

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

THIRTY-FIRST MEETING

ADVISORY BOARD ON
RADIATION AND WORKER HEALTH

DAY ONE

The verbatim transcript of the Meeting of the
Advisory Board on Radiation and Worker Health held
at the Chase Park Plaza Hotel, St. Louis, Missouri,
on July 5, 2005.

C O N T E N T S

July 5, 2005

| | |
|---|-------|
| WELCOME AND OPENING COMMENTS | 9 |
| DR. PAUL ZIEMER, CHAIR | |
| DR. LEW WADE, EXECUTIVE SECRETARY | |
| BETHLEHEM STEEL TECHNICAL BASIS DOCUMENT | |
| DR. JIM NETON, NIOSH | 13,33 |
| COMMENTS BY MEMBER OF CONGRESS | |
| SENATOR CHRISTOPHER BOND | 24 |
| PRIVACY INFORMATION | |
| LIZ HOMOKI-TITUS, ESQ. | 70 |
| Y-12 SITE PROFILE | |
| JOE FITZGERALD, SC&A | 81 |
| Y-12 SPECIAL EXPOSURE COHORT (SEC) PETITION | |
| LARRY ELLIOTT, NIOSH, AND PETITIONERS | 122 |
| BOARD DISCUSSION OF Y-12 SEC PETITION | |
| DR. PAUL ZIEMER, CHAIR | 134 |
| IAAP SEC PETITION | |
| LARRY ELLIOTT, NIOSH, AND PETITIONERS | 160 |
| BOARD DISCUSSION OF IAAP SEC PETITION | |
| DR. PAUL ZIEMER, CHAIR | 167 |
| GENERAL PUBLIC COMMENT | 184 |
| COURT REPORTER'S CERTIFICATE | 253 |

TRANSCRIPT LEGEND

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

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

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

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

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

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

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

In the following transcript (off microphone) refers to microphone malfunction or speaker's neglect to depress "on" button.

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

(By Group, in Alphabetical Order)

BOARD MEMBERSCHAIR

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

EXECUTIVE SECRETARY

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

MEMBERSHIP

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

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

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

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

OWENS, Charles Leon
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

AGENDA SPEAKERS

(in order of appearance)

DR. JIM NETON, NIOSH
SENATOR CHRISTOPHER BOND
MS. LIZ HOMOKI-TITUS, ESQ.
MR. JOE FITZGERALD, SC&A
MR. LARRY ELLIOTT, NIOSH
DR. PAUL ZIEMER, CHAIR
MR. LARRY ELLIOTT, NIOSH
DR. PAUL ZIEMER, CHAIR

STAFF/VENDORS

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

AUDIENCE PARTICIPANTS

ADAMS, EILEEN, NIOSH
AL-NABULSI, ISAF, NCRP
ALGERT, DAVE, DOD/DTRA
BEATTY, EVERETT RAY, SR., FERNALD ATOMIC COUNCIL
BEHLING, HANS, SC&A
BEHLING, KATHY, SC&A
BERRY, CHARLENE, MALLINCKRODT
BLOSSER, FRED, NIOSH
BUHR, LORRAINE
CAPPIELLO, ROBERT, ATTNY FOR WIFE/MALLINCKRODT
CASE, DIANE L., DEPT. OF LABOR
DEEP, HEIDI, NIOSH
DEHART, JULIA
ESPY, RICHARD, MALLINCKRODT WIDOWER
FITZGERALD, JOSEPH, SC&A
FRISCHMAN, BILL, FESTUS
GARNER, DON, ST. LOUIS
GENERI, MARY, MCW
HAPPELL, CARL C., NIOSH
HEARL, FRANK, NIOSH
HEISTER, MELANIE, NCRP/VBDR
HERBST, ALVERA, MALLINCKRODT WIFE
HOLTBAUS, RICHARD A.
HOMOKI-TITUS, LIZ, HHS
HOWELL, EMILY, HHS
KOENEMAN, BARB & TANYA, UNWW
LICAVOLI, JOSEPHINE, MALLINCKRODT SURVIVOR
LOVETT, BRICE, UNWW
MAKARA, MEL, SELF
MAKHIJANI, ARJUN, SC&A
MAURO, JOHN, SC&A
MCBRIDE, MOLLY
MILLER, RICHARD, GAP
MITAS, JIM, OFFICE OF CONGRESSMAN AKIN
NITCHMAN, JOHN
NOVAK, JUSTINE, MALLINCKRODT
PRESLEY, LOUISE S., WIFE OF ROBERT PRESLEY
RAFKY, MICHAEL, HHS
RAMSPOTT, CHRISTINE
RAMSPOTT, JOHN
SAMPSON, ROBERT, GAO

SCANENSEN, CLARENCE, UNWW
SCHNEIDER, MARILYN, UNWW
SCRANEE, DARRELL, MALLINCKRODT
SCRANEE, RON, MALLINCKRODT
STACAOWITZ, RAINER
STEGER, RON, MALLINCKRODT
TAYLOR, GEORGE EDWIN, VBDR
TOOHEY, RICHARD, ORAU
WALKER, EDWIN A., BETHLEHEM STEEL
WALKER, JOYCE, BETHLEHEM STEEL
WHITE, GARY, DOD
WILDHABER, SANDRA, MALLINCKRODT
WINDISCH, ANTHONY J., MALLINCKRODT WORKER
WIPFLER, ED, WELDON SPRING

P R O C E E D I N G S

(1:11 p.m.)

WELCOME AND OPENING COMMENTS

1
2
3 **DR. ZIEMER:** Good afternoon, everyone. Welcome
4 to this, the 31st meeting of the Advisory Board
5 on Radiation and Worker Health. We're pleased
6 to be back in St. Louis. I think for some of
7 the Board members it's beginning to feel like
8 old home or a second home or something, but
9 we're -- we're pleased to be here in St. Louis
10 on this occasion.

11 Several reminders for you. Please, if you
12 haven't already done so, register your
13 attendance in the registration book, which is
14 out in the foyer just outside this room.
15 Also, those of you who are intending on
16 participating in the public comment period --
17 which is at 7:30 this evening -- we'd like to
18 have you register -- or sign up, actually --
19 for public comment so we have some idea of the
20 numbers of individuals who will be
21 participating in that activity. Again, those
22 sign-up sheets are also out in the foyer.
23 There are a number of handouts. There are
24 copies of the agenda, copies of various
25 handouts that'll be used in the meeting here

1 today, as well as other Board-related
2 materials. They are in the room just off to
3 the side here. Please avail yourselves of
4 those materials as you see fit.

5 I wanted to make note that we actually now
6 officially have a quorum. That's what the
7 delay was, we were waiting to actually have a
8 quorum so we could begin our meeting. You'll
9 notice a couple of empty chairs. We do expect
10 Mr. Owens and Ms. Munn and Mr. Espinosa to join
11 us, but there are perhaps some travel
12 difficulties.

13 I would like to note that Michael Gibson will
14 not physically be here at the meeting due to
15 serious illness of his father, but we are going
16 to try to involve Mike, to the extent possible,
17 by phone hookup so he may be able to
18 participate. I know Mike certainly wants to
19 participate when we come to voting on various
20 items.

21 Also we expect shortly Senator Christopher Bond
22 to arrive. My understanding is he will arrive
23 about 1:30, and that will serve as a time
24 certain as far as our agenda's concerned, as
25 when the Senator arrives we will interrupt

1 business and allow him to address the Board and
2 the assembly. And then he will be welcome to
3 stay or leave, as needed. Knowing the
4 Senator's busy schedule, he probably will not
5 be able to stay on, but we do look forward to
6 hearing from him, as well.

7 I'd also like to give our Designated Federal
8 Official, Dr. Wade, an opportunity to make a
9 couple of opening remarks. Lew?

10 **DR. WADE:** Thank you, Paul, very much. I'm
11 compelled to thank the members of the Board for
12 their travel around the July 4th holiday and
13 coming together to undertake a very full
14 meeting. If you look at the agenda, we have a
15 great many items that we need to turn our
16 attention to, and I again thank you for your
17 willingness to -- to travel here and do this
18 most important work.

19 I bring you regards from Secretary Leavitt; the
20 Director of CDC, Dr. Gerberding; and also Dr.
21 John Howard, the NIOSH Director. Dr. Howard is
22 again with us during these meetings, and on all
23 of their behalf again, I thank you.

24 We've done this a little bit differently this
25 time in that we will have a subcommittee

1 meeting. It is scheduled to precede our
2 deliberations tomorrow and the next day. We
3 will exercise some flexibility, if we feel we
4 need more time, to extend the day and allow the
5 subcommittee to meet. We're trying to get the
6 subcommittee together in the morning to address
7 issues that will be taken up by the full Board
8 later that day.

9 So again we will have long days, and hopefully
10 productive days. And again I thank you
11 personally for your willingness to come and
12 join us in this work. Thank you, Paul.

13 **DR. ZIEMER:** Thank you, Lew. And I might point
14 out that the activities of the subcommittee are
15 also public and you're welcome to be here for
16 those. Tomorrow morning the subcommittee
17 begins at 7:30, so we expect all of you to be
18 here bright and early. You are welcome to be
19 here for the subcommittee deliberations. The
20 Subcommittee on Dose Reconstruction and Site
21 Profile Reviews is a group that tries to do
22 preliminary work on some of our agenda items
23 prior to the full Board addressing some issues.
24 The Board members are aware that in their
25 packet are two sets of minutes, extensive

1 minutes, which they have not seen prior to
2 about a minute ago. And the Chair is going to
3 assume that they are unprepared to act on these
4 minutes. And in fact, if there's no objection,
5 we will delay action on the minutes until
6 Thursday, at which time we'll expect the Board
7 members to have digested them thoroughly and be
8 prepared to take action. So without objection,
9 we'll delay action on the minutes.

10 And incidentally, there are two sets of
11 minutes, Board members, one the minutes of the
12 30th meeting, which was the Cedar Rapids
13 meeting, and then the other was the conference
14 call meeting on April 11th. So both sets of
15 minutes should be in your packet there.

16 **BETHLEHEM STEEL TECHNICAL BASIS DOCUMENT**

17 Now we're going to move on our agenda then to
18 presentation on the Revised Technical Basis
19 Document for Bethlehem Steel, and this
20 presentation will be brought to us by Dr. Neton
21 from NIOSH. Jim, thank you.

22 Also, Board members, the copies of the Power
23 Point materials that Dr. Neton will use are not
24 in your packet but should be by your place
25 there.

1 **DR. NETON:** Good afternoon. It's my pleasure
2 to be here this afternoon to talk about the
3 Bethlehem Steel site profile and where we're at
4 with regards to revising it to be consistent
5 with the recommendations of the SC&A report, as
6 well as the Board's input that we received at
7 the St. Louis meeting the last time we were
8 here.

9 I think, since it's been a while and this has
10 been an ongoing revision process, I think I'd
11 like to take a few minutes and just go briefly
12 over the history of this profile.

13 Revision 0 was issued at the end of March,
14 2003, and we processed a large number -- almost
15 all the Bethlehem Steel cases -- using that
16 profile, somewhere in the vicinity of 400 or
17 500 cases, I forget the exact number now. But
18 while we were doing that, we did receive some
19 stakeholder comments regarding the profile.
20 And most notably the objection we received was
21 that we did not have the ingestion pathway
22 addressed in that profile.

23 And we acknowledged that and we went back to
24 the drawing board and incorporated ingestion in
25 that pathway -- in that model. And there was a

1 few other minor tweaks in there, but that was
2 the most significant alteration that we made --
3 revision we made, and Revision 1 was issued on
4 June 29, 2004.

5 We subsequently went back and reviewed all the
6 dose reconstructions we did using Rev. 0
7 against Rev. 1, and I don't believe any dose
8 reconstructions -- the probability of causation
9 was -- would move over 50 percent, given that -
10 - that revision.

11 SC&A issued their draft review about the middle
12 of September, 2004 of the profile, and NIOSH
13 provided our original response at the December
14 board meeting in Livermore, if you remember.
15 But that response was not complete. It was our
16 initial thoughts and reactions to the profile -
17 - the review, but we -- we hadn't had
18 sufficient time to completely think through our
19 reaction to it. So at the February 7th Board
20 meeting in St. Louis we presented our -- what
21 we believed to be our complete response to that
22 profile.

23 At that Board meeting, if you recall, we -- I
24 presented -- I gave a presentation on our
25 thoughts on this and described our approaches

1 and asked for the Board's advice on a few key
2 issues. And as a result of that presentation,
3 the Board actually passed five motions on the
4 Bethlehem Steel site profile -- at least our
5 response to the review of the Bethlehem Steel
6 site profile.

7 I took the liberty of summarizing these
8 motions. They're paraphrased, so if they're a
9 little bit off, I'd appreciate your feedback.
10 I did take these directly out of the minutes of
11 the Board meeting -- the transcript of the
12 Board meeting.

13 The first motion was that the Board accepted
14 NIOSH's response to the SC&A review. Now I
15 should clarify that doesn't mean they accepted
16 all of our discussion, but they just physically
17 accepted or received the response.

18 The second motion that was passed was that the
19 Board concurred with the use of the 95th
20 percentile for estimating worker intakes. Now
21 that -- that's exactly what it says; however,
22 there is a little bit of language after that,
23 that NIOSH was encouraged to continue to
24 research modes of estimating intakes and use of
25 probability distributions, et cetera. But the

1 gist of it was the Board did concur with the
2 use of the 95th percentile.

3 The Board also requested that NIOSH review the
4 use of the ICRP default values for heavy work
5 and oro-nasal breathing. We asked for advice
6 on that and the Board asked that we go back and
7 re-look at that.

8 The Board also concurred with NIOSH's
9 characterization of the aerosol particle size
10 that was used, which was the default ICRP
11 particle size of five microns, and the default
12 of the density that was used, which is a
13 default of -- of a unit density, one -- a
14 density of one.

15 And the Board also concurred with NIOSH's
16 approach to characterizing external exposure.

17 So with that in hand, we went back to the
18 drawing board and modified the profile in
19 accordance with what we discussed at the
20 February Board meeting. And I have a few
21 bullets here that summarizes the gist of what
22 we've done, and then I'll take some time to go
23 over what I think are the more important
24 modifications that we've made.

25 The profile itself has increased in volume,

1 it's doubled in size -- tripled, I guess. It
2 was only 13 pages -- a scant 13 pages the first
3 pass through. I think it's now somewhere --
4 35, 40 pages long, so we've added a lot more
5 background material. We've added more
6 rationale behind the approaches that we've used
7 to reconstruct doses, the background on rolling
8 operations, what that means, how Simonds Saw &
9 Steel appears to us to be an appropriate
10 surrogate facility. We've added some
11 information from Joslyn Steel, which was also
12 used to roll uranium. And we've also
13 characterized in more detail the air sampling
14 program.

15 I presented a fair amount of this at the last -
16 - at the St. Louis meeting where I talked about
17 the Health and Safety Laboratory's approach to
18 -- to air sampling in the workplace and how
19 they had different -- indeed had different
20 categories of air sampling, job speci-- general
21 air sampling, personal air sampling and then
22 what they called process sampling, which is not
23 really intended to represent a worker's intake
24 but sort of to characterize the worst-case
25 exposure conditions for an operation, but not

1 necessarily one that someone would be
2 breathing.

3 And we've also -- and I'll talk about this in
4 some detail later -- our justification or
5 evaluation of why -- or why not -- the default
6 breathing assumptions in the ICRP models are
7 applicable to a facility such as Bethlehem
8 Steel. If you recall, we -- we used the -- in
9 some cases, the light worker breathing rate
10 coupled with normal mouth -- or nasal
11 breathing. And the SC&A review suggested that
12 heavy work or even greater may be more
13 appropriate as far as the ventilation rate of
14 the workers, and that there are a certain
15 segment of the population that breath through
16 their mouths and -- and maybe we should
17 consider that, and I'll talk about that in some
18 detail later.

19 We've also replaced the triangular distribution
20 with a time-specific lognormal distribution.
21 I've got a few slides on that.

22 We've added residual contamination pathway for
23 internal and external exposure between
24 rollings. We covered ingestion, as I
25 mentioned, in Rev. 1. But the SC&A review

1 asserted that we really didn't know the
2 contamination control practices good enough to
3 assume that there was no internal exposure in
4 between rollings, and we acknowledge that and
5 we've gone back and put that in.
6 We've also done some work in evaluation of
7 exposure to grinding operations. This is some
8 -- some input that we received from -- from
9 workers, from stakeholders that are involved
10 with Bethlehem Steel, and we -- we did an
11 evaluation to ensure in our mind the grinding
12 operation -- the 95th percentile of the air
13 sample distributions that we were using are
14 indeed bounding values for all the operations
15 in the plant, including grinding -- which on
16 paper you would -- you would intuitively sort
17 of feel that they were very large high -- high
18 airborne concentration operations. It turns
19 out that they most likely aren't, and I can
20 talk a little bit about that.
21 And then we also added a estimate of skin dose
22 due to wearing contaminated clothing. It's
23 well understood that Bethlehem Steel was a very
24 messy, dirty, dusty operation. With these
25 large airborne uranium concentrations it's very

1 clear that uranium could deposit on the surface
2 of the workers' skin and on the clothing and
3 provide a skin dose to the worker. That was
4 absent in the original model in the profile and
5 we've added that now and will assign skin doses
6 to workers. That of course will only be
7 relevant for dose reconstructions that are
8 performed for purposes of skin cancer.
9 Okay. With those few bullets out of the way,
10 I'll just proceed through what I think some of
11 the more significant issues are.
12 The inhalation exposure model -- like I said,
13 we've adopted the use of the 95th percentile of
14 the lognormal distribution of air samples. The
15 1949 and '50 values, as in the past, rely on
16 the Simonds Saw & Steel data. We had some air
17 sample data from -- that was taken in the late
18 '40's by the Health and Safety Laboratory at
19 Simonds Saw & Steel. We've now used those in
20 a lognormal distribution to model the exposures
21 in those two years. In 1950 and '51 we
22 actually have about 200 air samples that were
23 taken at Bethlehem Steel, and we've taken those
24 and fit those to a lognormal distribution and
25 are using the 95th percentile.

1 I'm just going to skip ahead real quick here,
2 just to remind you what we did before. This
3 was what appeared on the -- at the last Board
4 meeting. I guess I don't have a pointer here,
5 but if you recall, the first -- the Rev. 1
6 assumed a triangular distribution. It's hard
7 to tell on this slide, but that straight line
8 descending from left to right is actually a
9 triangular distribution. It's so skewed that
10 you can't see the line coming down on the -- on
11 the Y axis. But what we assumed was that that
12 triangular distribution would represent all
13 workers over all four years. The blue line and
14 the red line represent the 95th percent-- the
15 lognormal distribution of the air sample at
16 Simonds Saw & Steel and Bethlehem Steel,
17 respectively. So we used a composite of the
18 two, and there was some criticism that that
19 didn't represent the workers' exposures. It
20 could not -- a triangular distribution is
21 truncated 1,000 times the Maximum Allowable Air
22 Concentration. It didn't allow for higher
23 values. We accepted that.
24 And so effectively what we've done now is we've
25 taken the blue line and the red line and fit

1 them specifically for 1949 to '50 for -- using
2 the Simonds Saw & Steel data. And in 1950 and
3 '51 and '52 the red line represents the
4 Bethlehem Steel data.

5 Just to refresh everyone's memory, we are now
6 assuming that the workers breathe the 95th
7 percentile air concentration of the measured
8 values for either Simonds Saw & Steel or
9 Bethlehem for the entire 10-hour shift. And
10 furthermore, we are now assuming that the
11 workers breathed continuously 1.7 cubic meters
12 of air per hour as opposed to partially -- we
13 allowed for 1.2 cubic meters per hour, which
14 was light work. We had a sort of a -- we had a
15 triangular distribution over that where we
16 would allow partially 1.7 cubic meters per
17 hour. Now we're assuming full time 1.7 cubic
18 meters per hour at the upper end of this
19 distribution.

20 I'd just remind the Board that the -- the
21 Simonds Saw & Steel -- the samples taken at
22 Simonds Saw & Steel were for purposes of
23 generating a time-weighted average exposure to
24 the high-- to the workers, and the highest
25 exposed time-weighted average exposure was

1 about one-third of the maximum value measured.

2 **COMMENTS BY MEMBER OF CONGRESS**

3 **DR. ZIEMER:** Okay, Jim, thank you. We're going
4 to interrupt you just a moment here now. I
5 understand Senator Bond has arrived, yes?
6 Senator Christopher Bond, welcome to the
7 podium. We're pleased to have you here today.

8 **SENATOR BOND:** Good to see you, sir. Thank you
9 very much.

10 **DR. ZIEMER:** And please welcome him to our
11 meeting. You can use the podium there or
12 you're -- you're welcome to sit or stand,
13 whichever is best.

14 **SENATOR BOND:** All right, thank you very much.
15 Thank you.

16 Well, thank you very much for allowing me to
17 testify.

18 I have to apologize for arriving late. We had
19 a -- we had what should have been a two-hour
20 drive in from mid-Missouri, and fortunately our
21 highway department is very busy on
22 construction, so we had about a 20-minute delay
23 getting here. But I welcome, on behalf of the
24 people of Missouri, this distinguished panel.
25 We're delighted to have you back in our home

1 state and hope that you are enjoying the warmth
2 and humidity of St. Louis at this time of year.
3 I heard a story at one point that some foreign
4 countries used to declare St. Louis a hardship
5 spot when they sent representatives or consuls
6 general here, but that was before air
7 conditioning and before the St. Louis
8 Cardinals, so everything is much better now and
9 we -- we hope that you'll be enjoying it.
10 But I sincerely appreciate all the hard work
11 and dedication of every member of the Advisory
12 Board advising NIOSH on the multitude of
13 complex issues that come before the Board.
14 Your input and guidance in helping NIOSH to
15 resolve these issues is critical to the
16 effective performance of NIOSH's duties under
17 the Energy Employment's (sic) Occupational
18 Illness Compensation Program Act, EEOICPA --
19 being a tongue-twister. This nation and its
20 aging Cold Warriors owe you a great debt of
21 gratitude for your service.
22 At the last two Advisory Board meetings I have
23 read and submitted statements for the record
24 regarding the urgent need to designate the
25 former workers at the Mallinckrodt downtown

1 site as members of the Special Exposure Cohort,
2 or SEC. In those statements I clearly stated
3 the reasons why I believe that these former
4 workers at the downtown site deserve to be
5 included in the SEC. Today, for your benefit,
6 I don't intend to repeat all those reasons, but
7 I do want to highlight some of the reasons why
8 I think the SEC designation for the workers who
9 worked at the downtown site from 1949 through
10 1957 is the only prudent action, the only
11 compassionate action, this Board could take to
12 bring some long-awaited justice to these aging
13 Cold War warriors.

14 However, before I begin, my sincerest thanks to
15 the Board for recommending the former
16 Mallinckrodt workers who worked at the downtown
17 site from 1942 through 1948 for inclusion in
18 this -- in the SEC. Your decision to recommend
19 these employees be included has brought relief,
20 closure and long-awaited justice for these
21 victims, who waited for t his result for over
22 50 years. As I stated at the previous two
23 meetings, I'm convinced that the Mallinckrodt
24 downtown site meets the two statutory criteria
25 for inclusion in the Special Energy -- Exposure

1 Cohort. As you well know by now, these
2 criteria are, one, it's not feasible to
3 estimate with sufficient accuracy the radiation
4 dose that a class of employees received; and
5 two, there's a reasonable likelihood that such
6 a radiation dose endangered the health of a
7 member of -- of the class of employees.

