, we'd need to --

10 **MR. ELLIOTT:** -- constitutes a quorum, constitutes --
11 we'd have to have a closed session because you're going
12 to deal with Privacy Act information and we'll have to
13 get that put in play to have a closed session of the
14 Board.

15 **MR. ESPINOSA:** Just another suggestion --

16 **MR. ELLIOTT:** Or you could split the group and split
17 the days. That's the other way to get at it.

18 **MR. ESPINOSA:** Yeah, just another suggestion, you know,
19 some people won't be leaving until that Wednesday the
20 20th, so maybe we could have a half-day on the 20th and
21 some people get here early enough to where you can have
22 a later half-day on the 18th or something -- or in the

1 morning of the 18th and, you know, however that works
2 out.

3 **DR. ZIEMER:** And start mid-day on the 18th, yeah.
4 Yeah, we can work out the logistics. I think we
5 understand the -- so did we vote on this? I lost track
6 here.

7 **MR. PRESLEY:** Yes.

8 **DR. ZIEMER:** We did. Did we? We didn't vote.

9 **DR. ANDRADE:** No, I don't think so.

10 **DR. ZIEMER:** Must be time to end. All in favor of
11 meeting on the 18th through the 20th, if necessary, in
12 Cincinnati say aye.

13 (Affirmative responses)

14 **DR. ZIEMER:** Any opposed?

15 (No negative responses)

16 **DR. ZIEMER:** So ordered. Thank you very much.

17 **DR. DEHART:** One other question, Paul.

18 **DR. ZIEMER:** A question.

19 **DR. DEHART:** When will the final rule be out? Do we
20 have any idea?

21 **MR. ELLIOTT:** Good question. We are addressing the
22 comments that we received and we're working that rule

1 back together, and it's our hope that before the end of
2 the year we'll have a final rule out and people can --

3 **DR. DEHART:** Okay, so August is too -- it's premature.

4 **MR. ELLIOTT:** Yes, yes. The number of comments that
5 we've got and the number of issues we have to deal
6 with, I don't think we're going to have a final rule by
7 August.

8 **DR. ZIEMER:** Mark, did you have a --

9 **MR. GRIFFON:** Yeah, just another proposed agenda item.

10 I'd like to see the site profile -- you know, status
11 report on site profiles --

12 **MR. ELLIOTT:** Sure.

13 **MR. GRIFFON:** -- at the meeting if we can, and if
14 possible maybe a presentation on sample ones that have
15 been completed. I know Bethlehem Steel's one -- I
16 guess you're calling it an exposure profile more than a
17 site profile, but --

18 **DR. ZIEMER:** Did you have another comment, Rich?

19 **MR. ESPINOSA:** Oh, I just -- you know, I was
20 (inaudible).

21 **DR. ZIEMER:** Okay. Any other items pertaining to the
22 next meeting?

1 Okay, housekeeping items. Cori?

2 **MS. HOMER:** Yes. Instead of filling out that little
3 slip of paper we usually ask you to hand to Larry and
4 have him sign to approve your time, what I'd like for
5 you to do from now on and in the future, to send an e-
6 mail to Larry identifying very specifically the time
7 you've spent preparing, time you've spent on the work
8 group and of course our meeting time we already know,
9 you know, what days you were here. That way when I'm
10 accounting for your time, I can separate the work group
11 and prep time, as well as meeting time. But go ahead
12 and send it to Larry. He'll approve it and send it to
13 me. You'll have to do that the day that you get back
14 or the day after or I may not be able to get you on
15 that pay cycle.

16 **MR. ESPINOSA:** You want the meeting time, also?

17 **MS. HOMER:** No, I do not need the meeting time.

18 **DR. ROESSLER:** So you need it -- two categories, the
19 preparing for the meeting and doing the normal things,
20 and then the other one is --

21 **MS. HOMER:** Work group.

22 **DR. ROESSLER:** -- work group. Okay.

1 **MS. HOMER:** Anything work group-related is entirely
2 separate from preparation time.

3 **MR. ELLIOTT:** And if you've already given me this on a
4 piece of paper, don't send an e-mail at this time, but
5 for the future that's the way we'd like to have this
6 transaction occur.