8 And I think that one's pretty obvious for all
9 the Mallinckrodt workers. All you really have
10 to do is look at the Mallinckrodt workers with
11 cancer and the ones who've already died with
12 cancer. That leaves the feasibility of this
13 reconstruction for former workers. While I've
14 said it before on numerous occasion, I'm now
15 certain that an accurate, reliable dose
16 reconstruction is simply not feasible for the
17 former workers at the Mallinckrodt downtown
18 site.

19 It's almost been five months since I last
20 personally addressed this issue before the
21 Advisory Board regarding the issue -- five
22 months. Since that time even more people have
23 died while waiting for dose reconstruction, and
24 an overwhelming majority of claimants still
25 have yet to have their doses reconstructed. I

1 respectfully ask, how long can this go on? How
2 long can it take?

3 As I stated at the February meeting here in St.
4 Louis, there are important documents regarding
5 worker exposure and worker history that are
6 either missing, incomplete or destroyed. These
7 are documents that indicate a significant
8 portion of existing -- the exposure data is
9 inaccurate and unreliable. We have evidence
10 that some of these records were improperly
11 recorded. We know there was a serious dust
12 problem at the plant which may have caused
13 significant dust exposures.

14 We've also documented the testimony of a former
15 Atomic Energy Commission official who stated
16 that the Mallinckrodt downtown site was one of
17 the two worst plants in the country in terms of
18 the level of radioactive contamination. That's
19 over ten times the levels at the Paducah site,
20 which was previously considered the worst, and
21 Paducah of course is one of the four existing
22 SEC sites.

23 Yet constantly we hear the same rhetoric out of
24 the NIOSH Office of Compensation and Support,
25 that dose reconstruction is definitely feasible

1 for these workers. Well, if that's the case,
2 why are the overwhelming majority of these
3 claimants still waiting for dose reconstruction
4 five years after the enactment of the statute?
5 If dose reconstruction is feasible, why have
6 over 40 Mallinckrodt workers already died
7 waiting for dose reconstruction and
8 compensation?

9 And if dose reconstruction is definitely
10 feasible, why did NIOSH and its office send out
11 letters in January of this year to former
12 Mallinckrodt workers and their survivors
13 indicating that NIOSH has to resolve several
14 new issues before they can adequately complete
15 dose reconstruction for those employees? This
16 particular letter came almost one year after
17 NIOSH wrote these same former workers and their
18 survivors informing them that NIOSH was ready
19 to proceed with their dose reconstructions. So
20 one year NIOSH says that they can do dose
21 reconstructions, then a year later NIOSH says
22 they can't until they resolve new issues. Why
23 has NIOSH, after almost five years after
24 enactment, not completed the dose
25 reconstruction for those workers and not

1 provided them with the long-overdue
2 compensation they deserve?

3 Well, I think the answer to all these questions
4 is that dose reconstruction is just not
5 feasible for these workers. Because if the
6 dose reconstruction is so feasible, wouldn't
7 NIOSH have completed almost all of them by now
8 instead of completing the relatively small
9 number of claims where the necessary
10 information for dose reconstruction is readily
11 available? The inability of NIOSH to
12 reconstruct doses and compensate most of these
13 former workers is not consistent with the
14 intent of the Act, which is to compensate these
15 former workers in a timely manner. But it is
16 consistent with the fact that so many records
17 of workers are missing, incomplete or
18 inaccurate, which is why designating these
19 workers as part of the SEC is, in my view --
20 and I would hope in your view -- the only
21 practical solution.

22 You could ask the victims to wait even longer,
23 in the hopes that the records and other
24 relevant information will somehow appear, and
25 it will be accurate and it will be useful. But

1 for how long? Another six months, a year, two
2 more years?

3 I trust the members of the Board will keep in
4 mind that a good portion of these workers,
5 those who have not died, have been waiting for
6 dose reconstruction for over four and a half
7 years. The sick and aging workers appear to be
8 victims of an endless bureaucratic process. At
9 some point the Advisory Board has to decide how
10 much time NIOSH can spend on each SEC petition
11 to determine whether or not dose reconstruction
12 is feasible for that particular class of
13 employees. Otherwise, the Board runs the risk
14 of allowing NIOSH to violate one of the
15 cardinal principles of the Act, which five
16 years ago said that the purpose of this Act was
17 to compensate these former workers in a timely
18 manner.

19 Been 20 months since NIOSH first released its
20 site profile for the downtown site -- 20
21 months. I constantly hear from NIOSH that this
22 site profile is a living document and subject
23 to revision over time. Well, it may be good
24 news for the document that the site profile is
25 alive and well, but the former Mallinckrodt

1 workers are dying.

2 Since the site profile was first introduced in

3 October of 2003, numerous workers have already

4 passed on, many of them that I had the

5 opportunity to work with. Sadly, for a large

6 portion of these aging Cold Warriors, time is a

7 luxury they simply do not have. The former

8 Mallinckrodt workers are some of the oldest

9 former nuclear workers in the country. As I

10 have already indicated, many have already

11 passed on as a result of the illnesses they

12 contracted as a result of their service to the

13 country. In light of this, once again I urge

14 and beg you to recognize the plight of these

15 workers and recommend the remaining workers who

16 worked at the downtown site from 1949 to 1957

17 should constitute a Special Exposure Cohort.

18 This would give the workers the compensation

19 they need, their families need, to pay the

20 medical bills and provide for service.

21 Again, I simply ask you, most sincerely, to do

22 the reasonable, prudent and just thing, to help

23 these Cold Warriors who did so much for this

24 great nation. I thank you for your service and

25 I wish you the best in your deliberations, and

1 I appreciate the opportunity to come and meet
2 with you. Thank you again for being here.

3 **DR. ZIEMER:** Thank you very much, Senator Bond,
4 for a very articulate presentation. We
5 appreciate you taking the time to be here with
6 the Board today.

7 **BETHLEHEM STEEL TECHNICAL BASIS DOCUMENT**

8 Now we'll return to Dr. Neton. Jim, you'll
9 have to remind us where we were -- and then
10 where we're going.

11 **DR. NETON:** I didn't realize we had a lavalier
12 mike here, that's much better. It just dawned
13 on me, that may be the only time in my career
14 that I will have both preceded and followed a
15 member of the U.S. Senate at the podium.

16 I was talking about the internal exposure model
17 that we have adopted for Bethlehem Steel, and
18 the gist of this presentation was that we've
19 adopted a 95th percentile of the air sample
20 distributions for Simonds Saw & Steel for 1949
21 and '50. We applied that to Bethlehem Steel in
22 that time frame. And then in 1951 and '52
23 we've applied the actual Bethlehem Steel data
24 to the exposures. So this graph depicts the
25 lognormal distribution ranked by -- by log on a

1 Z-score plot, which you can think of a Z-score
2 as the zero value as the median value of the
3 distribution and the 1, 2 and 3 representing
4 multiples of standard deviation away from the
5 median value -- geometric standard deviation.
6 What this indicates is for the samples that
7 were taken at Simonds Saw & Steel, the data fit
8 very nicely a lognormal distribution. You get
9 this very nice straight line with an R-squared
10 value of 0.98, and so we're fairly comfortable
11 with the fact that this does represent the
12 facility distribution of air samples. We've
13 chosen the 95th percentile, and the solid line
14 that you see drawn on top at 553 MAC -- that's
15 553 times the Maximum Allowable Air
16 Concentration at that time, which was 70 dpm
17 per cubic meter -- is what we'll assume or
18 assign to every worker who we're reconstructing
19 doses at Bethlehem Steel, whether they -- since
20 we can't tell where they were positioned
21 relative to the -- that air concentration
22 value, we'll assume that they were positioned
23 right there at that air concentration the
24 entire time.
25 Now for 1950 and '51 I mentioned we had a

1 couple hundred -- I think there were actual 213
2 air samples -- but only 197 were actually
3 legible, where we could actually read and --
4 and use. But using those 197 air samples,
5 again, they fit a very nice straight line on --
6 on this type of plot, this cumulative
7 probability plot, as it's called. And again,
8 you can see that the 95th percentile is fairly
9 high. It's up here, it's -- the values -- the
10 measured values, by the way, at Bethlehem Steel
11 are much, much lower than the values at Simonds
12 Saw. There's a number of reasons for that, I
13 think, but it's 21 MAC, 21 times the maximum
14 allowable air concentration is what we end up
15 using for the 95th percentile. So every worker
16 who we're reconstructing doses in Bethlehem
17 Steel that worked in 1950 and '51 will be
18 assigned 20.8 times the maximum allowable air
19 concentration at a breathing rate -- as I
20 indicated before -- of 1.7 cubic meters per
21 hour, which is the heaviest worker designation
22 in the ICRP lung bottle*, so we've increased
23 that quite a bit. The respiration rate has
24 gone up and we've adjusted to 95th percentiles.
25 Okay, just to move on and briefly touch on

1 residual contamination, this, it turns out,
2 does not add a huge amount of dose to the
3 workers, but it is a very important pathway to
4 address for completeness' sake, and it does add
5 some dose -- it's not zero. But we added
6 internal dose due to inhalation and ingestion
7 for residual contamination. That is, during the
8 rolling operation we assumed people are
9 breathing a certain amount of uranium, and
10 they're also ingesting. But once the rolling
11 operation stopped, we had reason to believe,
12 based on some documentation in the files, that
13 the operations were cleaned up so there was
14 very little potential for internal
15 contamination due to -- with the residual
16 material.
17 We have now assumed that that didn't happen.
18 And based on the air concentration in the
19 facility, we've assumed a certain amount of
20 material was ingested and inhaled in between
21 rollings. So we assumed there was one rolling
22 a month, for those 29 or 30 days in between
23 rollings, we assumed the worker ingested a
24 certain amount of material that was just
25 present in the -- in the -- on the floor, in

1 the surrounding environment in between those
2 rollings.

3 It turns out that on day one -- you assign an
4 ingestion of about 5.2 milligrams of uranium in
5 the '49 and '50 time frame, and a couple tenths
6 of a dpm -- I should have been more consistent
7 with those units -- that would correspond to
8 about .1 milligrams of uranium per day for '51
9 and '52. Now the reason those are lower is
10 because the air concentrations are lower. The
11 amount of contamination you have in the
12 facility in general is directly proportional to
13 the amount of uranium that was dispersed into
14 the air. That's the only way, you know, you're
15 going to get it distributed widely about the
16 facility.

17 The chronic inhalation model we developed
18 relied on residual contamination which was an
19 exponential decrease model. What that means is
20 we look at a couple of different ways. One
21 could go with a dilution model, meaning one day
22 a month Bethlehem Steel rolled uranium. The
23 remaining times, steel was rolled. So that as
24 time goes on for those 29 additional days,
25 you'll be adding steel dust and mixing it in

1 with the uranium, which will make it less
2 available for inhalation.

3 Or we could go with this what's called a
4 residual -- exponential decrease model, which
5 means we -- we found some air -- some surface
6 measurements around Simonds Saw & Steel plant
7 where on one day they took a surface
8 measurement and then two or three days later
9 they took another one, and we can determine how
10 much the contamination decreased.

11 In evaluating those two models, the surface
12 exponential decay model gave the higher dose
13 than the dilution model, so we ended up using
14 the exponential decay model.

15 What happens with the exponential decay model,
16 that adds the equivalent to about breathing 22
17 times the maximum allowable air concentration
18 for one day. Now I'm not saying that happened
19 in one day, but if you (unintelligible) that
20 over all the -- all the four years, it'd be the
21 same as if you breathed 20 times the maximum
22 allowable in that day, sort of a nice way of
23 trying to bracket how large that is. So it
24 adds a -- it adds a fair amount of dose, but
25 it's certainly not the largest component of the

1 dose. The largest component of the dose is
2 still, of course, the inhalation of the
3 material from the rolling itself.

4 Okay. I'd like to spend a little time on the
5 breathing rate issue because that's the one
6 open issue that we had from the last meeting,
7 and that's the issue that the Board asked us to
8 go and sharpen our pencil and do our homework
9 on.

10 Revision 2 still continues to use the ICRP
11 defaults, but again, as I indicated, we're
12 using the default value for heavy work, not
13 light work. So that -- that increases the
14 breathing rate to 1.7 cubic meters per hour,
15 and that consists of a worker 12 and a half
16 percent of the time in heavy exercise and 87.5
17 percent of the time in light exercise. It's a
18 little confusing. You have to differentiate
19 between light exercise and light work, heavy
20 exercise and heavy work. Heavy work is a
21 combination of light and heavy exercise. These
22 values, these heavy work values that were
23 developed by the ICRP, were based on a study by
24 Monod and Flandrois, who examined the breathing
25 habits of factory workers. It's a French study

1 where they went around and determine that yes,
2 factory workers do have -- and where there's
3 non-mechanical -- non-mechanized work going on,
4 they're doing manual labor -- a higher
5 breathing rate. They recognized, in the
6 development of the model, that they had to have
7 something higher than 1.2 cubic meters per
8 hour, so they -- they relied in part on this
9 study.

10 During heavy exercise I'd also like to point
11 out that 50 percent of the air is inspired
12 through the mouth, by default. Keep that in
13 mind as we move forward.

14 The classification by the ICRP to cover the
15 heavy work environment -- and this is right out
16 of their own document -- was designed to cover
17 workers such as firemen, construction workers,
18 farmers. Firemen, construction workers, those
19 tend to be workers who are going to be involved
20 -- engaged in heavy labor. It doesn't
21 specifically say steel workers.

22 Now we've gone and surveyed the literature and
23 we could not find a good study that detailed
24 the breathing rate in steel mills. There's a
25 lot of studies out there with heat stress and

1 that sort of thing, but where people have gone
2 and actually measured the inspired or expired
3 air directly in these workers is difficult to
4 come by.

5 If one looks at the ICRP, though, this is one
6 of the studies they relied on for defining
7 heavy work, which is what we've assigned the
8 Bethlehem Steel workers. There's a South
9 African miner's study that was done where they
10 looked at 620 workers in underground gold
11 mines, and they actually had expired air
12 analyzers on. I mean they were like little
13 devices that would measure exactly how much air
14 these people breathed out during their shift.
15 The mean breathing rate for these underground
16 workers was about 1.3 cubic meters per hour.
17 And for those performing heavy work within a
18 non-mechanized environment -- now they don't
19 define what that means, but I assume that means
20 manual labor, lifting, that sort of thing -- 70
21 percent had a breathing rate greater than 1.2,
22 15 percent had a breathing rate greater than
23 1.5 -- meaning 85 percent had a breathing rate
24 less than 1.5. This is very consistent with
25 the designation of the ICRP for heavy work. In

1 fact, this is used as an example to define
2 heavy work in their -- in their documents.
3 Another indication that we can get that the
4 heavy work -- what the nature of the heavy work
5 is for a worker comes from EPA Federal Guidance
6 Report No. 12 where it does some comparisons of
7 exercise designations to certain activities.
8 Here they say that heavy work is characterized
9 by such activities as cross-country skiing,
10 rock climbing, stair climbing with a load,
11 playing handball and chopping with an axe.
12 Those are pretty heavy work activities, very
13 strenuous related activities.
14 Light exercise, on the other hand, is
15 characterized by pushing a wheel barrow with a
16 15 kilogram load, simple construction, stacking
17 firewood. Even those I would not characterize
18 as sedentary activities.
19 I think if you take these into consideration,
20 as well as the South African miner's study,
21 that in our mind the designation of heavy work,
22 1.7 cubic meters per hour is an appropriate
23 designation for -- for a manufacturing
24 environment such as a steel mill.
25 The EPA also recognized that adaptive responses

1 are important in characterizing breathing rate,
2 and that's generally true. As more and more
3 work is done in an environment, one goes
4 through an acclimatization effect where you do
5 become acclimatized to the environment and your
6 breathing rate and your body temperature and
7 everything will -- will sort of respond and
8 start to go back towards more of the normal.
9 But anyway, I think these, in totality, sort of
10 paint the picture of (unintelligible) very
11 consistent with what we see in a steel mill.
12 Now I'd like to shift briefly to oro-nasal
13 breathing. The ICRP model does discuss two
14 distinct breathing patterns. Number one is
15 what's known as nasal augmenters. Those are
16 people who normally breathe through their nose.
17 At a certain point, when the work gets very
18 demanding, they start breathing through their
19 mouth and that's -- when you get to around I
20 think three meters -- three cubic meters per
21 hour or something around that level, most
22 people start breathing through their mouth to
23 supplement their -- their breathing.
24 Although, interestingly, there are people who
25 are pure nose breathers. There are people who,

1 no matter how hard they work, they will breathe
2 through their nose.

3 On the other side of the coin, there are also
4 what are called pure mouth breathers, people
5 who, no matter what, will breathe through their
6 mouths 100 percent of the time.

7 So you do have a continual spectrum here of
8 pure mouth breathers, pure nose breathers and
9 people who are in the middle of the spectrum,
10 and most people are nasal augmenters.

11 The ICRP does go through a fairly interesting
12 evaluation of how to deal with mouth breathers
13 in their document. And after looking at the
14 mouth breathers -- mouth breather issue, I'll
15 call it -- they deliberately chose to use nasal
16 augmenters -- that is the normal segment of the
17 population -- in their model. Much of that
18 rationale is based on this recommendation in a
19 study by Miller. I think it was the *Annals of*
20 *Occupational Hygiene*. It was -- Miller, who
21 was from the EPA, teamed up with Mort Lipman*
22 at New York University, who is an expert
23 respiratory inhalation person, and did a study
24 -- a review paper where they looked at the
25 difference in deposition to the lung of what

1 they call spontaneous breathers, which would be
2 mostly nasal augmenters, versus mouth
3 breathers. And it turns out that the
4 difference between the breathing patterns was
5 smaller than the difference among the subjects
6 in total. So in other words, the variability -
7 - the interperson variability was greater than
8 the mean difference between the two breathing
9 patterns.

10 Because of that, they decided it was not worth
11 including this particular pathway in their
12 analysis.

13 We tried -- that's one piece of information
14 that we've obtained. The other thing we did is
15 we tried to look at what's -- what else is out
16 there. Wesley Bolch evaluated the uncertainty
17 in regional lung deposition in a health physics
18 publication where he looked at the -- the
19 geometric standard deviations of the deposition
20 patterns of a number of respirable particles in
21 different regions of the lung. Most of the
22 deposition fractions that they came up with for
23 respirable particles have a geometric standard
24 deviation of less than 1.5. It's not a small,
25 not a large GSD, but it's -- you know, it's

1 sort of an intermediate level uncertainty.
2 If we look at that and say -- and we combine
3 that with the fact that the Bethlehem Steel air
4 model -- the uncertainty of the air sample that
5 a person breathes at Bethlehem Steel has a
6 geometric standard deviation of 8.4. In other
7 words, the median value has a GSD of 8.4, a
8 very large difference. If we combine that
9 uncertainty of 1.5 with the GSD of 8.4 in the
10 Bethlehem Steel model, that results in a six
11 and a half increase in the 95th percentile.
12 That is equivalent to about a 40-minute lunch
13 break for the worker who we're assuming
14 breathed 10 hours a day at 1.7 cubic meters per
15 hour at that 95th percentile air concentration.
16 It's a very small difference in the -- in the
17 inspiration of uranium in these workers, and
18 it's very consistent with what the conclusion
19 of Miller was in their paper, that the
20 variability and all the parameters that go to
21 make up the deposition in the worker is very
22 large. And to take in -- to start take into
23 account some of these other parameters, it gets
24 lost in the wash.
25 I might add that, if you recall, when we do

1 internal dose calculations based on our best
2 estimate, we always put a geometric standard
3 deviation of three. There's a reason for that.
4 The intake of a person, based on -- for
5 instance -- bioassay data, is no better known
6 than about a geometric standard deviation of
7 three. That results, at the 95th percentile,
8 of about a factor of six, either direction.
9 We're saying we don't -- at the 95th
10 percentile, we really can't say with any
11 certainty within a factor of six what that true
12 value is.

13 The reason it's so large is partly this. The
14 variation in the deposition patterns in the
15 lung, the interpersonal variability of the
16 deposition pattern, the variation of mouth
17 breathing versus nose breathing -- there's a
18 number of factors that go into making that
19 intake variable. I suggest that this is just
20 one of them, and the ICRP has essentially said
21 the same thing when they tried to accommodate
22 mouth breathing in their models and recognized
23 that the variability among people is larger
24 than the variability between the breathing
25 patterns.

1 Another way we tried to approach this -- this
2 is sort of a multi-faceted approach -- is we
3 looked -- we tried to do an empirical
4 evaluation; what does this mean in terms of
5 what we've done -- what we have available from
6 the data that we have at the various
7 facilities. If you look at the Simonds Saw &
8 Steel data, we not only have air concentration
9 data at Simonds Saw & Steel, we also have some
10 urine sample data. In fact, we have urine
11 sample data that was taken not too far after
12 the time when these air samples were measured
13 that were used to generate the Bethlehem Steel
14 model.
15 We used those urine samples to predict the
16 excretion of type M material for the air
17 samples. You know, what would be the -- what
18 would the person be excreting if they really
19 breathed this 553 MAC air for their work shift,
20 and we used the default parameters -- one
21 micron, standard, oro-nasal breathing, those
22 type of things. And what we find here is that
23 the predicted urinary excretion far over-arches
24 the actual yellow (unintelligible) points,
25 which are the measured urine output of the

1 workers. What that gives us is a little
2 comfort level. We're saying that not only is
3 oro-nasal breathing probably not a significant
4 biasing factor in these workers, but other
5 factors such as ancillary ingestion, changes in
6 default particle size, those sort of factors
7 are over-compensated by the fact of using the
8 standard models -- using a 95th percentile of
9 the air sample concentration on a continuous
10 basis to predict the worker's intake, and it's
11 confirmed that the urine data are well below
12 what we would predict using the urine model.
13 So those three things take into account, I
14 think -- substantiate or support the use of the
15 standard nasal augmenting way of breathing for
16 workers, not only at Bethlehem Steel, but I
17 think for all of our dose reconstructions.
18 So just a little concluding slide here on the
19 default breathing parameters. I think -- I
20 think the ICRP default value for heavy workers
21 is appropriate for Bethlehem Steel. It's
22 consistent with the values recommended by
23 factory workers and others engaged in strenuous
24 occupations as indicated by the ICRP.
25 The ICRP default for nasal augmentation we also

1 think is appropriate for the reasons I've just
2 gone over. It allows for mouth breathing at
3 higher ventilation rates, which we do account
4 for in our -- in our model. And the
5 uncertainty in deposition created by breathing
6 habit is small compared to the other
7 uncertainties. And we believe our empirical
8 evaluation of workers at Simonds Saw at least
9 supports that. I'm not saying that it proves
10 it, but it does support the fact that we're not
11 at least biasing the values in -- in the wrong
12 direction.

13 And I believe that concludes my slides.

14 **DR. ZIEMER:** Thank you very much, Jim. We can
15 open the floor for questions by the Board
16 members, or discussion on this presentation.
17 Who has a question? Mark.

18 **MR. GRIFFON:** Jim, I -- I'm trying to remember
19 back to the SC&A comments on the site profile,
20 and I think there were seven -- six or seven
21 items that SC&A said that you were working with
22 them on -- on certain issues and resolving
23 some, and I know certainly oro-nasal breathing
24 was one and the triangular distribution was
25 another. Does this -- does this presentation

1 cover all those seven items? I know you
2 focused on the Board motions rather than the
3 SC&A items, and I just want to make sure we're
4 cross-walking --

5 **DR. NETON:** It was my -- my opinion at the time
6 I presented those issues and covered them that
7 those were the outstanding issues that we had
8 with SC&A. I'm not speaking for them, but I
9 think -- in my opinion, they're -- outside of
10 the issues I talked about here, I'm not aware
11 of any substantive issues that remain to be
12 worked out -- and I know they're here, they can
13 speak for themselves, of course. But...

14 **DR. MELIUS:** Paul, can I --

15 **DR. ZIEMER:** Yes, Jim.

16 **DR. MELIUS:** My recollection of the meeting --
17 I was the one that made the motion -- was that
18 the other issues, and I -- whether there were
19 three or four others -- had been essentially
20 resolved. They were either sort of factual
21 issues or that you had basically -- the two
22 parties agreed, and so these were sort of
23 outstanding issues that required further --
24 further work -- some of them -- the other ones
25 may -- I don't want to say trivial, but they

1 were relatively minor and so did-- we didn't
2 feel they needed to be addressed.

3 **DR. ZIEMER:** Okay. Roy.

4 **DR. DEHART:** Jim, do you have any idea what
5 this would do in the calculations, the 50th
6 percentile? Do you have some models that
7 you've looked at?

8 **DR. NETON:** Yeah, I anticipated that might be a
9 question. We've looked at some dose
10 reconstructions. I'm reluctant to give real
11 quantitative numbers, but it certainly will --
12 would affect those cases that were closer to 50
13 percent than not. Now if you remember the
14 presentation I gave -- I think Bethlehem Steel
15 tends to be bi-modal. There's -- there's a lot
16 of claims, I think 40-plus percent, that are
17 already over 50 percent. There are 40 percent-
18 plus that are less than 10 percent. In my
19 opinion, those that are less than 10 percent
20 are not likely to change at all, given this
21 change. There were some in the middle, and
22 there are a few in the 40 percent range, I
23 think those we will have to look very closely
24 at and I'm -- I'm not sure which way they go,
25 but there's a chance that some of those may

1 change.

2 **DR. ZIEMER:** Jim, need another --

3 **DR. MELIUS:** (Off microphone) I have another
4 couple of -- mainly questions.

5 **DR. ZIEMER:** Use your mike there.

6 **DR. MELIUS:** Yeah. Jim, procedurally or
7 whatever, where do we stand in terms of
8 actually a revised site profile that -- and --
9 and then I guess the subsequent question is
10 when will you then be using that site profile
11 to go back and re-evaluate what cases need to
12 be re-evaluated?

13 **DR. NETON:** The site profile is ready to go.
14 It's not been signed off yet, but we antic-- we
15 -- we anticipate not hearing any significant
16 objections to what we've done here, to using it
17 as soon as possible.

18 **DR. MELIUS:** And are there other changes to the
19 -- I mean -- to the site profile that have been
20 made, in addition to what --

21 **DR. NETON:** Nothing substantial, other than
22 more supporting documentation and write-ups,
23 but these are the substantial numerical --
24 these are the numerical changes that have been
25 made as far as estimating intakes.

1 **DR. MELIUS:** And then I also have a question, I
2 believe it's Ed Walker from the Bethlehem group
3 -- workers group, copied me in a letter to
4 Larry regarding some questions about -- I guess
5 it's the -- the geometric basis for the --
6 whether the right parts of the steel mill were
7 used in making some of these estimates. I
8 don't -- that I received last week late, or
9 sometime during the week, and I don't know if
10 you've had time to look at that. I believe it
11 -- I'm not sure it's relevant to some of the
12 changes you've made since you're now using
13 direct air monitoring data. This was a
14 question about whether the -- the right parts
15 of -- part of the steel mill was used in making
16 the --

17 **DR. NETON:** Right, I --

18 **DR. MELIUS:** -- calculations, and I don't know
19 if other members of the Advisory Board received
20 that letter. We can get copies made; I brought
21 my copy with me. But I don't know if you have
22 any comments on that or --

23 **DR. NETON:** I have not read the entire
24 document. I'm aware of its existence and have
25 looked through it. I would -- if I recall, the

1 key issue was that a photograph that was
2 displayed by SC&A in Livermore that purported
3 to be the rolling mill was in fact the hot
4 strip mill, and that was recognized by us. We
5 did not make a big deal about it because it
6 really didn't -- was not germane to the dose
7 calculation itself. That was purported to be a
8 picture of a large industrial operation. The
9 facility itself was not modeled, as it was a
10 hot strip mill. We modeled it based on the air
11 concentration available at Simonds Saw & Steel,
12 which was a rolling mill. And then the 1951
13 and '52 data at Bethlehem was data taken at the
14 rolling mill, not the hot strip mill.

15 **DR. MELIUS:** Yes. However, I think there's
16 some question as to whether -- or the
17 question's raised as to whether the Simonds Saw
18 rolling mill is similar in setup, geometry, to
19 the one at Bethlehem that was used --

20 **DR. NETON:** Right.

21 **DR. MELIUS:** -- and whether that's an approp--
22 I think that was the other question --

23 **DR. NETON:** That's the other issue, and we
24 discussed that in the revised site profile.
25 It's a fact that the Simonds Saw & Steel was a

1 much smaller, confined space actually works the
2 other direction. When you start blowing
3 uranium dust into a smaller confined space, if
4 anything you would tend to increase the
5 concentration and not dilute it. So I'm not
6 sure that argument would -- would make a swing
7 in the claimant-favorable -- in the direction
8 of making the air concentration higher.

9 **DR. MELIUS:** But I think there's some other
10 differences that were pointed out in terms of -
11 - there's an area underneath the rolling mill
12 and --

13 **DR. NETON:** Yeah.

14 **DR. MELIUS:** -- so forth. I mean, again, I
15 don't want to get --

16 **DR. NETON:** Yeah, I think --

17 **DR. MELIUS:** -- into this without having --

18 **DR. NETON:** I think the residual contamination
19 model that we've added here that accounts for
20 the settling of all the dust that was generated
21 in the facility, and then being exponentially
22 decreased over time -- because it can't sit on
23 the surface forever. If you roll steel dust 29
24 out of 30 days, you're going to be diluting
25 that uranium with a lot of additional dust that

1 makes the uranium not as available for intake.
2 I mean it will still be there, but you can't
3 put one gram of uranium in the ground and then
4 cover it with 100 grams of steel and then --
5 and then assume that it's all pure uranium
6 intake. So we've modeled that -- I think it's
7 appropriate. I don't know if it really is
8 going to change based on the review that I've
9 looked at. And again, I have not point by
10 point taken a review of Mr. Walker's document.
11 That came in fairly late last week, as you
12 pointed out.

13 **DR. ZIEMER:** Larry Elliott from NIOSH can also
14 speak to this point.

15 **MR. ELLIOTT:** Yes, the letter from Mr. Walker
16 did come in late last week and Mr. Walker will
17 get a response. We'll make sure you're copied
18 on that, Dr. Melius and other Board members. I
19 don't believe we've had a chance at this point
20 to react and consider each of the points that
21 have been raised. We have talked among
22 ourselves briefly about those points that Jim
23 spoke to a moment ago, and that's all we've
24 done with that so far. This -- this site
25 profile would be ready to go into use

1 immediately upon our return and we would
2 evaluate all those claims that were in that
3 middle category that Jim talked about earlier.

4 **DR. WADE:** Larry, has the letter in question
5 been shared with all the Board members?

6 **DR. MELIUS:** I've got a copy here so we'll --

7 **MR. ELLIOTT:** I don't believe --

8 **DR. MELIUS:** -- (unintelligible) make copies.

9 **MR. ELLIOTT:** -- it had. I believe it just
10 came to me, with a copy to Dr. Melius and may--
11 I don't know who else was copied, but I don't
12 think the whole Board --

13 **DR. WADE:** We'll see that all the Board members
14 get that at the break.

15 **DR. ZIEMER:** Thank you very much. Other
16 comments or questions?

17 It does remain for us to determine where we are
18 in the Bethlehem Steel profile in terms of
19 closure. Let me remind you, initially we had
20 the Bethlehem Steel Rev. 0, which I think was
21 what the version was that SC&A initially
22 reviewed for -- on our behalf as part of our
23 process. The action that Jim referred to I
24 think -- I'm not sure if that was prior to Rev.
25 1 or about the same time.

1 **DR. NETON:** I think SC&A did review Rev. 1.

2 **DR. ZIEMER:** Rev. 1.

3 **DR. NETON:** Right, 'cause that was issued in
4 June, and they reviewed --

5 **DR. ZIEMER:** That was the version they --
6 right. So we had the issues, and of those --
7 and Jim summarized -- there were some things
8 that NIOSH accepted, some of the critique
9 issues. There was concurrence on several, and
10 then this request that they review the use of
11 ICRP default values. So one of the questions -
12 - and I'm not sure I know the answer to this at
13 this point -- is how we deal with this in sort
14 of coming to closure with our own process
15 because the site profile does continue, as they
16 all do, to change. But the question is, has
17 the -- has NIOSH been responsive to the
18 criticisms brought by our contractor and are we
19 satisfied that those issues have been addressed
20 appropriately. And that's kind of a rhetorical
21 question at this point. Jim.

22 **DR. MELIUS:** Yeah, I just find it a little hard
23 for us to reach closure on an issue where we --
24 all we've really received -- we've had a slide
25 presentation and then some explanation from Jim

1 -- we -- for a document that we -- isn't
2 produced yet. We haven't seen the doc-- the
3 actual document. There's no written report for
4 us to evaluate, and the -- the slides we were -
5 - received when we got here today, so there
6 really wasn't even time to go back and
7 reference our old -- concern -- we review the
8 old site profile. So I personally would rather
9 defer any action until -- that we take until
10 we've had a chance, one, to see a revised site
11 profile and at least had time to review this
12 issue in more detail and have more than an hour
13 and 15 minutes or 20 minutes to do so.

14 **DR. ZIEMER:** Let me frame the dilemma in a
15 somewhat different way. That is that we now
16 have Rev. 2, but it wasn't Rev. 2 that we asked
17 our contractor to review. And I'm asking how
18 we come to closure with respect to the task
19 that our contractor did. Whether or not we
20 approve Rev. 2 may be a somewhat different
21 issue, and of course there can be, at some
22 point, a Rev. 3 or -- and so on. So --

23 **MR. GRIFFON:** I guess this is -- this is the --
24 sort of a finding resolution process. I mean
25 we're not -- I don't think we should have a

1 complete re-review of Rev. 2, but we have these
2 outstanding -- and if it is this list, that's
3 fine, but -- and I think these are the major
4 ones, but I think that there's some details
5 that I'd like to sit down with and maybe have
6 our contractor -- and make sure that, you know,
7 in a -- for the most part, I think Jim's
8 addressed, you know, the 95th percentile.
9 Looks fine, I think we just need time to see it
10 in its full extent in the -- in the profile and
11 make sure that it -- it meets what our concerns
12 were prior to this.
13 The same with -- you know, this -- this talks
14 about an exponential decreased model. Well, I
15 understand in principle what Jim's describing,
16 but I haven't seen what parameters he's using,
17 you know, to -- to model that and -- and do
18 they seem conservative and claimant --
19 claimant-favorable, et cetera. I think we need
20 more time to examine that, so...
21 **DR. NETON:** I guess I -- I'd like a little
22 clarification then, maybe, if possible. I
23 understand what -- what was being said here,
24 but the issues that are on the table, I think -
25 - I understand that the residual contamination

1 model hasn't been seen, but is there a sense
2 that you want to re-review the use of the 95th
3 percentile that is -- I'm working on the
4 assumption that the Board has already endorsed
5 or accepted a 95th percentile, they've accepted
6 the aerosol size and density and they've
7 accepted the external exposure. So are we
8 going to reopen that with SC&A or -- you know,
9 'cause there -- there are certain issues that
10 I've been working to that I believed had been
11 resolved and accepted by the Advisory Board
12 already.

13 **DR. ZIEMER:** Yes, you are quite right that we
14 took specific action on some of those items,
15 and hence the nature of my rhetorical question
16 is how to come to closure on the task that our
17 contractor did. Obviously we can -- if the
18 Board wishes, we can go back and ask the
19 contractor to now look at Rev. 2, for example.
20 Or we could say no, the -- the review has
21 served its purpose. We -- you know, we have a
22 number of site profile reviews that we are
23 asking the contractor to do. And even though
24 the site profiles then may be changed,
25 reviewed, revised, the task of reviewing them

1 serves a certain kind of purpose. And it's not
2 necessarily to bring perfection to a site
3 profile so much as to raise the issues, try to
4 come to some kind of closure on them and move
5 on to other issues. So -- Dr. Melius.

6 **DR. MELIUS:** Again, repeat what I said, I don't
7 think, you know, we can be expected to provide
8 adequate closure on, you know, something we
9 received at 1:00 o'clock this afternoon and we
10 get a presentation on it, without any hint of
11 what was going to be in it or anything. I
12 don't think we necessarily have to wait for the
13 site profile to be revised, but I would
14 certainly like to see some more documentation
15 than we received in this presentation. If the
16 easiest way to do that is that this -- the
17 revised site profile that's under review and I
18 think close to sign-off, if I -- if I
19 understood what Jim was saying and Larry, then
20 maybe the easiest way of -- of doing it. If
21 there's some other method of achieving, that's
22 fine, but we certainly need more time to refer
23 back and -- and preferably with some more
24 detailed information.

25 **DR. ZIEMER:** And the Chair's not pushing for

1 closure here today necessarily. I just want to
2 make sure that we have in mind where we're
3 going on this.

4 Okay. Mark.

5 **MR. GRIFFON:** Let me just follow up on the -- I
6 mean I agree. Jim's statement about a 95th
7 percentile -- I mean in theory I think we're --
8 we're right there, we agree with that, and I'm
9 not sure that -- that we fully accepted what
10 sampling data was being used to establish the
11 95th in this Bethlehem Steel case. I mean I
12 think, you know, just right -- and again,
13 looking at this cold, as Jim said, it strikes
14 me that you have this -- a situation here again
15 where you're using another plant's data for one
16 year period and you have 553 MAC being
17 assigned, then the next year you have 21 MAC,
18 and that may be based on very good data, but it
19 does create this equity question in my mind,
20 too, where you have a -- you're assigning a
21 much higher exposure for that one-year period
22 there, I --

23 **DR. NETON:** Well, I --

24 **DR. ZIEMER:** I think we saw that data before,
25 though. That's not new information.

1 **MR. GRIFFON:** No, I know, I know.

2 **DR. NETON:** I was very clear when I think I
3 presented, that's the intent of what we're
4 doing and the Board voted on that motion. I
5 reviewed it very carefully.

6 **DR. ZIEMER:** It appears, however, that -- that
7 perhaps the sense of the Board is they would
8 like to at least see Rev. 2 before coming to
9 some kind of closure on this. Jim, additional
10 comment?

11 **DR. MELIUS:** I would just clarify that by
12 saying I think that the closure that we come to
13 ought to be directed at the five issues. I
14 mean -- and so I think the question -- that
15 were in the presentation were within our
16 original motion, however many months ago that
17 was, whether the way of providing a more
18 detailed background for that is just simply
19 giving us the next revision -- is the
20 documentation for that's fine, but then our
21 review and so-called closure would focus on
22 those issues, if that helps to...

23 **DR. ZIEMER:** Roy.

24 **DR. DEHART:** Perhaps a mechanism to speed
25 things along would be either with a working

1 group or a subcommittee to review the five
2 items or whatever in detail and compare that
3 with our contractor's remarks and comments and
4 come up with a recommendation to the Board as a
5 whole. And perhaps we could even handle that
6 on a conference call. I'm sure we'll have a
7 conference call or two before the next meeting.

8 **DR. WADE:** We will.

9 **DR. ZIEMER:** That -- that would be a useful
10 suggestion. Any other comments? If it's a
11 subcommittee that does this, that would be an
12 open meeting, even if it's by phone.

13 **DR. MELIUS:** Just to, as usual, put Larry on
14 the spot -- and Jim -- do we have a rough time
15 line on the next -- this revision being signed
16 off on? You may have said it already. I may
17 have missed it.

18 **DR. NETON:** It's ready to go. I mean it could
19 be signed tomorrow if we -- if we felt so
20 inclined, although (unintelligible) --

21 **DR. MELIUS:** Okay, so something's ready
22 (unintelligible) --

23 **DR. ZIEMER:** It's within days.

24 **DR. MELIUS:** That was my...

25 **DR. ZIEMER:** Okay. Then the Chair's going to

1 take it by consent that we will defer formal
2 action on this until such time as we have Rev.
3 2 to look at and -- I've made a note here --
4 we'll ask the subcommittee to look at the
5 items, make sure that all of the items have
6 been appropriately handled.

7 Jim, thank you very much for --

8 **DR. NETON:** Just a (unintelligible) would --
9 would it be acceptable then if I just sent
10 electronically the Board the draft profile and
11 --

12 **DR. ZIEMER:** I would think that would be --

13 **DR. NETON:** I can do that --

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

15 **DR. NETON:** -- tonight, if that's the case.

16 **DR. ZIEMER:** Thank you.

17 **DR. WADE:** Maybe we should just take a look at
18 where we are and the steps we're going to
19 follow, 'cause I think it is terribly important
20 that -- that we bring things to closure. And I
21 think we're approaching closure on this first
22 site profile task. So my understanding is that
23 the Board or the subcommittee, and we can
24 decide which, in receipt of Jim's presentation
25 materials and the revised site profile, will

1 take to answering the question is the site
2 profile and NIOSH's work consistent with the
3 recommendation of the Board and therefore the
4 Board will accept this site profile. That's
5 what's in front of us. Would we prefer to do
6 that with the subcommittee or with a conference
7 call and full Board? We'll probably be having
8 both.

9 **DR. ZIEMER:** I think Roy was recommending
10 subcommittee. Is that my understanding?

11 **DR. DEHART:** That's correct, that would be the
12 choice that I would have because I think it's
13 more likely we can get a smaller number
14 together.

15 **DR. WADE:** And then the subcommittee would
16 bring that recommendation to the full Board.

17 **DR. ZIEMER:** Henry, a comment?

18 **DR. ANDERSON:** Yeah, at least what I heard from
19 Lew was a bit broader of accepting the second
20 revision as opposed to -- what I thought we
21 were going to do is review to see whether the
22 five issues that we raised with Revision 1 --

23 **MR. GRIFFON:** Had been adequately --

24 **DR. ANDERSON:** -- had been adequately
25 addressed, where we haven't really been asked

1 or -- to review -- or to approve everything
2 that may be in Revision 2. And since we
3 haven't seen it, we don't know. There may be
4 some things that have been added that were not
5 part of our original charge, but to close out
6 the first review I think we just want to
7 address what we commented on in Revision 1 to
8 see that they -- have those issues been
9 addressed in Revision 2.

10 **DR. ZIEMER:** Lew, I think technically that
11 would be correct.

12 **DR. WADE:** Yes, I agree with that completely.
13 The other issue I think it would be wise for
14 the Board to consider is the work that's been
15 brought to the process by what we've been
16 through. This will be the first time we've
17 been through this detailed process, and I think
18 it would be well -- now, or when -- when you
19 finally do reach closure, to have a discussion
20 of that and then guide future activities by
21 that discussion.

22 **DR. ZIEMER:** Thank you, good comment. Before
23 we get into the presentations on Special
24 Exposure Cohort and Y-12 site profile and so
25 on, which come after the break, we -- we are

1 going to have a brief discussion from counsel
2 on conflict of interest. Lew, do we have time
3 to do that before the break?

4 **DR. WADE:** I think it would be best to do that
5 after --

6 **DR. ZIEMER:** After the break?

7 **DR. WADE:** We can take our break now.

8 **DR. ZIEMER:** Then let's go ahead and take the
9 break now and then we'll resume at -- let's see
10 -- well, in 15 minutes.

11 (Whereupon, a recess was taken from 2:30 p.m.
12 to 2:50 p.m., during which Mr. Leon Owens and
13 Mr. Rich Espinosa arrived and joined the
14 assembly.)

15 **PRIVACY INFORMATION**

16 **DR. ZIEMER:** Okay, we're going to call the
17 meeting back to order, if you'd please take
18 your seats. Before we begin with the
19 presentation on the Y-12 site profile, Liz is
20 going to give us some information on conflict
21 of interest. As Board members all know, Liz is
22 with the General Counsel's Office, Health and
23 Human Services.

24 **MS. HOMOKI-TITUS:** Am I on?

25 **DR. WADE:** Yes.

1 **MS. HOMOKI-TITUS:** Okay. Thank you for giving
2 me this time to address you briefly. I'm Liz
3 Homoki-Titus with the General Counsel's Office
4 at Health and Human Services. I just want to
5 remind you of information that I know you have
6 all heard previously, but with the SEC
7 petitions that are coming up, the conflict of
8 interest is going to once again be a question.
9 First off, as a private citizen you may -- you
10 have the right to address this Board and to
11 address the Federal government. You can tell
12 them anything that you want to, you can act in
13 the role as a site expert, but you must do that
14 in your role as a private citizen, not in your
15 role as a Board member if you have a conflict
16 of interest.
17 If you do have a conflict of interest for an
18 SEC site or a dose reconstruction that's being
19 considered, please indicate such and then step
20 away from the table. And we want to be very
21 clear and make that indication on the record so
22 that it's part of the record, and then if you
23 step away from the table it'll be very clear
24 for the public that you're not participating in
25 the discussion and that you're not

1 participating in the vote.

2 As far as the dose rec-- individual dose
3 reconstructions that you review, if it's a
4 general discussion then you may continue to
5 participate, but please remember that you're
6 not participating in that vote.

7 I also want to remind you that if you receive a
8 document from another Board member where they
9 have made some type of public comments, you may
10 review that document, just as you would review
11 a public comment from any member of the public.
12 You should not give it extra weight just
13 because it comes from one of your fellow Board
14 members, nor should you ignore it just because
15 it comes from one of your fellow Board members.
16 But you must remember that you are reviewing
17 that and giving it the same consideration that
18 you would give any other document that you
19 receive from a member of the public who's
20 making a comment to the Board or to the
21 government.

22 And finally, you as a Board may want to
23 consider establishing procedures that you as
24 Board members are going to follow when you are
25 providing a public comment to ensure that your

1 documents are not given any special weight and
2 are not viewed any differently by the other
3 Board members. Obviously you as a Board set
4 your procedures, so if you'd like to do
5 something like that you should feel free to go
6 ahead and take care of it.

7 Do any of you have any questions? I know that
8 was short, but I know that you've all heard it
9 before in your conflicts interviews.

10 **DR. ZIEMER:** Liz, let me ask this question. If
11 you would clarify -- for example, we have two
12 items on our agenda. One is the review of the
13 NIOSH site profile for Y-12. The other is the
14 Y-12 petition for SEC status. Are both of
15 those in the same category, as far as Board
16 members are concerned? For example, Mr.
17 Presley, who works at Y-12 --

18 **MS. HOMOKI-TITUS:** No, those would not be in
19 the same category. For the site profile --

20 **DR. ZIEMER:** Right --

21 **MS. HOMOKI-TITUS:** -- it's a --

22 **DR. ZIEMER:** -- can he -- can he discuss the
23 site profile without --

24 **MS. HOMOKI-TITUS:** He should be able to discuss
25 the site profile and provide his general

1 comments on it.