7 **DR. ZIEMER:** Cori, for clarification, the work group
8 time, you're -- you're talking about the actual time
9 that the work group meets.

10 **MS. HOMER:** Meets, as well as whatever time you spend
11 preparing for the work group, 'cause it's entirely
12 different.

13 **MR. GRIFFON:** Entirely.

14 **DR. ZIEMER:** It's separate from the committee time.

15 **MS. HOMER:** I know, it's -- the way I have to account
16 for it on annual reports, it's just really helpful for
17 me to have it as specific as possible.

18 **MR. GRIFFON:** Just a clarification, Cori, on the pre-
19 bid meeting that a bunch of us attended, were we
20 supposed to submit ours or was --

21 **MS. HOMER:** Yes.

22 **MR. GRIFFON:** Okay, I never did --

1 DR. ZIEMER: For prep time --
2 MS. HOMER: Uh-huh.
3 DR. ZIEMER: -- and the meeting time?
4 MS. HOMER: Uh-huh. No, meeting time you never have to
5 --
6 DR. ZIEMER: Okay.
7 MS. HOMER: -- but if you have attended a work group
8 meeting, and I may not necessarily be aware of that,
9 you need to tell me.
10 MR. ESPINOSA: Yeah, the bidder's conference was
11 considered a work group meeting. Right?
12 MS. HOMER: Okay, so identify that under work group.
13 MR. ESPINOSA: Okay.
14 MS. HOMER: Even if I was there, just go ahead and --
15 DR. ZIEMER: Thank you. Other items --
16 MS. HOMER: 'Cause that helps.
17 DR. ZIEMER: -- Cori?
18 MS. HOMER: I think that's about it. Can you think of
19 anything else?
20 DR. ZIEMER: Henry -- or Jim -- Henry.
21 DR. ANDERSON: It might be helpful if, just seeing the
22 difficulty picking a date for the -- for this next

1 meeting, when we get into the fall season, when I look
2 at my calendar it's already filling, so I'm wondering
3 if we want to start to think about anyway what -- when
4 would the next meeting potentially be and -- something
5 like that 'cause, for instance, my October -- that's
6 always the busiest month, so...

7 **MS. HOMER:** I can pull them by e-mail.

8 **DR. ZIEMER:** Cori, why don't you ask each person to
9 send in their schedule --

10 **MS. HOMER:** Yeah.

11 **DR. ZIEMER:** -- of bad times --

12 **MS. HOMER:** Through October and November, is that
13 helpful? Okay. So if you could send your schedule to
14 me through November.

15 **DR. ZIEMER:** Now -- you have a calendar in your packet
16 now -- right? -- if you know what it is.

17 **MS. HOMER:** That's right.

18 **DR. ZIEMER:** Otherwise e-mail it?

19 **MS. HOMER:** Uh-huh.

20 **DR. ZIEMER:** Any other items to come before us today?
21 Okay. Does anyone have any other issue that needs to
22 be raised? I have some instructions on the tour.

1 Robert?

2 **MR. PRESLEY:** People that are going on the tour please
3 just stay in place here in the room and Steve White
4 will come in and we will get our instructions on
5 badging and then we'll head out and get on the bus.
6 Has everybody got a blue TLD that's going on the tour?

7 **DR. ZIEMER:** Okay, very good. And again for the
8 record, I want to announce that the tour is simply an
9 effort to allow Board members to see the site and learn
10 more about the Oak Ridge site. There will be no
11 official business conducted by this Board on the tour.
12 We stand adjourned.

13 (Meeting adjourned 1:50 P.M.)
14

C E R T I F I C1
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A T E

STATE OF GEORGIA)
)
COUNTY OF FULTON)

I, STEVEN RAY GREEN, being a Certified Merit Court Reporter in and for the State of Georgia, do hereby certify that the foregoing transcript was reduced to typewriting by me personally or under my direct supervision, and is a true, complete, and correct transcript of the aforesaid proceedings reported by me.

I further certify that I am not related to, employed by, counsel to, or attorney for any parties, attorneys, or counsel involved herein; nor am I financially interested in this matter.

WITNESS MY HAND AND OFFICIAL SEAL this _____ day of June, 2003.

STEVEN RAY GREEN, CVR-CM
GA CCR No. A-2102