2 **DR. ZIEMER:** As a Board member.

3 **MS. HOMOKI-TITUS:** As a Board member, but for
4 the --

5 **DR. ZIEMER:** It's only when we get into the
6 petitions -- the SEC petitions then --

7 **MS. HOMOKI-TITUS:** Right.

8 **DR. ZIEMER:** -- where this conflict of interest
9 issue rears its head?

10 **MS. HOMOKI-TITUS:** Right, for the con-- yes,
11 for the Special Exposure Cohort petitions, and
12 then for individual dose reconstructions that
13 you review. But like I said, for the dose
14 reconstructions, if you're having a generalized
15 discussion about issues, then he could
16 participate in that. But he wouldn't want to
17 participate in the vote on that.

18 **DR. ZIEMER:** So he cannot discuss that as a
19 Board member from the table.

20 **MS. HOMOKI-TITUS:** Right.

21 **DR. ZIEMER:** Can he listen from the table?

22 **MS. HOMOKI-TITUS:** No. It would be best if he
23 would step away from the table, just to make it
24 clear to everyone that he's not participating
25 or influencing the debate.

1 **DR. ZIEMER:** Okay.

2 **MS. HOMOKI-TITUS:** So if he would join the --

3 **DR. ZIEMER:** The sound cannot even reach your
4 ears from the table, I guess.

5 **MS. HOMOKI-TITUS:** No, no, he doesn't have to
6 leave the room.

7 **DR. ZIEMER:** No, no.

8 **MS. HOMOKI-TITUS:** He can join the public.

9 **DR. ZIEMER:** No, it can't be from the table,
10 though.

11 **MS. HOMOKI-TITUS:** But it can't be from the
12 table.

13 **DR. ZIEMER:** Okay.

14 **MS. HOMOKI-TITUS:** And he would be welcome to
15 join the public comment session this evening
16 and give public comments if he wishes to do
17 that, but not from the table.

18 **DR. ZIEMER:** That in itself I think suggests a
19 procedure that we will necessarily need to
20 follow, and that is, for example, in such cases
21 where a petition is being presented and
22 discussed, the individual or individuals having
23 conflict would then have to recluse (sic)
24 themselves from the table and sit in the -- in
25 the more comfortable chairs.

1 Now can you also clarify, at least for the
2 Chair -- for example, when we talk about Y-12,
3 is that only Y-12 or is the whole Oak Ridge
4 reservation included in some way?

5 **MS. HOMOKI-TITUS:** I believe that's only Y-12,
6 'cause that's what the SEC petition is
7 considering -- and the evaluation report and
8 what you all's recommendation will be on.

9 **DR. ZIEMER:** Thank you. Other questions for
10 Liz? Roy.

11 **DR. DEHART:** Is it clear that this only applies
12 if you have provided professional consultation
13 within the last year?

14 **MS. HOMOKI-TITUS:** It should be only in the
15 last year.

16 **DR. DEHART:** Thank you.

17 **DR. ZIEMER:** Jim.

18 **DR. MELIUS:** I just have a procedural question,
19 and it's regarding Bob's -- Presley's earlier
20 communication to you that I think we all
21 received an e-mail about from -- it was either
22 from Liz or Lew, I can't remember who sent us
23 the commun-- communication, and my only concern
24 about that was -- procedurally is that we
25 maintain a public record of such communications

1 that -- so that the public -- so that there be
2 a record that Bob made that -- those comments
3 as a member of the public and that that be --
4 there be transparency to that so that some way
5 those get entered into the record of our
6 deliberations for the -- our review of the
7 petitions. One of the things that came under
8 consideration, not from Bob as a Board member
9 but from Bob as -- as a public citizen and that
10 --

11 **MS. HOMOKI-TITUS:** It may be best for NIOSH to
12 address that because they do have a docket
13 office that handles public comments. And like
14 I said, each comment, if it comes from a Board
15 member as a private citizen, should be handled
16 the exact same way that a private citizen's
17 comment is.

18 **DR. MELIUS:** Yeah, which is just fine, I just
19 think that's -- we just need to be clear that
20 that's the way it (unintelligible) --

21 **MS. HOMOKI-TITUS:** And it may help if the Board
22 sets up some of its own procedures to ensure
23 that that happens.

24 **DR. ZIEMER:** And in fact I don't know the
25 whereabouts of that, but I do know that after I

1 received that I did send an e-mail to the Board
2 members alerting you to the fact that you
3 should regard this as a public comment from Bob
4 as a site expert and not from Bob as a Board
5 member.

6 **DR. MELIUS:** Yeah, my concern there would be --

7 **DR. ZIEMER:** Giving it no greater weight nor
8 lesser weight.

9 **DR. MELIUS:** Yeah, but -- but by the fact that
10 you've not done that with other comments that
11 you've received, I think we need --

12 **DR. ZIEMER:** Actually I have, in cases where it
13 appears they are asking for the information to
14 be distributed to Board members. But I don't
15 think I've gotten any other ones that dealt
16 with SECs specifically, but --

17 **DR. MELIUS:** Okay.

18 **DR. ZIEMER:** -- but do we know where those --
19 did those comments originally go to NIOSH?
20 They did, so...

21 **MR. ELLIOTT:** (Off microphone) Yes, I
22 (unintelligible).

23 (On microphone) The comments from Mr. Presley
24 did come to -- I believe -- you, Dr. Ziemer,
25 and Dr. Wade with a copy to me. And as you

1 said, you forwarded it on to the Board. I
2 believe these were the first set of comments
3 from a public commenter, if you will, on a
4 particular SEC petition, and we've had no
5 others that we've had to deal with. We do
6 assemble all those kind of comments, though, in
7 with the petition docket and we keep track of
8 those that way. If it's the Board's pleasure,
9 we can publish them on our web site.

10 Other comments that come in to the Board that
11 are addressed to you, Dr. Ziemer, as Chair of
12 the Board -- they come into my office. We make
13 sure that we get them to you, and if you tell
14 us to pass them on to the Board, we do. If you
15 decide to pass them on to the Board, that's
16 your discretion. But that's the extent of how
17 we've been handling these types of external
18 inputs.

19 **DR. MELIUS:** Then my suggestion is we do create
20 a public docket for those, that those be put on
21 the NIOSH web site so that it's -- for its
22 transparency, along with any other, you know --

23 **DR. ZIEMER:** Jim, is --

24 **DR. MELIUS:** -- comments from public --

25 **DR. ZIEMER:** -- your suggestion for all such

1 comments, not just from Board members?

2 **DR. MELIUS:** Correct --

3 **DR. ZIEMER:** All such comments.

4 **DR. MELIUS:** -- yes.

5 **DR. WADE:** Public comments.

6 **DR. MELIUS:** Public comments --

7 **DR. ZIEMER:** Public comments.

8 **DR. MELIUS:** -- yes.

9 **DR. ZIEMER:** Did I understand, Larry, that you
10 in fact do that now, or no?

11 **MR. ELLIOTT:** (Off microphone) No, we don't,
12 but we will.

13 **DR. ZIEMER:** We will.

14 **DR. MELIUS:** They have a private -- they --
15 they keep track of all of them, I think was
16 what I understood Larry to say, they just don't
17 -- it's just not posted on the web site or made
18 public.

19 **MR. ELLIOTT:** (Off microphone) Correct. That's
20 correct and we will post these, if you wish, on
21 the web site under the Board page.

22 **DR. ZIEMER:** Is that agreeable with the other
23 Board members? Any objections? I'll take it
24 by consent then that we'll agree to do that.
25 Thank you, Jim.

1 Liz, any other comments for us? Board members?

2 (No responses)

3 **Y-12 SITE PROFILE**

4 **DR. ZIEMER:** Okay, then we're ready to proceed
5 with the presentation on the Y-12 site profile,
6 and Joe Fitzgerald from SC&A is here. And Joe,
7 welcome --

8 **MR. FITZGERALD:** Thank you.

9 **DR. WADE:** Can I just make some introductory
10 comments? No one needs to recuse themselves at
11 this point. We're talking about the site
12 profile, not the SEC petition, so everyone can
13 stay at the table.

14 One of the reasons we're doing this is that I
15 think it would be good procedure, if at all
16 possible, that before we consider an SEC
17 petition --if we have a site profile under
18 review -- that we discuss that document. And I
19 -- and I'll try and schedule that if possible.
20 It is not always possible because we will not
21 always have a site profile under review. But
22 in this case I thought I would ask SC&A to come
23 forward and discuss their review of the site
24 profile, given the fact that we're going to be
25 looking at an SEC petition immediately

1 following.

2 **MR. FITZGERALD:** (Off microphone) Thank you,
3 Mr. Chairman. Is this coming through clear?

4 **DR. ZIEMER:** No.

5 (Pause)

6 **MR. FITZGERALD:** (Off microphone) How's that,
7 any better?

8 **DR. ZIEMER:** No.

9 **MR. FITZGERALD:** (Off microphone) No?

10 **DR. WADE:** Here comes the man.

11 (Pause)

12 **MR. FITZGERALD:** Great, thank you. What I want
13 to talk about today is a rather expedited
14 review of the Y-12 National Security Complex.
15 As the Board will recall, there was a decision
16 to expedite our review of Y-12. It's on the
17 original list, but because of the SEC
18 petitions, certainly the notion was to move it
19 up to do it on an expedited basis, which we in
20 fact did.

21 We went ahead and inaugurated this on May 3rd,
22 although quite frankly, most of the work --
23 including documents review and interviews --
24 were conducted within the last 30 days, so when
25 I say expedited, I guess -- I want to

1 underscore, this is -- for a site this large,
2 for a history this long, this was quite a
3 undertaking in terms of the amount of ground
4 covered and the amount of subjects covered.
5 And I might want to add that this was made
6 possible, frankly, with the cooperation with
7 ORAU in the sense that we were able to do this
8 in real time. And I said this at last meeting,
9 that the only way we could accomplish this
10 would be to have conference calls to --
11 actually to see documents and to do a number of
12 site visits on a rather expeditious basis.
13 This site is a classified site. We still have
14 notes that we haven't seen yet. They're being
15 reviewed for classification purposes. So in
16 any case, we expect to have this report ready
17 by sometime later this month.
18 We looked at the series of site profile TBDs.
19 I think the take-home message here is
20 essentially these -- this was the third site
21 that was actually profiled by NIOSH, and this
22 is March of 2003. A lot of the TBDs are -- you
23 know, you want to talk about a living document,
24 these are definitely living documents. We
25 understand that and we looked at it in that

1 context.

2 A lot of our findings are ones that frankly
3 underscore what I think NIOSH and ORAU already
4 recognize in terms of what it's going to take
5 to complete and make these TBDs comprehensive.
6 So I think you'll hear that -- that refrain
7 reiterated during this review.

8 We also looked at a number of supporting
9 documents that -- this is just a short list of
10 what we were able to cover. And again, given
11 the time frame, we did go through these I think
12 relatively fast just to in fact get a
13 underpinning of what was looked at in the TBDs,
14 what was referenced by the TBDs. We still have
15 some closeouts to do in terms of resolving I
16 think final documentation before the report's
17 prepared. But again, I think we -- we touched
18 most of the bases we needed to touch.

19 Just a little bit on Y-12. Again, old site,
20 started Manhattan District, certainly developed
21 the original enriched uranium for the Hiroshima
22 weapon, so we're talking about probably one of
23 the oldest of the DOE sites.

24 In terms of operating contractors, I kind of
25 lumped those that were, you know, sort of in

1 the same family together, but essentially had a
2 series of single contractors from the Manhattan
3 District days up to the present, a fairly long
4 tenure as DOE contractors go -- certainly the
5 construction contractors. About 811 acres,
6 which is a fairly tight site, in DOE terms.
7 And again, about 5,000 employees today. You
8 know, quite a few more back in the -- in the
9 old days, after the War and during the Cold
10 War. So seeing a lot of changes in terms of --
11 of numbers.
12 Missions, electromagnetic separation of
13 uranium, basically during the War years,
14 producing enriched uranium. Beyond that,
15 getting a mission of -- production mission of
16 secondaries and doing refurbishment and cases.
17 A lot of stockpile stewardship in the later
18 years, so it's gone through an evolution of
19 missions over the last 40 or 45 years,
20 essentially keeping pace with pretty much what
21 was going in the national security realm.
22 Let me just touch on -- I -- I think, again, we
23 really wanted to focus on the completeness of
24 this -- of this site profile, looking at the
25 TBDs. We wanted to look at the assumptions and

1 the comprehensiveness. And you know, we were -
2 - you know, I think the ORAU counterparts will
3 confirm this. We were taken aback because
4 really there were a lot of places we felt just
5 weren't being touched on in terms of scope.
6 And in the interactions that we've had it's
7 pretty clear there's not a disagreement on
8 that, but there's certainly acknowledgement of
9 this being one of the early site profiles, the
10 focus was on the uranium, the central mission
11 of the facility, and a lot of the issues that
12 certainly we found to be important were not
13 addressed in this initial pass at the site
14 profile for Y-12. But I don't think that's a -
15 - as much of a concern as it would be if it
16 weren't for the fact that there's a number of
17 efforts underway which would augment this Rev.
18 00, which is -- was in place and in some cases
19 is going to be revised at least once to bring
20 these other source terms in, to bring the other
21 analyses in. What we'll be covering
22 essentially a little bit later will be just
23 some of these areas that need to be addressed.
24 But I think in general what we see is some
25 movement to add these aspects in. We think

1 these are important aspects. I think there's a
2 rather extensive records search. I was telling
3 somebody it's like the dog catching the car in
4 a way, 'cause we're -- we're going to Y-12 on
5 the heels of some of the ORAU investigators
6 and, you know, they have boxes of documents
7 going out the door and we're trying to get our
8 hands on the same -- so it's sort of -- you
9 know, there's a lot of interaction going on and
10 obviously a lot of work that's being done to
11 bring these up to date, so we certainly want to
12 acknowledge that.

13 Last bullet, you know, we've made I think a lot
14 of the recycled uranium issue in terms of
15 contaminants. And I'd like say I think we were
16 very pleased and just want to be very
17 supportive of what was done on recycled
18 uranium. I think that was one of the more
19 comprehensive treatments we've seen, in this
20 particular one, in terms of constituents, in
21 terms of history, and I think that's a --
22 that's a big plus, particularly in this case.
23 I wanted to put this particular slide in, not
24 to sort of go back into ancient history, but a
25 little -- little context, because -- you know,

1 I -- I lived this history, too, when I was at
2 DOE, and -- and clearly, relative to the
3 uranium programs, there was a -- clearly an
4 issue of -- of how the program was managed in
5 terms of health physics standards. And I think
6 this is relevant from the standpoint of a
7 context by which one looks at the dosimetry
8 information, looks -- looking at issues such
9 as, you know, ingestion as a pathway, when we
10 start getting into trying to figure out, you
11 know, what's important, what needs to be
12 scrutinized, where one needs to go beyond the
13 paper and start looking at actual practices and
14 comparing what workers are saying versus what
15 the procedures or policies may call for. I --
16 I only -- as sort of a reminder, when you go
17 back into the eighties and seventies, whatever,
18 one has to keep this in mind in terms of
19 practices that certainly have been upgraded,
20 reversed, but at the time raised questions
21 about how a lot of these programs were -- were
22 managed and what kind of contamination levels
23 you might be looking at. And they did
24 certainly provide some basis for some of the
25 issues that we think are important. So I

1 wanted to at least provide some perspective on
2 that.

3 Now saying that, I don't think one could find
4 better health physics work than by people by
5 Hap West and the folks that I -- and the
6 documents that I looked at. I mean just
7 tremendous work, a lot of focus in areas such
8 as the transuranics, neptunium. Outside of
9 uranium, I think there was a real concern about
10 what was coming into this plant. There was a
11 lot of focus on recycled -- you know, recycled
12 uranium in terms of contaminants, a lot of
13 concern about making sure that one was able to
14 evaluate those source terms and actually
15 characterize what the implications might be for
16 a uranium plant to have that in the plant. So
17 there was a lot of scrutiny, a lot of
18 monitoring, and it was very impressive in terms
19 of the precautions that were taken to manage
20 some of these issues such as thorium, such as
21 some trace elements such as Pu. But in the
22 whole you still had this, you know, issue in
23 the -- in the room, which is as far as uranium
24 there was a bit of a blind spot that kind of
25 carried forward practically into the nineties.

1 I think this is something that we wanted to at
2 least make clear.

3 In terms of experts, we spent quite a bit of
4 time. We didn't have much time, but we spent a
5 lot of it down at the site talking to the
6 health physics staff, talking to the security
7 staff, talking to the line workers. I
8 personally interviewed 25 production and
9 maintenance workers that dated back to 1969.
10 And my colleague, Kathy DeMers, talked to
11 security staff, as well as the -- the health
12 physics staff. And I'm not going to dwell on
13 some of these comments, but you know, some of
14 these are pretty important, at least from the
15 perspective of wanting to be able to go back
16 and compare what some of these accounts are
17 versus what we may be seeing in the
18 documentation or even in the policies and
19 procedures.

20 I think some of these are worth mentioning.
21 Certainly the notion that workers were very
22 mobile within this site is true. Workers moved
23 from maintenance to machining. They moved from
24 one part of the plant to another, maybe six or
25 seven moved. This was the first question I

1 asked to workers is, you know, where do you
2 work now and where did you work. And it was
3 very rare -- I'd get a answer that they worked
4 five, six, seven different places. Some of
5 them had come in from K-25. A lot of movement
6 coming into Y-12 and out of Y-12, so I think
7 that's something that's important to mention.
8 The support workers, you'll -- you'll hear this
9 again. I'm concerned about this class of
10 workers who aren't the camera operators, who
11 aren't the machinists, aren't the people on the
12 line, but the folks who actually fix the
13 machines, that actually clean up the
14 contamination, that actually provide the
15 support throughout the plant. And I talked to
16 a number of those workers. They were not
17 monitored, by and large. I mean they got an
18 occasional whole body count, lung count, they,
19 you know, may have had occasional urinalyses.
20 But essentially they weren't monitored because
21 they weren't line workers, up until the latter
22 years. Now we'll get into that in a bit, but I
23 think that's a -- that's a very important issue
24 because characterizing how these workers -- and
25 they were certainly able to go into any of the

1 radiological areas, including the Oak Ridge
2 facilities; I mean they pretty much had the run
3 of the site -- trying to make sure that we
4 characterize those exposures adequately. I
5 think it's an important -- important issue.
6 And some of the other issues, such as the
7 plutonium, thorium, what-not, I think that's --
8 that's been recognized by NIOSH and ORAU in the
9 site profile. But again, the workers were
10 seconding the fact that they were aware of
11 these non-uranium isotopes being on -- on --
12 on-site.

13 They were troubled -- and this is the bullet on
14 the fecal analysis. They were troubled when
15 the workers that were doing the high fired
16 oxides -- these are the highly insoluble oxides
17 -- were -- were switched from routine
18 urinalysis to routine fecal analysis just
19 overnight. This happened in '98. And of
20 course, you know, from a health physics
21 standpoint there was a lot of analysis that was
22 done. Eckerman* and George Kerr* came --
23 certainly came up with their paper regarding
24 how -- you know, the recognition that, after
25 operations started up in '98 after being down

1 for four years, it turned out that they felt
2 that -- they determined that the uranium was in
3 fact hypersoluble, very -- I mean, I'm --
4 insoluble, very insoluble versus the
5 recognition it was intermediate before.
6 But from their standpoint, they were getting
7 these weekly urinalyses and quarterly, you
8 know, lung counts for a long time as workers in
9 this high fired oxide area. And all of a
10 sudden that was discontinued and they were
11 getting, you know, weekly fecal analyses and
12 sort of the question in their minds, and they
13 asked it outright, is -- you know, what does it
14 mean? I mean what happened to that data? Is
15 that -- I mean is there anything that's going
16 to capture that information because, you know,
17 now I'm concerned that maybe that -- that dose
18 wasn't captured in the past. So I think that
19 was certainly a rather telling comment.

20 (Whereupon, Ms. Wanda Munn arrived and assumed
21 her seat with the Board.)

22 **MR. FITZGERALD:** In terms of breathing zone
23 sampling, the comment there -- and this is more
24 of a cautionary note -- they felt that they
25 process by which the maximally exposed

1 individual was selected -- in this case it's
2 breathing zone sampling -- but they felt that
3 it wasn't always the maximally exposed
4 individual that was singled out by management
5 to be sampled. And I guess -- again, this is
6 just a antidote (sic), but I think it's just a
7 cautionary note that one needs to be careful
8 about that assumption because from their
9 vantage point a lot of times -- and this is,
10 again, just reporting what we got from them --
11 it wasn't necessarily the individual who was
12 most exposed or who was probably in -- in the
13 line of most contamination or operating the
14 most hazardous item. So I just want to sort of
15 point that out, that this is something I think
16 we need to address with some care as we go
17 through this.

18 Let's move on. In terms of monitoring data,
19 this is a rather complex history. And I'm not
20 going to bore you 'cause a lot of this is
21 seeded in the site profile, but as you go
22 through the time frame you do find that things
23 shift around, both from the external as well as
24 from the internal over time. And there was a
25 lot of changes going on. In fact, if I can

1 bring you down from having no data in '43
2 through '47, having a paucity of data in '48
3 through '60 and then having perhaps the more
4 stable program thereafter. There were, over
5 time, fairly significant reductions in the
6 worker categories, as well as whole departments
7 that were getting urinalyses. Okay. There
8 were decisions made that -- by virtue of
9 results that were being achieved, or simply
10 numbers of workers that were in fact being
11 flagged, that one could reduce the category of
12 workers or departments that would in fact
13 continue with urinalysis. They were taken out.
14 And I think the -- the -- certainly the issue
15 there is one of being able to account for that
16 whole movement of information. You have
17 information on X number of workers. As years
18 progress, that number changes; some workers
19 were added, a lot of workers were taken off.
20 So you're going to have varying data. Some
21 workers were switched from basically urinalysis
22 to whole body counting, so there's a lot of
23 movement, a lot of changes over time. And
24 again, a lot of the analyses on things like
25 tritium, plutonium, fecal did not start until

1 later on in the process.

2 But getting to the findings -- and again, these
3 are findings that I still think are preliminary
4 in the sense that we've been at this for about
5 a month, maybe five weeks, and we're certainly
6 converging on these. We've had a number of
7 interactions with ORAU counterparts, but I
8 think I would foresee probably one more session
9 with ORAU on these, but I wanted to make sure,
10 though, that we gave you the best sense of
11 where we are right now.

12 This first issue addresses these so-called
13 support workers. And I don't want to draw too
14 fine a line. I mean certainly they're
15 janitors, they're the maintenance people. But
16 there's a whole class of people who, frankly,
17 were taken out of bioassay, and in some cases
18 weren't badged till, you know, after '61, who
19 are in this generic class of workers that --
20 for which there isn't any real routine data
21 coming out of it. And when talking to the
22 workers, these -- these folks essentially went
23 into the thorium areas, went into the plutonium
24 areas and were actively working in terms of
25 maintenance activities, as well as clean-up

1 activities and what-not. So again, this is --
2 even though they weren't classified as line
3 workers, the issue is to what extent were they
4 exposed, how can one really characterize that
5 exposure and can we focus on that -- on the --
6 on these -- on these groups.

7 The -- the other questions revolve around the
8 question of records, what records are possible
9 and what -- what air sampling information may
10 be possible. Now in some of the discussion
11 with -- with ORAU -- and these have been very
12 productive -- I think the issue comes down to
13 does one treat this kind of issue in a -- as a
14 generic issue that needs to be addressed in the
15 site profile, or is it something that
16 ultimately the dose reconstructor would handle
17 based on a CATI interview and whatever
18 information is culled out on an individual
19 basis.

20 I think at this point our thinking is that
21 really this is a generic issue. This is a
22 question of missing -- potentially missing dose
23 for a category or several categories of
24 workers, which I think certainly should be
25 addressed. And -- and I think right now I

1 can't find much in the way of data that would
2 characterize what these workers are exposed to.
3 Okay.
4 Again, they did the maintenance activities,
5 they did the clean-up. If there was a spill,
6 these workers would go in and mop up,
7 effectively. And so I think the question is
8 can we actually address those -- that category.
9 There's a class of releases which -- you know,
10 I -- I think we're pretty familiar at this
11 point with, you know, how accidents and
12 incidences are handled, and I -- I want to
13 raise that issue. I mean I think we've raised
14 it. We understand, you know, these aren't
15 typically addressed in site profiles. But with
16 Y-12 and I suspect with future sites -- you
17 know, we come up against these incidences that
18 are more than just, you know, human error.
19 They're almost a regular part of the -- of the
20 work week, work day. And uranium chip fires
21 are certainly one example where they were
22 almost part of the way things were -- were --
23 were handled. I mean you had them fairly
24 frequently, sometimes two or three times a
25 shift -- not always big, they're sometimes

1 small. Uranium being very pyrophoric, some--
2 you're grinding away, the operators were
3 expected to be able to douse these things.
4 Sometimes they weren't able to douse them and
5 there was quite a bit of smoke. And as an
6 example of something that is contributing a
7 fair amount of what I would call an acute cloud
8 of uranium, something that would fill up an
9 operating area for some time, the question that
10 we're trying to grapple with is, you know,
11 what's -- what's -- how's -- how's that
12 actually captured by the bioassay program, for
13 example, and are you going to be able to see
14 these acute releases.
15 And there some other examples here, I didn't
16 put all of them up, but we -- we -- we saw a
17 number of instances of acute releases of -- of
18 uranium and other metals where you had -- had a
19 -- certainly an opportunity for a significant
20 uptake, but it wasn't clear whether that would
21 be captured down the pike in terms of the
22 actual monitoring frequency and what you were
23 in fact looking for in that bioassay program.
24 So we wanted to raise these issues in that
25 context, that -- I believe there's a 9206

1 incinerator that continually I think released
2 fugitive emissions and that were -- was the
3 major contributor to 9206 air concentrations
4 and it took years to get that new incinerator
5 in, apparently.

6 And you have other issues, and I've listed a
7 couple that I've just taken out off the top --
8 exhaust fans that were sometimes turned off in
9 -- it's not clear how often, you know. It's
10 not that I can tell you this was a frequent
11 thing, but just sort of instances where yes,
12 there was a -- in this case, a blow-back of a
13 fair -- fair amount of uranium. Now what did
14 that mean in terms of the acute exposure? Not
15 clear. Not clear whether that would have been
16 picked up if the analysis was done sometime
17 later or not. But in any case, just -- just
18 trying to raise the issue.

19 Now in terms of the third bullet, exposure from
20 radon and radium preferentially vaporized, we
21 didn't see a whole lot of treatment on radon,
22 but it turns out that when one is actually
23 casting -- melting and casting both uranium and
24 thorium, you do have to deal with what is
25 preferentially vaporized in that process 'cause

1 of the melting point and you do get radon and
2 radium and the daughters essentially put into
3 the air in fairly high activity levels -- so
4 high in fact that you exceed plant levels
5 almost immediately, and this was a cautionary
6 note that one had to be very careful. And I'm
7 not clear on -- looking at the TBD, and this is
8 something that I think may be addressed in the
9 revision, how one is going to look at issues
10 such as radon and daughter products that might
11 in fact be released in that way.

12 So again, this is not your classic accident and
13 incidences, but sort of a regularized acute --
14 series of acute releases that would occur
15 pretty regular-- frequently, but not as a
16 normal part of the process, more of an
17 incidental release.

18 In terms of nuclides, I think the list in the
19 TBD is a good one. I don't think we basically
20 identified anything that wasn't already
21 fingered in the site profile. Yes, Y-12 did in
22 fact handle tritium. It handled returns from
23 Los Alamos and other places and tritium figured
24 in -- in -- in those operations. Also
25 technetium in terms of recycled uranium,

1 thorium as well -- in terms of production.
2 Thorium and neptunium were in fact processed,
3 fabricated, rolled, the whole works. There
4 were production operations at Y-12 for both,
5 and both were of particular concern from the
6 health physics standpoint because of the
7 respective activity levels and the -- and the
8 concern over -- in the case of neptunium being
9 a bone-seeker, concern over having a long
10 residence time in terms of the material. So
11 certainly that was an issue for that.
12 Plutonium was in fact both a contaminant as
13 well as a production material at Y-12, wasn't
14 used very much. It was a small amount used,
15 but yet you still have certainly some that
16 exists. It's in gloveboxes, sealed. It's not
17 a contamination problem, but it's basically an
18 issue of having to certainly account for in the
19 past.
20 The support workers, again -- we -- we had a
21 question regarding how the Oak Ridge facilities
22 at Y-12 would be addressed in the context of
23 the site profiles, and the answer was those
24 facilities would be addressed as part of the
25 Oak Ridge National Lab site profile. But we do

1 have this gray area with the support workers
2 who are supporting Oak Ridge's -- X-10's
3 facilities at Y-12. And certainly those Y-12
4 workers would have to be accounted for, more
5 than likely in the Y-12 site profile. So
6 there's a bit of a gray area there and that's -
7 - that's certainly one issue that we'd like to
8 see addressed and included in the Y-12 profile.
9 And this is something that -- certainly there's
10 an ongoing effort to collect this data. I
11 think we saw all the documentation that was
12 flowing out to Mel Chu* and Bryce Rich* and I
13 think it's a pretty impressive effort. It's
14 just got started. I think they started
15 collecting documents back in December and
16 they're going through them now and they're
17 looking at U-233, looking at thorium, looking
18 at recycled uranium. So I think this is well
19 on its way, but I think this again underscores
20 the fact that for a uranium facility -- I guess
21 I was surprised, and I had been at DOE long
22 enough -- but for a uranium facility it was a
23 fairly diverse amount of non-uranium isotopes
24 being handled in different ways.
25 This slide probably could come later, but it's

1 basically a summary of, you know, where we feel
2 there's some issue rel-- relative to missed
3 dose. And you know, certainly the unmonitored
4 categories of workers is one area -- we just
5 talked about.

6 Recycled uranium workers prior to '61, it's not
7 clear -- you know, recycled uranium workers,
8 based on some of the studies done, could be
9 anywhere from 1.2 to almost 1.6, 1.7 higher in
10 relative exposure just because of the
11 constituents. And it's not clear how one's
12 going to characterize that, and that's
13 something we think should be treated in the
14 site profile.

15 Uncertainties and detection limits of bioassay
16 techniques, this is something we can address --
17 it's being addressed in a couple slides later.

18 Radioactive material solubility and particle
19 size assumptions, one thing on particle size
20 assumptions -- and this is something that was,
21 you know, I think addressed in the -- relative
22 to the Bethlehem Steel -- is the default
23 particle size of five microns is also being
24 used here. And we -- we -- we're still
25 troubled by that. I guess it's something that

1 -- you know, the range at Y-12 is one to ten,
2 and we see different levels associated with
3 uranium -- uranium oxides that are a lot
4 smaller than that. We see some data that's
5 higher than that. And we're wondering and
6 would like to see some treatment of -- can one
7 use a generic value like that default value and
8 still get the best estimate that you need. And
9 can you in fact apply what data you have -- if
10 you have particle size data for certain
11 operations, would this not argue that you would
12 use that data. I think that's -- that's where
13 we're coming from on the -- on the particle
14 size. A generic particle size default of five
15 microns, I think we -- we -- we're still uneasy
16 about that.

17 The ingestion pathway, I think we said earlier
18 that workers throughout the history of the
19 plant up through the eighties essentially ate,
20 smoked, drank and did everything at their work
21 stations. They were encouraged to do so.

22 Again, this was in the major production mode of
23 Y-12, and there's no question that they
24 literally, you know, did everything at the --
25 at the contaminated work site. And I think

1 that just makes ingestion -- I mean we've
2 raised the ingestion issue at other sites, but
3 in this particular instance I think it's a
4 significant issue. It's one that has to be
5 treated and treated with that kind of
6 importance, and I think that's something that
7 needs to be added to the site profile and given
8 particular weight. Not to say I know what the
9 results would be necessarily. You know,
10 certainly the GI tract is going to be the
11 vulnerable organ. But certainly with the
12 amount of time some of the workers were
13 involved in this and the pathways available, it
14 certainly would be significant.

15 In terms of the application of coworker data,
16 we had a -- I think a very vibrant discussion
17 last week on this subject with -- with ORAU,
18 and I think the way we left it was there isn't
19 any verifiable information, no data, to
20 indicate how -- how Y-12 came up with the
21 maximally exposed individuals who were in fact
22 monitored before '61. Okay. And certainly the
23 notion is to go to coworker data in order to
24 make dose assignments using what data you do
25 have. I think our only admonition is that

1 there isn't anything that indicates what the
2 basis for judging maximally exposed individual
3 is. You know, all you have is the procedure or
4 the policy and the fact that if it's -- if it's
5 ten percent of the CEDE, they were badged. But
6 it's not clear if in fact that was the way it
7 was implemented. It's not clear exactly what
8 worker categories were in fact included. So
9 there's a lot of gray area there that we think
10 needs to be addressed.

11 The last item gets to the high fired oxides,
12 and here we have a situation where you have
13 uranium material that's highly insoluble for
14 which you did have a urinal-- routine
15 urinalysis program. Recognition came in '98
16 that in fact this and some other materials were
17 in fact -- were insoluble, not something that
18 could be picked up in urinalysis, and everybody
19 was put on routine fecal analysis. Again, this
20 is something that needs to be addressed in the
21 site profile. Not a whole lot of treatment
22 other than the fact that the -- that that
23 change was acknowledged, that they in fact did
24 change it, but not anything that would speak to
25 what is one going to do about what potentially

1 could be a lot of missing dose for the workers
2 that were working with the insoluble uranium.
3 We spent some real time on neutrons because,
4 again, with Iowa and what have you, we did go
5 through this discussion on NTA film. And I
6 have to say, we were puzzled with the I think
7 hard-held position that 500 to 700 keV was an
8 appropriate threshold and in fact that you were
9 able to capture 95 percent of the neutrons that
10 were important to measure in some of these
11 operations. And we had -- again, had some
12 vibrant discussions with George Kerr and the
13 ORAU folks. I think we -- and in this -- this
14 is the product of that discussion, and I think
15 we understand that the -- that the assumption
16 is that -- based on experience, that these
17 neutrons were in fact high energy hard
18 neutrons, that in fact you didn't have a
19 variety of sources to worry about, that the
20 principal source were these high energy
21 neutrons and that the NTA film, on that basis,
22 could see them, so to speak, at these energies.
23 We're not comfortable -- we're not there yet
24 with that particular position. And frankly it
25 just comes from the fact that there's other

1 sources we feel moderate -- that there's in
2 fact sources of moderated neutrons at -- at Y-
3 12, that in fact you do have other sources that
4 would not fit that -- that -- that template,
5 and that I think you're going to not see the
6 broad proportion that you -- that is being
7 claimed in the site profile.

8 I think the -- the comeback was one could look
9 at the energy spectra of neutrons at Y-12 and
10 try to come up with a broader basis for making
11 that claim. But at this point -- at this point
12 in time in terms of the site profile, it really
13 isn't enough I think to substantiate that, you
14 know, neutrons are in fact so exclusively hard
15 that -- that NTA film in this particular
16 instance -- not other instances, this
17 particular instance -- is going to be okay, you
18 can in fact rely on it, you can draw all the
19 exposures from it. And I think that's the --
20 that's the message that we have here that
21 really one is going to have to come up with
22 perhaps a stronger basis in terms of spectral
23 measurements, or data that speaks to the
24 spectrum before I think you -- this case could
25 be made.

1 And there's other things in the site profile
2 that I think really are contradictory, in a
3 way. There were some references to more
4 advanced dosimetry for neutrons that were put
5 in place in '80, and the comment was made that
6 -- that by putting this in place, it would be
7 more representative of the workplace because it
8 in fact would capture back-scatter and would
9 capture moderated neutrons more effectively.
10 And so it sort of makes that comment in terms
11 of -- of being more representative of the Y-12
12 workplace from that instance, but it doesn't
13 jive quite with this particular conclusion.
14 In terms of the external dose, radiation-
15 generating devices, this is a scope issue.
16 Again, we think there's a number of non-medical
17 X-ray machines, 86-inch cyclotron and other
18 sources that in fact are radiation sources that
19 aren't really addressed in terms of the scope
20 of the site profile. I think the comment was
21 made in our conference calls last week, this is
22 something that'll be picked up in a revision.
23 But again, this is a scope issue. These are
24 sources that ought to be picked up in terms of
25 how they're measured and whether or not the

1 dosimetry's adequate.
2 I touched on this before. Again, the methods
3 outlined in the site profile are valid if the
4 pre-1961 badged workers were in fact the
5 highest exposed workers. And the comment was
6 made that, you know, if you don't buy that
7 supposition, then the coworker approach does
8 not work at all. And again, we don't disagree
9 with that, but we're not -- we're -- we're
10 still skeptical and somewhat dubious that in
11 fact this class of workers who were ultimately
12 badged represents the highest maximally
13 exposed. And we certainly would like to see
14 more documentation, more verification on how
15 these workers were in fact selected for badging
16 and whether one can rest -- a fairly important
17 assumption, this is how one is going to
18 determine, you know, this -- this -- this broad
19 assignment of dose for all these workers before
20 '61. It's all going to come down to whether in
21 fact these badged workers were the maximally
22 exposed. I think that's -- that's where we're
23 having some concern. Other than I think some
24 reliance on the policies that were in place,
25 some confidence in Hap West and maybe the

1 people that were making those decisions, and we
2 can't find anything that documents that process
3 and how these were selected. And I think
4 that's -- that's the qualification that we have
5 at this point. Not to say that -- that -- you
6 know, the strategy wouldn't work, it's just
7 that we can't see anything that -- that
8 validates these -- these individuals as being
9 maximally exposed.

10 In terms of internal dose, other sites --
11 particularly uranium sites -- attention's given
12 to the different classes of solubility in terms
13 of picking ones that are most conservative for
14 the particular pathway involved, whether it be
15 air concentrations, whatever. In this case,
16 Type F is kind of taken off the table and
17 reliance is on S and M. I think -- the only
18 thought we have there is that it's not clear if
19 that should be the case across the board. We
20 think for uranium hexafluoride and certain
21 chemical compounds, F class may actually be
22 very pertinent from the standpoint of
23 inhalation dose, whatever. And we're not clear
24 why S and M is being focused on exclusively.
25 We understand from the urinalysis standpoint,

1 but I think it's too broad. I think we want to
2 see more treatment of different pathways where
3 F class may actually be more conservative,
4 depending on the cancer and the organ you're
5 looking at. And that -- the inconsistency is
6 that other sites -- other site profiles, that's
7 the way it's been done. So we're just trying
8 to see why this is being sort of ruled out,
9 taken off the table in terms of how that's
10 treated.

11 Particle size we talked about. Ingestion we
12 talked about, that's a pathway that needs to be
13 addressed.

14 And there's uncertainty measurements and
15 detection limits that frankly are important in
16 understanding what the assumptions were in
17 terms of the bioassay measurements that aren't
18 clearly laid out in the site profile at this
19 point. And again, we'd like to see that
20 clarified and be very crisp about it because,
21 again, I think that has a heavy influence on
22 it.

23 One thing that we picked up on that is a --
24 it's sort of a generic issue, is that workers
25 up through the late eighties were told to --

1 you know, to wait 48 hours before providing a
2 sample. They would go home over the weekend
3 and come in on Monday and provide the urine
4 sample for urinalysis. The basis was to allow
5 the soluble uranium to be washed out so you
6 wouldn't have that as a background necessarily.
7 And again, that isn't treated specifically in
8 the site profile, but we believe it has
9 implications for missed dose if one doesn't
10 look at what the equilibrium value of -- and
11 potential exposure might be from some of the
12 soluble uranium that's resident because of the
13 contamination levels. Not prejudging how
14 significant it is, we're just saying it should
15 be looked at, should be part of the intake
16 model, you know, in terms of this so-called 48-
17 hour delay that -- that typified how things
18 were done.

19 This was reversed the late eighties. They went
20 from doing it after 48 hours to doing it during
21 the weekend -- taking the bottle home, so to
22 speak. But again, the workers were pretty
23 clear that this is the way it was done before
24 then.

25 On the environmental side, again, I think these

1 are points of scope. I don't think there's any
2 controversy, but we do think that ingestion
3 ought to be factored into the environmental
4 assessment.

5 Nuclides other than uranium, right now uranium
6 is exclusively addressed in the environmental
7 dose TBD.

8 To the extent that -- because of the proximity
9 of the sites, that perhaps X-10 contributes,
10 that's something that can be either ruled out
11 or ruled in, depending on a very cursory
12 scoping analysis, I think.

13 And again, they did burn DU chips and the
14 question of how that might have contributed.
15 Just points to...

16 Extremity and skin doses were pretty
17 significant at Y-12. Workers handled uranium
18 directly. They, you know, milled it, they
19 shaped it, they carried it. And same thing for
20 thorium. And the exposures, I just took a item
21 out of one of the quarterly dose reports that
22 was put out by Y-12, and it was relatively
23 significant. I wouldn't say it was a urgent
24 issue, but it was relatively significant. Skin
25 dose and extremity dose is not covered in any

1 great detail in the site profile. And granted,
2 it's not a organ dose issue other than the
3 skin, but I think it's fairly significant. I
4 think it's something that would need to be
5 addressed. I don't think there's any
6 disagreement. I understand that ORAU is moving
7 toward including extremity and skin dose in the
8 site profile.

9 And finally, we found the site profile to be an
10 adequate treatment of the "core" programs --
11 okay? -- at -- at Y-12. We did have issues of
12 completeness. These aren't any surprises. I
13 think every instance we've raised, I don't
14 think there was any dispute by ORAU. I think
15 the notion was that this being a early site
16 profile, it was truly, with a capital L, a
17 living document. And they were trying to add
18 to and complement the profile.

19 In terms of where they might be headed, we
20 think attention should be paid to the bioassay
21 program in terms of its ability to detect
22 insoluble uranium oxides, the high fired oxides
23 in particular; acute uptakes, some of these
24 incidental acute instances of exposure; and
25 radionuclides other than uranium -- these are

1 all being addressed.

2 The use of coworker issue in terms of trying to
3 fill in the gaps before '61 I think is a very
4 crucial issue. I think we have situations with
5 recycled uranium in other instances where I
6 think those judgments are going to be extremely
7 important and how you base those values. What
8 coworkers you actually use I think is going to
9 be a -- a telling point.

10 Spectral field measurements for neutrons, I
11 think this is an issue that can be answered
12 right now. I think there's not a sufficient
13 basis for saying that NTA film is fine and you
14 can use it in this particular situation. I
15 understand the -- certainly the site experts
16 who have dealt with the neutron dosimetry at Y-
17 12 see this as pretty much a hard neutron field
18 and -- but the PNNL study which was done, which
19 is actually cited in the site profile, did look
20 at one specific source term in terms of
21 exposure, and it was a fairly hard source. I'm
22 not sure that answers the question in terms of
23 the other possible sources at Y-12.

24 And again, the question of unmonitored or
25 intermittently monitored -- I put

1 intermittently in there because you have the
2 unmonitored workers, but the workers we talked
3 to -- it's a -- it's a gradation. You have
4 some folks that weren't monitored hardly at
5 all, some that were occasionally -- bioassays -
6 - but not on any regular frequency. And I
7 think trying to figure out how you treat those
8 and certainly deal with the exposures is pretty
9 important.

10 And of course the environmental dose
11 methodologies.

12 I want to again close out and acknowledge that
13 given the 30 days of active review, we did get
14 a lot of cooperation and -- and -- not only
15 from NIOSH and ORAU, but also from Y-12. Y-12
16 turned around classified reviews within 24
17 hours. I've never seen that in my career where
18 in fact you could get a cleared document in 24
19 hours. They actually did do that at Y-12, so I
20 thought that was tremendous and enabled us to
21 actually even have something to say, quite
22 frankly. So again, it's been a very expedited
23 review.

24 I did want to engage the ORAU counterparts.

25 We've had some pretty good dialogue. I think

1 we have a -- we want to do an issue resolution
2 process on this in a couple weeks. I think
3 they're agreeable. What I'd like to see is
4 some convergence on what's important, because a
5 lot of the work being done is ongoing and I
6 think this will help perhaps point things in
7 the right way.

8 Thank you very much. Any questions?

9 **DR. ZIEMER:** Thank you, Joe. Let's see if any
10 of the Board members have questions. Obviously
11 this is a work in progress and it gives us a
12 kind of a status report on where they are and
13 what they've done so far.

14 Yes, Leon Owens.

15 **MR. OWENS:** Some of this -- this class of
16 workers that you referred to as service
17 workers, do they have occasion to handle any of
18 the uranium, based on your interviews? Did you
19 get any information regarding that from them?

20 **MR. FITZGERALD:** They didn't handle it as a
21 line production person would handle it. They
22 essentially did everything else. I mean, you
23 know, when you talk about a maintenance person,
24 a maintenance person in a plant like Y-12 could
25 do anything from fixing the machines to

1 basically working on the process line to moving
2 material around. So when you say "handled",
3 they did everything but actually machine or --
4 or do chemical operations, but everything else
5 was in bounds. And Y-12 wasn't zoned in such a
6 way that people couldn't work anywhere within
7 those buildings. So even if you had high fired
8 oxides here, thorium here and plutonium in the
9 X-10 facilities here, those workers would have
10 access. They in fact would have worked in
11 those areas. And certainly a concern in those
12 cases is if they weren't monitored in any --
13 any meaningful way, it would be hard to even
14 know, you know, given the diversity of work
15 activities, what they might have been exposed
16 to day-to-day. They did move around all the
17 time. That was their job, to move around where
18 the -- either the maintenance work or the
19 janitorial work would be required. But the
20 only thing they didn't do is actually the
21 machining, the components and, you know, the
22 actual handle of the liquid streams, but as far
23 as maintenance and cleanup and moving material
24 around, that was pretty -- that was pretty
25 broad.

1 **DR. ZIEMER:** Okay, Rich Espinosa.

2 **MR. ESPINOSA:** On the exhaust systems, do you -
3 - does it -- was anything explained to you on
4 how the system was zoned and, you know, a lot
5 of times when they turn off these exhaust
6 systems in these buildings, what happens is it
7 creates, like they're saying here, a back-flow
8 and the --

9 **MR. FITZGERALD:** Right.

10 **MR. ESPINOSA:** -- system will literally burp.

11 **MR. FITZGERALD:** Right. That's essentially
12 what happened. This actually came from the
13 health physics reports. Y-12 puts out very
14 comprehensive quarterly -- I think it's a
15 quarterly -- health physics reports, and what
16 they were reporting is, you know, in terms of
17 anomalies where you had a high -- say 9206 had
18 a high air contamination level for that
19 particular month, exceeded plant levels. They
20 would try to diagnose, you know, what was the
21 reason behind that. And a number of examples
22 came up. One was the fact that you had this
23 back-flow on one instance where it essentially
24 pushed the contamination back in the work area
25 and put the air concentrations fairly high.

1 Another instance is there's an incinerator in
2 9206 that was a bad actor and essentially was
3 the source of a lot of the airborne
4 particulates and contamination for the
5 building, so you'll -- you'll see -- you know,
6 we would have been -- at this level -- if it
7 weren't for the 9206 incinerator, we would have
8 been at this level if it weren't for this back-
9 flow on the exhaust. And you kind of pick that
10 up over time. There's always another reason
11 why things were high, but you had these
12 examples of what I would call acute -- acute
13 releases of contaminants within the plant.
14 **DR. ZIEMER:** Any others? Okay, thank you.
15 Thank you, Joe, again.

16 **Y-12 SPECIAL EXPOSURE COHORT (SEC) PETITION**

17 Let's move on then to the presentation of the
18 petition on the Y-12 Special Exposure Cohort,
19 and this will be presented by Larry Elliott.

20 **DR. WADE:** I think -- a couple of issues. We
21 have to have Mr. Presley excuse himself, if
22 you'd be so kind, sir. And then we did provide
23 an open line to the Y-12 petitioners to join
24 us. Do we have any indication that any of
25 those petitioners have joined us at this point?

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

(No responses)

DR. WADE: Let me get Cori just to work that issue.

MR. PRESLEY: Let it be known that I am stepping away from the table. Also let it be known that today is a national holiday for Y-12 and there may not be anybody there.

(Whereupon, Mr. Robert Presley vacated his seat at the Board table.)

DR. ZIEMER: If you will, wait just a minute, Larry, till we find out if any petitioners are there.

(Pause)

DR. ZIEMER: You may proceed.

MR. ELLIOTT: Thank you, Dr. Ziemer, and good afternoon, ladies and gentlemen of the Board and the public.

Well, I appreciate all the good hard work that SC&A and Joe Fitzgerald and his team did on the Y-12 site profile. It certainly will aid us in providing a more comprehensive and robust Technical Basis Document for that site.

In all deference and respect to Dr. Wade and the Board here, though, this is an SEC petition. And in that site profile we had

1 reserved the early years of Y-12, indicating
2 that we had no data in that site profile for
3 those early years. And so this particular SEC
4 petition for Y-12 came to us and that's what
5 we're here to talk about at this point now.
6 We received three Y-12 petitions on behalf of
7 employees at the plant. Petition 18 defined a
8 class as all control operators that worked in
9 the building 9201-5 and the Beta Building at Y-
10 12 facility at Oak Ridge, Tennessee from
11 January, 1944 through December of 1945.
12 Petition 26 came to us defining all Tennessee
13 Eastman Corporation employees at the Y-12 plant
14 that conducted laboratory equipment cleaning
15 work from 1943 through 1947.
16 Petition 28 specified a class of all
17 steamfitters, pipefitters and plumbers who
18 worked at Y-12 from October, 1944 through
19 December of 1957.
20 These Y-12 submissions as petitions met the
21 criteria outlined in 83.7 through 83.9, and
22 qualified for evaluation on the following
23 dates: Petition 18 qualified on February 3rd,
24 2005; Petition 26 qualified on May 9th, 2006;
25 and Petition 28 qualified on April 29th, 2005.

1 Those petitioners were notified by letter, and
2 a notice was published in the *Federal Register*
3 on April 7th for Petition 18 and on June 6th of
4 this year for Petitions 26 and 28.

5 We evaluated the petitions using the guidelines
6 that are presented in 83.13, and we submitted a
7 summary of findings in a Petition Evaluation
8 Report to this Board and to the petitioners.
9 The Board received this evaluation report on
10 June 13th, 2005 and the petitioners received
11 the report on June 14th, 2005. A summary of
12 the evaluation report was published in the
13 *Federal Register* on June 22nd.

14 As you recall, the statutory requirement is
15 that a -- to add a class to the Special
16 Exposure Cohort, a two-pronged test must be
17 met. One, is it feasible to estimate the level
18 of radiation doses of individual members of the
19 class with sufficient accuracy; and two, if not
20 on number -- if you can't do number one and we
21 have to address number two, is there a
22 reasonable likelihood that such a radiation
23 dose may have endangered the health of members
24 of the class.

25 NIOSH identified and reviewed data sources to

1 determine the availability of information
2 relevant to determining the feasibility of dose
3 reconstruction, and we determined the
4 availability of information on personal
5 monitoring, area monitoring, industrial process
6 and radiation source materials that were
7 pertinent to these petitions. These particular
8 sources that we evaluated for these petitions
9 include the site profile and the Technical
10 Basis Documents, the previous dose
11 reconstructions that had been completed up to
12 the point in time of receiving the petitions,
13 the NIOSH and ORAU research documents that are
14 found on our database, the documentation and/or
15 affidavits provided by the petitioners. And we
16 evaluated the basis for health endangerment, as
17 well, from the information at hand.
18 When we looked at the site profile, as I
19 mentioned earlier, the early years of the site
20 were reserved. We had no data for those years.
21 But we used this information from the site
22 profile to examine the process history
23 information, the information on personal and
24 area monitoring, the radiation source
25 descriptions and the references to the primary

1 documents that are relevant to the different
2 radiological operations at the facility.
3 We examined the personal internal and external
4 monitoring data and we found none to be
5 available for the particular time period of
6 interest. There were limited area monitoring
7 for external penetrating exposures, and about
8 900 dust monitoring data records that are
9 available for examination.

10 As I mentioned earlier, we reviewed the dose
11 reconstruction database that -- for those cases
12 that had been completed. There were 810 cases
13 that meet the revised class definition
14 employment period criteria, and I'll show you
15 that class definition in a moment that was
16 revised. There were 135 dose reconstructions
17 that had been completed for employees at Y-12
18 during the years identified in the revised
19 class definition. We did not find any internal
20 or external dosimetry records that were
21 available or had been obtained through our
22 requests to DOE for those particular cases.
23 Again, the 135 cases that we had completed were
24 done through dose reconstruction techniques by
25 an overestimating or an underestimating

1 reconstruction approach. These methods are
2 outlined in NIOSH internal procedure OCAS-PR-
3 003. These methods make use of the relatively
4 limited and case-specific information that are
5 not sufficient to demonstrate the feasibility
6 of estimating radiation doses for an entire
7 class of employees.

8 In qualifying and evaluating the petitions, we
9 also looked at affidavits and documents that
10 were provided by the petitioners, and those
11 have also been shared with the Board.

12 Only area monitoring techniques were used to
13 measure and provide data to support the control
14 of radiation exposure during the March, 1943
15 through December, 1947 operating period. This
16 included the condenser R chamber results.

17 There were no personal internal or external
18 monitoring data available prior to 1948.

19 Our evaluation report addressed the following
20 revised class definition of employees at Y-12.
21 We -- we took the definition that was proposed
22 by the three petitioners and we revised it into
23 this definition that you see before you: All
24 DOE, DOE contractors or subcontractors, or AWE
25 employees who worked in uranium enrichment

1 operations or other radiological activities at
2 the Y-12 facility in Oak Ridge, Tennessee from
3 March, 1943 through December, 1947.

4 Now what radiological activities did this
5 encompass. It included all the Calutron
6 uranium enrichment operations and processes for
7 that time period.

8 It included a program for developing and
9 distributing beneficial radioactive isotopes
10 which began during the first half of 1944.

11 There was also an effort to develop a battery-
12 operated neutron monitor, and so that was
13 included in this class definition.

14 There was a large 226 radium source for
15 radiographic examinations that was in use and
16 had to be maintained. That was also included.

17 As well, the assaying of samples of enriched
18 isotopes of iron, chromium and lithium were
19 included in this list of radiological
20 activities for this class.

21 Also, a study of the relative behavior of
22 thorium and uranium in ether extractions was
23 going on at Y-12 at the time.

24 Furthermore, a development of a rapid procedure
25 for the separation of trace amounts of thorium

1 from large amounts of uranium prior to
2 colorimetric estimation with thoron was going
3 on at the time at Y-12.

4 So through -- March of 1943 through December,
5 1947, condenser R chamber measurements indicate
6 concern about exposure to X-rays for personnel
7 adjacent to the calutron operation. We had
8 this documentation available.

9 Also, there were formal area dust monitoring
10 program, but it was not established until late
11 April of 1945. Dust monitoring was conducted
12 from 1944 to 1947, and it consisted of general
13 area air sampling only. We have not been able
14 to locate any documentation that indicates
15 whether the samples measured breathing zone
16 exposures or not.

17 We find that we lack information on the
18 frequency of area dust monitoring sampling for
19 this time period of March, 1943 through
20 December, 1947.

21 We have an ORAU report that indicates that
22 workers employed during this time frame had a
23 high potential for internal intakes because of
24 the process that was performed, and that would
25 be the calutron operation.

1 We find that the completed dose reconstructions
2 that we have done, those 135 dose
3 reconstructions that were finished before we
4 received this SEC petition, they were
5 completed, but they were not sufficient to
6 demonstrate the feasibility of estimating
7 radiation dose for an entire class of
8 employees.

9 Overestimates applied to employees who did not
10 routinely work in uranium enrichment buildings
11 or the radiological processes at Y-12, or who
12 incurred cancers for which the maximum relevant
13 radiation doses can be estimated, are included
14 in this particular group of 135. These
15 overestimates would not apply to uranium
16 workers who worked routinely in the uranium
17 enrichment buildings.

18 Again, there are no individual monitoring
19 records that are available prior to 1948.
20 No urinalysis data is available prior to 1948,
21 and the later urinalysis data we feel is not
22 representative of the urine activity during the
23 time period from 1943 to 1947 when the
24 calutrons were in operation. In other words,
25 we can't use that as a surrogate to gauge what

1 happened during the calutron operation.
2 We find that there are no other bioassay data
3 in existence, at least none that we can find.
4 The sampling strategies and the frequencies of
5 general air sampling for dust is not known, not
6 documented.
7 NIOSH cannot establish a maximum exposure
8 scenario based on source term and process data
9 for this time frame and for these operations --
10 for these radiological activities.
11 The calutron operations were unique among
12 uranium production and enrichment operations.
13 And the inefficiencies of these calutron
14 operations, coupled with the continuous
15 assembly/disassembly, the huge amount of
16 maintenance activity, the large effort to clean
17 these devices requires a substantial amount of
18 time for workers to receive what we would
19 consider to be a substantial airborne
20 concentration. So without breathing zone
21 measurements for these activities, we do not
22 believe we can establish a maximum exposure
23 scenario.
24 External radiation exposures would have
25 occurred during this time period in specific

1 areas. We can recognize that from the process
2 description.

3 Exposure to neutron radiation was also possible
4 during this particular era and for these
5 operations.

6 Occupational medical exposures to X-rays also
7 documented for employees during this time
8 period do exist.

9 Film badge monitoring did not occur until 1948.
10 In summary, NIOSH has established that it lacks
11 access to sufficient information to estimate
12 either the maximum radiation dose incurred by
13 any member of this class, or to estimate such
14 radiation doses more precisely than a maximum
15 dose estimate.

16 The evaluation for Petition 28, January 1948
17 through December 1957, for all steamfitters,
18 pipefitters and plumbers continues, and that's
19 where this review of the site profile and Joe
20 Fitzgerald's preview of issues will certainly
21 come to bear on this next evaluation that we do
22 to finish up Petition 28. That evaluation
23 report will be presented to the Board in a
24 future meeting.

25 There were in our -- for evaluating health

1 endangerment, we were not able to identify any
2 discrete incidents to have involved
3 exceptionally high levels of acute exposure, no
4 criticality incidents, at least none
5 documented.

6 The hazard characterized as episodic
7 inhalations of radionuclides that cumulatively
8 resulted in chronic exposures, and so we
9 believe that the health was endangered.

10 Our proposed class definition for this class
11 would be that all DOE, DOE contractors or
12 subcontractors, or AWE employees who worked in
13 uranium enrichment operations or the other
14 radiological activities at Y-12 facility in Oak
15 Ridge, Tennessee from March 1943 through
16 December 1947.

17 In summary, we find that it's not feasible to
18 reconstruct doses for those -- this particular
19 class, and we do believe that the health was
20 endangered.

21 **BOARD DISCUSSION OF Y-12 SEC PETITION**

22 **DR. ZIEMER:** Thank you, Larry. We will have an
23 opportunity for some questions here. I'm going
24 to kick it off by asking Larry, will you
25 confirm to the Board that the lack of data for

1 the years that you indicated is not due to
2 there being data that's classified? Can you
3 confirm --

4 **MR. ELLIOTT:** I can confirm that to the best of
5 my ability. We have not run in--

6 **DR. ZIEMER:** I just want to make sure that
7 we're not dealing with the issue of classified
8 data. It's the issue of there appears, to the
9 best of your knowledge not to be that
10 information available.

11 **MR. ELLIOTT:** There appears to be no data, no
12 information.

13 **DR. ZIEMER:** Thank you. And would you clarify
14 now -- this final definition then includes
15 Petition number 18 --

16 **MR. ELLIOTT:** Yes.

17 **DR. ZIEMER:** -- Petition number 26 --

18 **MR. ELLIOTT:** Yes.

19 **DR. ZIEMER:** -- and what --

20 **MR. ELLIOTT:** Portions of Petition 28.

21 **DR. ZIEMER:** And portions of 28.

22 **MR. ELLIOTT:** Yes. It would include a portion
23 of the time, and of course steamfitters and
24 pipefitters, whoever worked in --

25 **DR. ZIEMER:** In that time.

1 **MR. ELLIOTT:** -- that time.

2 **DR. ZIEMER:** Everybody understand then that
3 this proposed class covers those first two
4 petitions completely --

5 **MR. ELLIOTT:** Yes, it does.

6 **DR. ZIEMER:** -- and a portion of the third
7 petition, Petition number 28, and it possibly
8 includes some others who wouldn't -- who
9 weren't even included in that peti-- those
10 petitions. Is that -- I'm (unintelligible) --

11 **MR. ELLIOTT:** I don't believe we have another
12 Y-12 petition that's been qualified at this
13 time.

14 **DR. ZIEMER:** There -- there's some workers that
15 might have been identified that weren't
16 identified in the original petition's -- it
17 seemed like your definition was a little
18 broader. Did I misunderstand that?

19 **MR. ELLIOTT:** The definition for 28 was broader
20 in its time frame, but specific in the worker
21 categories that it defined. Is that -- is that
22 your --

23 **UNIDENTIFIED:** (Off microphone) No.

24 **DR. ZIEMER:** Eighteen and 26 were very specific
25 in -- in the individuals they included. It

1 appeared that --

2 **MR. ELLIOTT:** Yes, 18 and --

3 **DR. ZIEMER:** -- when you combined them, you
4 broadened --

5 **MR. ELLIOTT:** Yes. Yes, we did.

6 **DR. ZIEMER:** -- them, as well.

7 **MR. ELLIOTT:** Eighteen and 26 were specific in
8 -- not only in time frame, but specific -- 18
9 was specific to the calutron operations.

10 **DR. ZIEMER:** Right.

11 **MR. ELLIOTT:** And we broadened both the time
12 frame --

13 **DR. ZIEMER:** And the --

14 **MR. ELLIOTT:** -- and the category of workers
15 that were included.

16 **DR. ZIEMER:** Yes.

17 **MR. ELLIOTT:** We're saying all workers --

18 **DR. ZIEMER:** Right.

19 **MR. ELLIOTT:** -- not just limiting it to
20 (unintelligible) --

21 **DR. ZIEMER:** That's my point, I want to make
22 sure that was understood by the Board.

23 **MR. ELLIOTT:** We also identified a number of
24 radiological activities that were not included
25 in either --

1 **DR. ZIEMER:** In the petitions.

2 **MR. ELLIOTT:** -- the first two petitions.

3 **DR. ZIEMER:** Yes. Okay. Jim?

4 **DR. MELIUS:** (Off microphone) I have two
5 questions.

6 (On microphone) One is -- since you brought it
7 up, Paul -- the classification issue. I
8 believe the Board at our last meeting had
9 requested further information on that,
10 including a copy of a written decision and --
11 if appropriate now or more appropriate at some
12 other point during this meeting -- I'd like to
13 get an update on where that issue stands.

14 **DR. WADE:** We have it on the agenda for
15 tomorrow.

16 **DR. MELIUS:** Okay, that's fine. Number two,
17 Larry, just to make sure I understand the issue
18 of the completed individual dose
19 reconstructions that overlap with this --

20 **MR. ELLIOTT:** Yes.

21 **DR. MELIUS:** -- petition, as I understand it,
22 you -- some have been --

23 **MR. ELLIOTT:** There's 135 dose reconstructions
24 that were completed.

25 **DR. MELIUS:** Yeah.

1 **MR. ELLIOTT:** Of those 135, we were able to
2 complete them by either using an overestimate
3 or an underestimate. These are -- these are
4 standard approaches that we use in dose
5 reconstruction. In underestimate we can use
6 the information at hand for the particular case
7 and the type of cancer that is involved and
8 show it to be compensable.

9 **DR. MELIUS:** Uh-huh.

10 **MR. ELLIOTT:** The overestimate, for the type of
11 cancer involved and the information at hand, we
12 can provide an overestimate that shows that the
13 case is not compensable.

14 **DR. MELIUS:** Right. But in this case you have
15 in one of your slides the overestimate applied
16 to employees who did not routinely work in
17 uranium enrichment buildings or radiological
18 processes at Y-12, or who incurred specific
19 cancers for which the maximum relevant
20 radiation doses can be estimated. That's part
21 I'm a little confused at in terms of -- of --
22 are these people that worked from '43 to '47 --
23 would they or not -- they not be included, the
24 (unintelligible) --

25 **MR. ELLIOTT:** They may have had some time in

1 that, but they had more time outside of that
2 time period.

3 **DR. MELIUS:** Okay. So would some of those
4 people now qualify?

5 **MR. ELLIOTT:** They may very well qualify. If
6 they were denied, they may very well be
7 qualified.

8 **DR. MELIUS:** Okay.

9 **MR. ELLIOTT:** And Department of Labor will
10 examine each of those cases to make that --

11 **DR. MELIUS:** Okay.

12 **MR. ELLIOTT:** -- determination.

13 **DR. ZIEMER:** Rich, did you have a question?

14 **MR. ESPINOSA:** No.

15 **DR. ZIEMER:** That's a carry-over, okay. Other
16 questions or comments?

17 **DR. WADE:** You need to see if any petitioners
18 are on, if they want to make any comments.

19 **DR. ZIEMER:** Yes, we need to determine whether
20 any petitioners did come on the line, or is
21 there anyone in the assembly who is a part of
22 the petition who wishes to speak. Apparently
23 not.

24 **DR. WADE:** Yes, we do.

25 **PETITIONER:** (Via telephone) Hello?

1 **DR. ZIEMER:** Oh, yes, okay, we apparently do.
2 Could you please identify yourself for the
3 record and please make your comments.

4 **PETITIONER:** (Unintelligible due to telephone
5 connection)

6 **DR. ZIEMER:** We're having a great deal of
7 difficulty with the connection here. It seems
8 to be coming in and out.

9 **PETITIONER:** (Unintelligible) Petition 28.

10 **DR. ZIEMER:** Could you state your name again,
11 please?

12 **PETITIONER:** (Unintelligible) Duvall.

13 **UNIDENTIFIED:** Duvall, Paul Duvall.

14 **DR. ZIEMER:** Paul Duvall, is that correct?

15 **MR. DUVALL:** I'm James Duvall and Betty Duvall,
16 my mother is here.

17 **DR. ZIEMER:** Okay. Please proceed with your
18 comments.

19 **MR. DUVALL:** We're just listening, but at this
20 time I don't think we have a comment. I think
21 our petition's number 28.

22 **DR. ZIEMER:** Yes, we have that petition.

23 **MR. DUVALL:** Okay.

24 **DR. ZIEMER:** Did you have any other comments
25 then?

1 **MR. DUVALL:** Not at the -- not at this time,
2 no.

3 **DR. ZIEMER:** Okay. Thank you very much.

4 **MR. DUVALL:** Thank you.

5 **DR. ZIEMER:** Yes, Mark Griffon.

6 **MR. GRIFFON:** Yeah, I -- I just want to
7 understand a little bit on -- on sort of where
8 -- where you can draw the line on when it's --
9 when you can calculate a plausible maximum. So
10 I noticed on the bottom of page 9 you talk
11 about --

12 **DR. ZIEMER:** It's on page 9 of which document,
13 Mark, are you looking at?

14 **MR. GRIFFON:** Of the evaluation report, I guess
15 for 18.

16 **DR. WADE:** That's in your binder. It's under
17 the tab for Y-12, the last document. You have
18 the three petitions and then finally the
19 evaluation report for 18.

20 **MR. GRIFFON:** And I -- I guess -- I guess this
21 would have been my sense, too, is that the
22 calutron operators -- it -- it -- I'm
23 summarizing, but it says the calutron operators
24 likely had very little or no contaminated dust
25 during normal operations. But Larry, you --

1 you talked about the break-- the constant
2 maintenance work and -- and -- and you know,
3 handling that went on. I'm wondering if -- if
4 these calutron operators were actually involved
5 in that kind of work or if we're being too
6 broad in -- in the characterization of the
7 class here. And I just want to understand
8 this, just -- just in terms of our setting
9 precedents and how we -- how we deliberate on
10 these issues.

11 Well, again, we have no information -- no
12 exposure monitoring information. It is our
13 belief from the work histories that we
14 developed in the Computer Assisted Telephone
15 Interview process that these people who worked
16 in the calutron operation at times were asked
17 to serve and clean up and do the maintenance
18 and do the disassembly and those -- those
19 various sorts of activities.

20 **MR. GRIFFON:** So -- so they could have well
21 been involved in those acti-- they had the
22 potential to be involved in --

23 **MR. ELLIOTT:** Yes.

24 **MR. GRIFFON:** -- that work. Okay.

25 **DR. ZIEMER:** Dr. Melius, did you have another

1 question -- no. Other Board members?

2 Now I believe that what is needed is a formal
3 action, if the Board is prepared to take
4 action, on what is essentially a recommendation
5 -- actually we don't have to -- we don't have
6 to approve the recommendation, but we have to
7 provide to the Secretary, through the Director
8 of NIOSH, our recommendation on this petition.
9 And I'm a little bit unclear procedurally --
10 and Lew Wade will help me with this -- that
11 once the class has been sort of reconstituted,
12 as was done in this case, are we then required
13 to use this new combined class or --

14 **DR. WADE:** I don't think you're required to use
15 the new combined class. I think it's the
16 Board's prerogative as to how to proceed from
17 the original petition. NIOSH is suggesting a
18 new class.

19 **DR. ZIEMER:** So the possible motions here would
20 be to act individually on these three
21 petitions, or to act on a combined class as
22 recommended by NIOSH. Jim, your flag is up.
23 Is that --

24 **DR. MELIUS:** Yeah, I am prepared to make the
25 motions on combined classes --

1 **DR. ZIEMER:** Jim, if you'd proceed to make your
2 motion.

3 **DR. MELIUS:** And this is rather lengthy, so --
4 and will sound familiar to the Board --

5 **DR. ZIEMER:** You have a wording somewhat
6 similar to previous situations --

7 **DR. MELIUS:** Quite similar.

8 **DR. ZIEMER:** Yes.

9 **DR. MELIUS:** The Board recommends that the
10 following letter be transmitted to the
11 Secretary of Health and Human Services within
12 21 days. Should the Chair become aware of any
13 issue that in his judgment would preclude the
14 transmittal of this letter within that time
15 period, the Board requests that he promptly
16 inform the Board of the delay and the reasons
17 for this delay, and that he immediately works
18 with NIOSH to schedule an emergency meeting of
19 the Board to discuss this issue.

20 Colon. The letter would read as follows: The
21 Advisory Board on Radiation and Worker Health,
22 parentheses, the Board, has evaluated SEC
23 Petitions 18, 26 and portions of Petition 28
24 under the statutory requirements established by
25 EEOICPA and incorporated into 42 CFR Section

1 83.13(c)(1) and 42 CFR 83.13(c)(3). The Board
2 respectively recommends a Special Exposure
3 Cohort be accorded to all Department of Energy,
4 parentheses, DOE, DOE contractor or
5 subcontractors, or DOE (sic) employees who
6 worked in uranium enrichment operations or
7 other radiological activities at the Y-12
8 facility in Oak Ridge, Tennessee from March
9 1943 through December 1947, and whom were
10 employed for a number of work days aggregating
11 at least 250 work days occurring either solely
12 under this employment or in combination with
13 work days of employment occurring within the
14 parameters established -- excuse me -- within
15 the parameters, parentheses, excluding
16 aggregate work day requirements, close
17 parentheses, established for other classes of
18 employees included in the SEC.

19 This recommendation is based on three specific
20 factors. Number one, the Y-12 facility during
21 this time period was one of the earliest sites
22 involved in the production of nuclear weapons
23 and was constructed and operated during a time
24 when radiation control and monitoring methods
25 were still under development.

1 Two, monitoring data, as well as information on
2 sources of radiation exposures and process
3 information are insufficient for adequate
4 individual dose reconstruction for the time
5 period involved. In particular, information
6 needed for dose reconstruction on the calutron
7 operations, an important source of exposure, is
8 incomplete.

9 Three, there is inadequate information
10 necessary for individual dose reconstructions
11 on other radiological activities during this
12 time period, including development of
13 beneficial radiological isotopes, development
14 and testing of a neutron monitor, maintenance
15 and use of a large Radium 226 sealed source,
16 and thorium extraction.

17 In its evaluation report NIOSH has concluded
18 that it is likely the radiation doses for this
19 group of workers at the Y-12 plant during this
20 time period could have endangered the health of
21 members of this class. The Board concurs.

22 Based on these considerations, the Board
23 recommends that this Special Exposure Cohort
24 petition be granted.

25 **DR. ZIEMER:** Thank you very much. Is there a

1 second?

2 **DR. ANDERSON:** Second.

3 **DR. ZIEMER:** Okay, you've heard the motion and
4 the second. This motion indeed parallels an
5 action by this Board previously, and perhaps
6 you would be willing to vote on this extensive
7 motion without seeing the detailed wording in
8 advance. However, this motion is open for
9 discussion, so let me ask if there are those
10 who oppose the motion or those who wish to
11 speak for the motion, or those who just have
12 some other comment. Mark?

13 **MR. GRIFFON:** I think I'd fall in that third
14 category. I speak in support of the motion,
15 although it might not sound like it right off.
16 I've still got some follow-up on -- on just how
17 -- how -- how you came to the conclusion that
18 you couldn't calculate a maximum plausible dose
19 for this class. I mean there's mention of 900
20 general area air samples. I understand the
21 limitations, but there -- there are a lot of
22 air sampling data. There's a mention that
23 there's no source term information available,
24 and I guess I find that kind of hard to believe
25 that there's no source term information

1 available for this time period. Even if you
2 had to make worst-case assumptions on
3 enrichment, I think there -- there must be
4 something that could be -- some kind of
5 estimates. And I guess why I raise this is I'm
6 thinking other petitions that we're dealing
7 with -- you know, I guess we have to understand
8 where these lines are drawn and when -- when we
9 -- when we think -- I know it's case by case,
10 but when we think certain things are sufficient
11 to make estimates and when they're not, so I'm
12 trying to get -- grapple with that a little
13 bit. And I'm wondering how -- whether -- I
14 mean you just say there's no -- no source term
15 information available or -- or was it that
16 there was -- you knew some quantity information
17 but there was no specifics on enrichment levels
18 and things like that, is that the --

19 **MR. ELLIOTT:** We knew -- we knew uranium -- we
20 knew uranium is the -- is the radionuclide of
21 concern in the calutron operation. However, we
22 do not know what the quantity of that source
23 term is at any given point in time. We do know
24 they were trying to enrich it, but to what --
25 to what degree along the path of the calutron

1 operation.

2 **DR. ZIEMER:** Perhaps Jim Neton will add to
3 that.

4 **DR. NETON:** I'd just like to add a little bit
5 to that. I think what's critical here is the
6 process of the calutron enrichment where --
7 these were essentially a series of many mass
8 spectrometers, if you will, in the early days.
9 And they would collect these -- this enriched
10 uranium on -- in certain locations, and that
11 would involve some scraping and collecting and
12 all this stuff. And it's unknown to us how
13 that all occurred, so we really don't know
14 much, if anything, about the process here.
15 It's very different if you're working on a
16 known process where you can sort of model it or
17 know the source term and get some dispersion
18 factors. But when you really don't know
19 exactly how it was handled and who was in
20 proximity to these things and where and that
21 sort of thing, I think that's the key unknown
22 here, is that.

23 **MR. GRIFFON:** And how about -- how about the --
24 the last question is the -- the health
25 endangerment question. I mean I think there

1 was a statement that basically said that it --
2 there was an ORAU report cited that said that
3 they -- these people could have had significant
4 intakes. I'm not sure I know what significant
5 intakes would be, but how -- how was that
6 conclusion made? I didn't look at the source
7 document, I must admit, but how did that
8 conclusion... I guess, you know, the other
9 concern when we're looking at these petitions
10 is that we're not -- I don't know, just because
11 there's very little data and -- we don't want
12 to be in a situation where we're potentially
13 compensating a very unlikely or very lowly
14 exposed classes, either, so --

15 **DR. NETON:** I honestly am not familiar with the
16 report. You know, I did not draft that Y-12
17 evaluation, but I would say that when you're
18 dealing with enriched uranium in a loose form,
19 clearly inhalation exposure and lung cancers
20 are -- are not -- would not be unlikely. I
21 mean PCs greater than 50 percent for -- for
22 certain exposure scenarios would not be
23 unlikely, but I can't speak to any more than
24 that.

25 **DR. ZIEMER:** Okay. Other questions or

1 comments?

2 I might add that this -- this letter -- if the
3 Board approves this action, the letter would
4 have an additional paragraph describing
5 supporting documentation that would accompany
6 it, which is the case in every previous
7 situation. It simply describes the -- the
8 petition itself, the evaluation of the
9 petition, the Board deliberations in terms of
10 our minutes (sic) and so on. That all gets
11 enumerated as a -- as a final paragraph to
12 this, so that would be included.

13 The 21 delay -- or 21-day time really is to
14 allow time for the -- for the transcripts
15 actually to be transcribed. It really is not
16 intended to take care of the Chairman's vast
17 vacation, even though sometimes it does. But
18 we have to allow some time for the supporting
19 documentation to catch up with a letter. And
20 the letter would go to John Howard and then to
21 the Secretary for action.

22 **MR. GRIFFON:** Just one last question on the
23 monitoring practices at the facility at the
24 time, and I'm trying to remember whether ORNL
25 was doing any monitoring at that time of -- of

1 the workers, whether they were at X-10 -- at
2 the X-10 facility or -- I -- I guess I wonder -
3 - I'm just wondering whether -- why these
4 people weren't monitored if there was
5 significant intakes -- potential for
6 significant intakes, and it looks like fairly
7 significant external doses from the X-rays.
8 Was it that the technology wasn't available at
9 the time or was it...

10 **MR. ELLIOTT:** I don't know that we have that
11 answer.

12 **MR. GRIFFON:** Okay.

13 **MR. ELLIOTT:** We've searched for the data, and
14 we've searched for information on
15 administrative controls and practices, and I
16 don't think we see anything in that that
17 informs us.

18 **DR. ZIEMER:** Do either of you know when Oak
19 Ridge formalized a dosimetry program, either at
20 X-10 or Y-12 or K-25? I think they had their
21 own system, as I recall. I wonder if Mr.
22 Presley, who's a site expert, knows the answer
23 to -- as to --

24 **MR. PRESLEY:** Yes, sir, I do.

25 **DR. ZIEMER:** Could -- as a citizen and employee

1 of Y-12, can you tell us --

2 **MR. PRESLEY:** As a citizen and employee of Y-12
3 and a person that's going through the 10,000
4 records for the Tennessee Eastman, there was a
5 program started in 1945 to use dosimeters, the
6 little film badge dosimeters, and that -- we
7 just ran across that document the other day. I
8 believe it's 1945 is when it was started.

9 **DR. ZIEMER:** At Y-12?

10 **MR. PRESLEY:** Y-12. Your --

11 **MR. ELLIOTT:** Do you have any idea why we have
12 no data in '45 then? Not to put you on the
13 spot, Mr. Presley, but --

14 **MR. PRESLEY:** Because -- because Bob Presley's
15 not gone through all the 10,000 documents yet.

16 **MR. ELLIOTT:** These are in the classified
17 holdings.

18 **MR. PRESLEY:** These were declassified in 1957.
19 Now, some of the things have been upgraded
20 since then, and that's the reason that I'm
21 going through them. But that did -- what he
22 asked is 1945.

23 **DR. ZIEMER:** Henry.

24 **DR. ANDERSON:** Yeah, I was -- I was just
25 wondering, of the 135 cases that were

1 adjudicated so far, how many of those were done
2 with the underestimating, do we know?

3 **MR. ELLIOTT:** I don't have that information. I
4 don't know.

5 **DR. ANDERSON:** Okay.

6 **DR. ZIEMER:** Rich?

7 **MR. ESPINOSA:** I just want to make sure I
8 understand the -- on the portions of Petition
9 28, what's covered. Is it just the years of
10 '43 to '47 for the steamfitters?

11 **MR. ELLIOTT:** Yes.

12 **MR. ESPINOSA:** Okay, I just wanted to make sure
13 on that. Thank you.

14 **MR. ELLIOTT:** All workers in those years.

15 **DR. ZIEMER:** Dr. Melius, you have another
16 comment?

17 **DR. MELIUS:** I just want to follow up on some
18 of Mark's comments and -- I mean as I read
19 NIOSH's evaluation report, I thought they had
20 made a -- you know, put a significant effort
21 into developing -- trying to obtain information
22 and I thought it was thoughtful evaluation of
23 what were different approaches that might be
24 used in terms of doing individual dose
25 reconstruction. And I think their report, you

1 know, sort of -- a lot of blind alleys there,
2 there just wasn't adequate -- the information
3 to be able to approach -- at least for that --
4 that time period involved. And I think they
5 also make a good case for why it's not possible
6 to go forward in time from '48 on when there --
7 more monitoring data becomes available and try
8 to extrapolate back and -- because of simply --
9 you know, what's missing among records -- you
10 know, could there be records someplace that may
11 show up whenever? We'll never know. I mean,
12 you know, it's always going to be a frustration
13 dealing with these facilities. But I think
14 that -- you know, I think with the -- say they
15 made a good faith effort and I think it made a
16 good case here for this particular time period.
17 As we get in -- a little further along, you
18 know, in the years of this facility, I think
19 then they'll -- you know, there will be
20 questions about where do we draw the line, when
21 is enough information -- you know, a certain
22 amount of information adequate and so forth.
23 I also think -- back to I think Henry's
24 question on the completed dose reconstructions
25 -- I mean this is sort of a -- a process that

1 goes on over time and that -- it's not possible
2 I think for NIOSH to foresee every possible --
3 you know, what's -- eventually become a Special
4 Exposure Cohort, so there are going to be some
5 that are going to be evaluated before -- I mean
6 the Special Exposure Cohort rule wasn't in
7 place for a few years and so some of these may
8 be completed during that time period. So I
9 think the fact that some dose reconstructions
10 have been completed and people have been turned
11 down, you know, may have as much as one -- some
12 of the individual work histories, but also the
13 fact that historically they're trying to, you
14 know, get done what they can get done and it's
15 not always possible to look at the bigger
16 picture and figure out what Special Exposure
17 Cohorts may be -- you know, evaluated and --
18 and, you know, passed at later meetings or
19 later points in time.

20 **DR. ZIEMER:** Henry.

21 **DR. ANDERSON:** Yeah, my -- my interest was more
22 in the ones that might have been unawarded than
23 if they did underestimate and they came over
24 50 percent. I was curious as to was that
25 because of subsequent years when they just

1 say Mr. Presley official abstains, too. Is
2 that not in the record? He can't even vote.

3 **DR. WADE:** He can't vote.

4 **DR. ZIEMER:** Can't vote, okay. That -- which
5 is sort of like abstaining, but it has --

6 **DR. WADE:** Totally different.

7 **DR. ZIEMER:** Totally different. Then the
8 motion carries and the -- the actions that are
9 included in the motion will be put into motion,
10 as it were.

11 Now the Chair's going to declare a 10-minute
12 comfort break and we will return.

13 (Whereupon, a recess was taken from 4:45 p.m.
14 to 4:58 p.m.)

15 **DR. ZIEMER:** We'll call the meeting back to
16 order. Before we begin the last item here on
17 this afternoon's agenda, I neglected to
18 announce to you that NIOSH has a couple of
19 staff people here who are available to assist
20 people who have issues or questions on
21 individual claims, if you want to know the
22 status of your claim or have other questions
23 about it. I believe those individuals are in
24 this room back behind us here to my right in a
25 table in the far corner. So if you're a

1 claimant and need information about the status
2 of your claim or other information about it,
3 they will be available to try to help you.

4 **IAAP SEC PETITION**

5 This next item on our agenda is a SEC petition.
6 It involves radiographers at the Iowa
7 Ammunition Plant and the presentation will be
8 made by Larry Elliott.

9 **DR. WADE:** Just very briefly, we welcome back
10 Mr. Presley. We missed you.

11 **DR. ZIEMER:** Let the record show that Mr.
12 Presley has come back to the table.

13 **DR. WADE:** I don't think there is anyone
14 conflicted on Iowa, so we'll remain whole
15 through this discussion.

16 **DR. ZIEMER:** Okay. Larry Elliott.

17 **MR. ELLIOTT:** Thank you, Dr. Ziemer. Just as a
18 reminder from our Cedar Rapids meeting, we went
19 through an evaluation report on a petition for
20 the Army Ammunition Plant and a portion of that
21 work force was still under evaluation, those
22 workers being radiographers, and so that is the
23 evaluation report that I'm here to present to
24 you today.

25 **DR. ZIEMER:** Hang on just a moment. Let's make

1 sure everybody has a copy of the document.

2 **DR. ROESSLER:** I don't have one.

3 **MR. PRESLEY:** I don't have one.

4 **UNIDENTIFIED:** There are none on this

5 (unintelligible) --

6 **DR. ZIEMER:** I think we have the petition and
7 the evaluation report. I think what people are
8 looking for are copies of your presentation,
9 Larry. We don't seem to have that. Or should
10 we have that?

11 **MR. ELLIOTT:** You should have that. They --
12 they were prepared over a week ago, so...

13 **DR. ZIEMER:** Dr. Wade will track them down. I
14 think you can go ahead and proceed and we'll
15 try to get them in the meantime.

16 **DR. MELIUS:** Next time you'll wait till the day
17 before.

18 **MR. ELLIOTT:** Next time you want me to wait
19 till the day before?

20 **DR. ZIEMER:** Too far in advance is what the
21 problem is.

22 **MR. ELLIOTT:** Always a hard group to please.
23 The Iowa Army Ammunition Plant's submission
24 requesting the Secretary of HHS to add a class
25 to the Special Exposure Cohort was provided to

1 NIOSH by way of FAX machine on June 15th, 2004.
2 The initial class definition that was provided
3 in that petition was stated as all technicians,
4 laboratory, health physics, chemical, X-ray, et
5 cetera, production personnel, hourly and
6 salaried, engineers, inspectors, safety
7 personnel, physical security personnel and
8 maintenance persons working at the Iowa Army
9 Ammunition Plant, Line 1, which includes Yard
10 C, Yard G, Yard L, Firing Site area, Burning
11 Field B, and the storage sites for pits and
12 weapons, including Building 73 and 77, from the
13 years 1947 through 1974.

14 This particular petition submission met the
15 criteria outlined in our Rule 42 CFR under
16 Sections 83.7 through 83.9, and qualified for
17 evaluation on October 20th of 2004. The
18 petitioners were notified by letter, and a
19 notice that the submission had qualified for
20 evaluation was published in the *Federal*
21 *Register* on October 25th of 2004.

22 We evaluated the petition using the guidelines
23 as specified in Section 83.13 of our rule and
24 submitted a summary of findings and a petition
25 evaluation report to the Board and to the

1 petitioners on February 2nd, 2005. A summary
2 of the evaluation report was published in the
3 *Federal Register* on February 3rd, 2006. And as
4 I said earlier, NIOSH presented the Iowa
5 petition evaluation report to the Board on
6 February 9th, 2005, and the evaluation report
7 proposed this following class definition: All
8 employees working at the Iowa Army Ammunition
9 Plant, Line 1, which included Yard C, Yard G,
10 Yard L, Firing Site area, Burning Field B and
11 storage sites for pits and weapons, including
12 Buildings 72 and 77, for March 1949 to 1947 --
13 '74, excuse me.

14 Again, we're required under statutory
15 requirement to evaluate these petitions using a
16 two-pronged test: Is it feasible to estimate
17 the level of radiation doses of individual
18 members of the class with sufficient accuracy;
19 and secondly, is there a reasonable likelihood
20 that such radiation dose may have endangered
21 the health of members of the class.

22 NIOSH had reviewed the available data sources
23 for the existence of personal monitoring, area
24 monitoring, industrial process information and
25 radiological source term information relevant

1 to determining the feasibility of dose
2 reconstruction for the class. The various data
3 that we looked at and the resources that we
4 examined are included in this slide, and they
5 consist of the existing site profiles,
6 Technical Information Bulletins, the variety of
7 individual dose reconstructions that had been
8 completed to date, internal databases
9 containing personal and area monitoring data,
10 Department of Energy records, NIOSH documents,
11 scientific reports, information that was gained
12 through the interviews with former workers and
13 information provided by the petitioners.
14 In summary, the available monitoring data was
15 found that from 19-- from May of 1948 to March
16 of 1949 individual dosimetry is not available
17 for the radiographers that are defined in the
18 class. Subsequent record searches have not
19 identified any detailed information concerning
20 the radiographic process, the equipment or the
21 procedures that were used during this early
22 time period.
23 This evaluation report that we're presenting to
24 you today addresses only the following class:
25 Industrial radiographers who conducted

1 radiography on non-radiological high explosive
2 weapon components at the Iowa Army Ammunition
3 Plant from May of 1948 to March of 1949.

4 In summary, our evaluation report in -- with
5 specific regard to the feasibility of dose
6 reconstructions for radiographers, we find that
7 there is -- there is no potential for internal
8 dose. There was no radiological material on-
9 site at that time, so we're only talking about
10 the X-ray exposure that would have occurred to
11 this -- in -- during radiographic operations.
12 We cannot use surrogate data because NIOSH
13 cannot validate the nature of the radiographic
14 operations. There is a lack of substantive
15 process information associated with radiography
16 for the time frame. There's a lack of
17 information on the radiation source strength
18 and the shielding that was used by
19 radiographers in this time frame. Virtually no
20 information on radiography practices, the
21 equipment, the source strength exists, and it
22 is not feasible to estimate an upper bound on
23 the potential external dose incurred by
24 radiographers.

25 Workers in this class may have accumulated

1 substantial doses through chronic exposure to
2 external sources of radiation. And so when we
3 look at health endangerment, we believe that
4 their health was endangered, and we have found
5 no discrete incidents to have involved
6 exceptionally high levels of acute exposure.
7 So our proposed class definition would be:
8 Employees whose job title was radiographer,
9 working at the Iowa Army Ammunition Plant, Line
10 1, which includes Yard C, Yard G, Yard L,
11 Firing Site area, Burning Field B and Buildings
12 73 and 77 from May 1948 to March 1949 and whom
13 were employed for a number of work days
14 aggregating at least 250 work days occurring
15 under this employment in combination with work
16 days of employment occurring within the
17 parameters, excluding those aggregate work day
18 requirements, established for other classes of
19 employees included in the Special Exposure
20 Cohort.
21 So it's a very short presentation. That's all
22 the slides I have. I can tell you that we have
23 four claims that fit into this particular class
24 of radiographers, only one of which has a job
25 title of radiographer.

1 The other issue that I would point your
2 attention to is that this time period does not
3 include 250 days. It is a very short time
4 period. I'm not sure -- I didn't do the math
5 yet, but it's shorter than 250 days for this
6 particular class.

7 And with that, I'll take questions.

8 **BOARD DISCUSSION OF IAAP SEC PETITION**

9 **DR. ZIEMER:** Okay. Thank you, Larry.
10 Questions? Dr. Melius, did you have a question
11 or is your flag --

12 **DR. MELIUS:** Now I do, on the basis of Larry's
13 last comment. Could you repeat that last
14 statement about the time period involved is
15 less than 250 days or --

16 **MR. ELLIOTT:** This is -- this class time
17 period, as we've defined it and as the records
18 indicate, covers a period from May of 1948 to
19 March of 1949.

20 **DR. MELIUS:** Uh-huh.

21 **MR. ELLIOTT:** It's short of 250 working days.
22 So a person who would have spent a -- for your
23 information, a person who would have spent the
24 entire duration of this class time period would
25 get whatever days acquired there and would have

1 to have other days in the other class at Iowa
2 to get their 250 days.

3 **DR. ZIEMER:** So this period, in and of itself,
4 is insufficient to meet the requirement.

5 **MR. ELLIOTT:** In and of itself is insufficient
6 to award a claim for that class.

7 **DR. ZIEMER:** And I have a follow-up question.
8 The proposed definition in the -- in your
9 evaluation report says industrial radiographers
10 who conducted radiography on non-radiological
11 high explosive weapons. Is that definition now
12 not operational? You seem to have a -- you
13 ended up with a different definition, I
14 believe, if I heard it correctly. The final
15 definition was more like the other groups,
16 described the lines and buildings and --

17 **MR. ELLIOTT:** Well, the definition that I
18 provided at the end is the definition that we
19 would -- the evaluation report proposes.
20 Earlier in my presentation I have a slide that
21 says evaluation report addresses the following
22 class: Industrial radiographers who conducted
23 radiography on non-radiological high explosive
24 materials.

25 **DR. ZIEMER:** Yeah, that's the so-called

1 abbreviated --

2 **MR. ELLIOTT:** Yes, that is an abbreviated --

3 **DR. ZIEMER:** My question has to do with the
4 phrase "non-radiological high explosives".
5 That doesn't occur later, and if a person
6 conducted radiography on both non-radiological
7 and radiological, would that exclude them from
8 this, or does the radiological part --

9 **MR. ELLIOTT:** No --

10 **DR. ZIEMER:** -- pick them up in the other --

11 **MR. ELLIOTT:** -- it would not -- it would not
12 exclude them. These folks worked on non-
13 radiological components during this very brief
14 time frame from -- from May of '48 to March of
15 '49. It's our understanding, and I think one
16 of the petitioners verified this understanding
17 in Cedar Rapids, as well as here in St. Louis,
18 that they -- they themselves believe there were
19 no radiological materials on-site prior to --

20 **DR. ZIEMER:** At that time.

21 **MR. ELLIOTT:** -- March of '49.

22 **DR. ZIEMER:** Thank you.

23 **MR. ELLIOTT:** And yes, some of these
24 radiographers could have worked in this class
25 and then continued their radiography work on

1 radioactive components into the next class, and
2 we know that that -- that happened.

3 **DR. ZIEMER:** Which might give them the rest of
4 the days they --

5 **MR. ELLIOTT:** Yes.

6 **DR. ZIEMER:** -- need, yes. Does everybody
7 understand the nature of this and it -- it's
8 understood by the petitioners that this
9 restrictive time period in itself is not
10 adequate to meet the needs of a claim. Is that
11 correct?

12 **MR. ELLIOTT:** In and of itself, a worker who
13 worked only during this time period would not
14 acquire 250 days. They would have had to have
15 worked at some other Special Exposure Cohort
16 class to aggregate the days.

17 **DR. ZIEMER:** Okay. Other questions or
18 comments? Yes, Robert Presley.

19 **MR. PRESLEY:** Larry, do we have anybody that
20 falls in that less than 250 days?

21 **MR. ELLIOTT:** We have four -- we have four
22 claims, and I believe only one of those -- one
23 of those that is not listed as a radiographer
24 may have a limited time in that class. I'm not
25 sure on that, but that may be it, only one

1 individual, I believe.

2 **MR. PRESLEY:** Then if that's the case, then he
3 would not be eligible even though he had
4 sufficient X-rays for this time period if he
5 didn't have the time other than --

6 **MR. ELLIOTT:** If he didn't have the -- if he
7 didn't have the 250 days, he would not be
8 eligible.

9 **MS. MUNN:** In another...

10 **DR. ZIEMER:** Wanda Munn?

11 **MS. MUNN:** And the remainder of that 250 days
12 would have to be in another SEC. Correct?

13 **MR. ELLIOTT:** That is correct.

14 **MS. MUNN:** So --

15 **MR. ELLIOTT:** Or in the Iowa SEC, that would be
16 a class.

17 **MS. MUNN:** So an individual who worked during
18 that period of time and had 250 days following
19 that, which does not fall into an SEC, would
20 not therefore qualify.

21 **MR. ELLIOTT:** If I understand your statement, I
22 believe that's correct, yes.

23 **DR. ZIEMER:** The Chair is ready to entertain a
24 motion relative to this petition.

25 **DR. MELIUS:** (Off microphone) I happen to be

1 ready with one.

2 **DR. ZIEMER:** Dr. Melius is ready. The Chair
3 recognizes Dr. Melius for the purpose of making
4 a motion.

5 **DR. MELIUS:** My motion is as follows -- sound
6 very familiar, parts of it.

7 The Board recommends the following letter be
8 transmitted to the Secretary of Health and
9 Human Services within 21 days. Should the
10 Chair become aware of any issue that in his
11 judgment would preclude the transmittal of this
12 letter within that time period, the Board
13 requests that he promptly informs the Board of
14 the delay and the reasons for this delay, and
15 that he immediately works with NIOSH to
16 schedule an emergency meeting of the Board to
17 discuss the issue. The letter reads as
18 follows:

19 The Advisory Board on Radiation and Worker
20 Health, parentheses, the Board, close
21 parentheses, has evaluated SEC Petition 006-2
22 concerning industrial radiographers who worked
23 at the Iowa Ordnance Plant, IOP, under the
24 statutory requirements established by EEOICPA
25 and incorporated into 42 CFR Section

1 83.13(c)(1) and 42 CFR Section 83.13(c)(3).
2 The Board respectfully recommends a Special
3 Exposure Cohort be accorded to all Department
4 of Energy employees or its contractor or
5 subcontractor employees who worked as
6 radiographers from March 1948 to -- excuse me,
7 from May 1948 to March 1949 in support of Line
8 1 operations of the Iowa Ordnance Plant and
9 whom were employed for a number of work days
10 aggregating at least 250 work days occurring
11 either solely under this employment or in
12 combination with work days of employment
13 occurring within the parameters, excluding
14 aggregate work day requirements, close
15 parentheses, established for other classes of
16 employees included in the SEC.
17 This recommendation is based on two factors.
18 During the time period in question there was no
19 individual radiation monitoring program at
20 IAAP. An individual dosimetry program was not
21 established at that site until 1955. However,
22 there is not sufficient information available
23 on the radiographic operations during the time
24 period in question to be able to utilize
25 monitoring data from a subsequent time to

1 reconstruct individual exposures during the
2 earlier time period. In order to do so in a
3 scientifically sound manner, additional
4 information on the radiological sources,
5 shielding and the radiography process would be
6 needed.

7 Based on these considerations, NIOSH has
8 concluded in its evaluation report that it is
9 not feasible to estimate with sufficient
10 accuracy the external doses incurred by these
11 radiographers at IAAP during the time period in
12 question. The Board concurs.

13 Number two, in its evaluation report NIOSH has
14 concluded it is likely that radiation doses for
15 this group of workers at the Iowa Ordnance
16 Plant during this time period could have
17 endangered the health of members of this class.
18 The Board concurs.

19 Based on these considerations, the Board
20 recommends that this Special Exposure Cohort
21 petition be granted.

22 And there's a closing paragraph on supporting
23 documentation.

24 **DR. ZIEMER:** Thank you. You've heard the
25 motion. Is there a second?

1 **DR. DEHART:** Second.

2 **DR. ZIEMER:** There's a second. The motion is
3 on the floor for discussion. Wanda Munn.

4 **MS. MUNN:** I think I would have to see that
5 wording in writing. There is one sentence
6 which does not make clear to the reader the
7 point which I was just questioning. Namely
8 since it is impossible for individuals to have
9 achieved the requisite number of days during
10 this period, their classification as SEC
11 claimants -- favorable claimants would have to
12 require their additional occupation in this
13 same classification during a different SEC
14 period, which had previously been -- or --
15 previously or subsequently identified.

16 **DR. ZIEMER:** Let me --

17 **MS. MUNN:** (Unintelligible) --

18 **DR. ZIEMER:** -- respond in part, and then
19 perhaps the mover of the motion can also
20 respond. I Believe it's true of any SEC
21 situation, regardless of whether it's this one
22 or any other, under the rules, the individual
23 has to get 250 days. This would be true of the
24 other ones, even if the time period's greater.
25 I think -- the question you're raising is does

1 an individual who fills the full gap of the
2 defined time period believe that -- somehow
3 that they are entitled to the compensation if
4 they sort of filled the full gap. I guess
5 that's really what you're asking, and I had
6 kind of asked that earlier. But I thought that
7 the 250 days were mentioned in the -- in the
8 motion, so Jim, can you clarify it for us?

9 **DR. MELIUS:** Yeah, we have standard language
10 that I think we worked out when we did our
11 first petition evaluation that indicates that
12 they have to -- say and whom were employed for
13 a number of work days aggregating at least 250
14 work days occurring either solely under this
15 employment, or in combination with work days of
16 employment occurring within the parameters,
17 excluding aggregate work day requirements,
18 established for other classes of employees
19 included in the SEC.

20 **MS. MUNN:** And that's -- that's where I raise
21 the question, because since it is impossible
22 for them to have accomplished it solely under
23 this period, I do not think that phrase should
24 be incorporated in our letter. Quite to the
25 contrary, I think --

1 **DR. ZIEMER:** Or perhaps modified somewhat to
2 indicate that it must be in combination.

3 **MS. MUNN:** Because this --

4 **DR. ZIEMER:** It's going -- it, of necessity in
5 this case, must be in combination, rather than
6 solely or in combination. It cannot be solely.
7 Is that correct --

8 **MS. MUNN:** Correct.

9 **DR. ZIEMER:** -- and Jim, did it have the word
10 "solely" in there or some such?

11 **MS. MUNN:** The original wording just read did
12 have "solely" in it.

13 **DR. ZIEMER:** The Chair will recognize this as a
14 friendly amendment, if the mover of the motion
15 can -- can --

16 **DR. MELIUS:** Let me wordsmith just a second
17 here.

18 Okay, what if it -- and whom were employed for
19 a number of work days aggregating at least 250
20 work days occurring under this employment in
21 combination with work days of employment
22 occurring within the parameters.

23 **DR. ZIEMER:** I think that would --

24 **DR. MELIUS:** I think that covers --

25 **DR. ZIEMER:** -- make it clear, yes. Wanda, are

1 you agreeable that that addresses your issue?

2 **MS. MUNN:** I believe so.

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

4 **MS. MUNN:** Although --

5 **DR. ZIEMER:** The seconder's okay with that?

6 **MS. MUNN:** -- I'm a visual (unintelligible).

7 **DR. ZIEMER:** The seconder's okay with that.

8 Okay. He heard you say you wanted to see the
9 words.

10 **DR. MELIUS:** She said she was visual, I was --
11 come look at the screen.

12 **MS. MUNN:** Yes.

13 **DR. MELIUS:** You want a piece of paper?

14 **MS. MUNN:** No, thanks.

15 **DR. ZIEMER:** I have a question. Maybe Larry or
16 Jim can answer it. Do we know whether these
17 radiographers were using X-ray equipment or
18 whether they used nuclides -- you know,
19 industrial -- were they sources or X-rays -- or
20 both?

21 **UNIDENTIFIED:** Sources, I'm sure.

22 **DR. NETON:** I believe they were both, so there
23 were some nuclides with -- nuclide-based
24 radiography equipment. I believe that one of
25 them may have been a cobalt 60 source, if I'm

1 not mistaken.

2 **DR. ZIEMER:** So we have limited information on
3 what was used or -- I mean I -- I would sort of
4 raise some questions similar to what Mark did.

5 **DR. NETON:** Yeah.

6 **DR. ZIEMER:** It seems to me radiographers would
7 be much easier to scope or to envelope than
8 others.

9 **MR. ELLIOTT:** I think it goes again to how many
10 were done in a given time frame. We couldn't
11 put a number on that, couldn't quantify that --
12 that amount of the source.

13 **DR. ZIEMER:** Yeah. Well, you know --

14 **MR. ELLIOTT:** Or which source was used, whether
15 it was X-ray or cobalt 60.

16 **DR. ZIEMER:** Well, you know, if you tried to do
17 this in a medical facility -- I'm looking --

18 **DR. ANDERSON:** Yeah, right.

19 **DR. ZIEMER:** -- you can figure out pretty close
20 what physi-- how many exposures you can
21 physically make in a day. I mean there's --
22 there's some limits to it, even for fast
23 workers. I was actually a little surprised
24 that we couldn't scope this one out, but you're
25 right, we don't know exactly just...

1 not want me to use this comment.

2 **DR. MELIUS:** That's what I'm saying.

3 **DR. ZIEMER:** Okay. All who support the motion,
4 raise your right hand.

5 (Affirmative responses)

6 **DR. ZIEMER:** Any opposed? Is Mike Gibson on
7 the line?

8 Any abstentions? Then the motion carries.

9 Larry, is there a remark that you wish to make?

10 **MR. ELLIOTT:** Yes, Mr. Anderson sent you all an
11 e-mail and asked me if I would, you know, make
12 this comment for -- for -- on behalf of the
13 petitioners from Iowa. He says (reading) To
14 the Advisory Board, this petitioner wishes to
15 thank the Board and NIOSH for their addition of
16 the X-ray workers on Line 1 into the petition.
17 Your thoroughness is commendable. Mr. Robert
18 Anderson.

19 **DR. ZIEMER:** Thank you very much.

20 **DR. MELIUS:** I received that at 11:00 o'clock
21 this morning.

22 **DR. ZIEMER:** We will have a public comment
23 period this evening. It will begin at 7:30
24 here in this room.

25 I also call attention, for Board members, that

1 the session tomorrow morning begins with a
2 subcommittee meeting, so you do not all have to
3 be here, but I do want to identify who will be
4 here.

5 I have Mark, Roy -- are you on -- you're on
6 this subcommittee?

7 **DR. DEHART:** Not if he's available.

8 **DR. ZIEMER:** Oh, you're the -- you were the
9 fill-in for Henry. Mark, Henry, I'm involved.
10 I think Mike Gibson was on the original group
11 and Mike is not able to be here. Who else was
12 on the original subcommittee. Gen, were you or
13 Wanda?

14 **DR. ROESSLER:** I think Wanda was.

15 **DR. ZIEMER:** Wanda. So those four individuals
16 at least will be here early, if not bright.
17 Others are welcome to join us. Is it a bad
18 thing if we have a quorum? If we have a quorum
19 of Board members, is that --

20 **DR. WADE:** No, it's not a bad thing.

21 **DR. ZIEMER:** Not a bad thing, so others can --

22 **MR. GRIFFON:** (Off microphone) (Unintelligible)

23 **DR. ZIEMER:** Yes, we're going to be looking I
24 think mainly at the Mallinckrodt document, Rev.
25 1 and the analysis of Rev. 1 by SC&A, in order

1 to make a recommendation to the full Board.
2 And certainly our local folks here are -- from
3 St. Louis are welcome to join us. This is an
4 open subcommittee session.

5 **DR. WADE:** And have you mentioned later in the
6 day possibly?

7 **DR. ZIEMER:** Oh, subcommittee members, there's
8 a pretty good chance we're going to also want
9 to meet tomorrow evening at 7:00 o'clock. We
10 have some other documents we need to go through
11 in preparation for our work on Thursday, so...
12 Are there any other announcements or any other
13 information that the Board needs this evening,
14 ask our staff. Cori is still with us -- Cori
15 or Lew, anything --

16 **DR. WADE:** We will get you copies of Larry's
17 presentation on the Iowa SEC petition as
18 quickly as we can.

19 **DR. ZIEMER:** It's too late. Liz, did you have
20 a comment?

21 **DR. MELIUS:** Can I just ask, while she's
22 getting to the mike, can we leave our stuff
23 here or do we have to take it with us?

24 **DR. ZIEMER:** Do you know if we can leave things
25 in the room?

1 **MS. HOMER:** I would not suggest doing that.

2 **DR. ZIEMER:** Okay, better not to. Liz?

3 **MS. HOMOKI-TITUS:** This is just a housekeeping
4 item. I wanted to introduce Emily Howell and
5 Michael Rapke*, who are new members of the
6 Office of General Counsel team. Emily will be
7 assisting me with Board work, so you'll see
8 more of her. And Michael came just to see one
9 Board meeting to see what goes on.

10 **DR. ZIEMER:** Okay. Welcome. General Counsel's
11 view is that you can't have too many lawyers at
12 the meeting. Right? Welcome, folks.

13 We will recess then till 7:30 this evening.

14 Thank you very much.

15 (Whereupon, a recess was taken from 5:30 p.m.
16 to 7:30 p.m.)

17 **GENERAL PUBLIC COMMENT**

18 **DR. ZIEMER:** Good evening, everyone. Welcome
19 to the public comment session of the Advisory
20 Board on Radiation and Worker Health. We've
21 been to St. Louis a time or two before, and
22 many of your colleagues have had an opportunity
23 to speak to the Board. I know we've had bigger
24 crowds in the past and, on a hot summer night I
25 -- let's see, the Cards aren't playing tonight,

1 are they?

2 **UNIDENTIFIED:** (Off microphone) Yes.

3 **DR. ZIEMER:** Oho -- anyway, we're glad you're
4 here. I'm Paul Ziemer and I'm the Chairman of
5 the Advisory Board.

6 I want to take a few minutes here at the
7 beginning and familiarize you with what this
8 Board is all about. Now for some of you, this
9 may not be new information because if you were
10 here last time we had a public comment session
11 I used the same slides. So sorry about that,
12 and the Board members have seen these not only
13 here in St. Louis, but a lot of different
14 places, so if they fall asleep we'll understand
15 why that is -- is true. We've even shown them
16 up there in New York. I see Ed is here from
17 the Bethlehem Steel area.

18 Anyway, let me take a few minutes and just
19 familiarize you with the responsibilities of
20 this Board.

21 Under the legislation on the Energy Employees
22 Occupational Illness Act -- under the
23 legislation the Board is defined, in terms of
24 its composition, as consisting of no more than
25 20 members who are appointed by the President

1 of the United States. And you've already
2 noticed there are not 20 members here. The
3 President has not chosen to -- to identify or
4 select that many individuals for the Board, so
5 you see all the Board members here, with the
6 exception of one who -- whose father is very
7 ill and he could not be here tonight.
8 The legislation also says that the Board must
9 in a sense represent certain groups,
10 particularly the affected workers, as well as
11 representatives of the scientific and the
12 medical communities. And indeed we have such
13 representation on this Board.
14 You see their name signs here. Very briefly I
15 want to identify for you -- is that readable?
16 I can almost read it myself, so -- I'm a
17 retired professor from Purdue University. My
18 area is radiation safety or the -- in the
19 jargon of the profession, health physics.
20 Lewis Wade, Dr. Wade at the front table here,
21 is -- serves as our Designated Federal
22 Official, and he is here in that capacity as
23 part of the Centers for Disease Control, which
24 is the parent organization of NIOSH.
25 Henry Anderson, Dr. Anderson, is here and you

1 see -- I won't go through all their titles
2 other than who they are, but this is Dr.
3 Anderson from Wisconsin.

4 Dr. Roy Lynch DeHart -- I like to get the Lynch
5 in there -- from Tennessee; Richard Espinosa
6 from Albuquerque, in the Los Alamos area; Mike
7 Gibson is the one who could not be here today;
8 Mark Griffon is a health physicist and
9 consultant, here is Mark; Dr. Melius, Jim
10 Melius over here, from New York State; Wanda
11 Munn, a nuclear engineer, also retired, from
12 the Hanford area; Charles Owens, who we call
13 Leon 'cause he goes really by his middle name,
14 so here's Leon Owens, and Leon is with U.S.
15 Enrichment Corporation in Paducah; Robert
16 Presley from Oak Ridge; and Dr. Gen Roessler,
17 retired professor from the University of
18 Florida, now living in Minnesota. So that is
19 the Board, and you do see they represent a
20 cross-section of different individuals.
21 This Board has three specific responsibilities,
22 the first of which is involvement in the
23 development of guidelines. Can you read that
24 from there, Richard Miller?

25 **MR. MILLER:** (Off microphone) No, I can't, sir.

1 **DR. ZIEMER:** Is there any way to blow that up
2 bigger?

3 Incidentally, if you want copies of this
4 there's hundreds of copies of this, so you
5 should get one and have one for your mother or
6 your -- yeah, or your spouse.

7 **DR. MELIUS:** (Off microphone) Tell Richard to
8 move forward.

9 **DR. ZIEMER:** Yeah -- Richard Miller should move
10 forward is what they said.

11 This Board is -- had specific responsibilities
12 on the development of the guidelines that are
13 used for the dose reconstruction process.

14 Those guidelines are now part of the *Federal*
15 *Register*. They have the force, in essence, of
16 law. And also the guidelines dealing with
17 probability of causation, the methodology by
18 with -- by which that magic number is
19 calculated.

20 We also have a responsibility on assuring and
21 confirming the validity of the dose
22 reconstructions and the scientific quality of
23 those. And so the Board has that as a very
24 specific responsibility to, in a sense, look
25 over the shoulders of the Federal agency -- in

1 this case NIOSH -- and assuring the quality of
2 the dose reconstructions.

3 And then we have a responsibility with respect
4 to the Special Exposure Cohorts. And that,
5 again, is spelled out by law that we are to
6 advise the Secretary of Health and Human
7 Services on the issue of Special Exposure
8 Cohort, a process which, as you know, we are in
9 right now with respect to Mallinckrodt, as well
10 as some other facilities.

11 So those are the three things that this Board
12 is responsible for. We do not do the dose
13 reconstructions. We do not deal with your
14 individual cases. We do not -- we're not an
15 appeals body that hears appeals on decisions
16 and things like that, so we -- we are, in a
17 sense, restricted by law in terms of what we
18 can do.

19 So in fact I put a slide in here to tell you
20 what we don't do. We don't have the authority
21 to review individual dose reconstruction cases
22 for claimants. Now we do review some cases as
23 a part of our quality control process. We look
24 at cases that have been finalized to assure
25 that they've been done properly. That's more

1 like an audit function. But we do not deal
2 with individual cases on behalf of claimants.
3 As I already said, we don't serve as a board of
4 appeals. We don't even make recommendations to
5 Congress. Often we have people in public
6 meetings tell us that we should have Congress
7 change the law in some way or do something like
8 that. We do not lobby Congress. We do have
9 opportunities to interact with them, indeed, as
10 we did earlier today, to hear from them, as --
11 as the case may be. But we are not a lobbying
12 group.

13 We are not involved in changing the provisions
14 of the law itself. Often people in public
15 comment period say well, why don't you do this,
16 or why don't you get the law changed. We are
17 not the ones that do that. We do have
18 opportunities sometimes to input in appropriate
19 ways if we believe there's some -- something
20 that should be changed, but that is not really
21 an official responsibility of this group.

22 You may be aware that, in order to assist the
23 Board in carrying out those functions that I
24 described, we have hired a contractor. And the
25 government has made some funds available to the

1 Board so that we can supplement our work
2 through the help of a private contractor. And
3 we have contracted with S. Cohen & Associates,
4 and I know that a number of you have already
5 interacted with them because they've been out
6 here on behalf of the Board to gather
7 information in terms of evaluating site
8 profiles and related things in this particular
9 case. So they are assisting us in the dose
10 reconstruction process reviews. But I do point
11 out, as I have in the last bullet here, the
12 reviews are the Board's responsibility. We
13 have the contractor to advise us, to gather
14 information for us, to give us their view of
15 what's being done. But ultimately the
16 responsibility lies with the Board in terms of
17 what we do with the recommendations of S. Cohen
18 & Associates.

19 Currently our contractor has four defined
20 tasks. Task One is to assist us in reviewing
21 site profiles. Now we do not review every site
22 profile. We select certain ones to review.
23 Likewise, they assist us in tracking the cases
24 that we've reviewed -- basically keeping our
25 database for us.

1 Task Three is reviewing dose reconstructions.
2 We select at random numbers of dose
3 reconstructions that have been completed. Our
4 objective is to -- to sample about two and a
5 half percent of all of the dose reconstructions
6 as an audit function to determine that they
7 have been done properly. And so they assist us
8 with that.

9 And actually what I just described is Task
10 Order Four. Task Order Three is a review of
11 the procedures that are used. They go back and
12 have reviewed the procedures of NIOSH and its
13 contractor, ORAU, to determine whether the
14 procedures are suitable and are being properly
15 used. So that is the function of our
16 contractor.

17 Now with that sort of as background material,
18 let me make one closing comment here, and that
19 is we're here just to listen to you. Some of
20 you will want to tell us about your individual
21 cases, and we're glad to have you do that. In
22 general, we may not be in a position to answer
23 specific questions. If you have questions
24 about your own case or if you are a claimant or
25 are here on behalf of a claimant, we would ask

1 that you contact one of the staff people for
2 NIOSH -- and they have people that are here all
3 week to assist in specific cases. So if you
4 have questions of that type, we will want to
5 refer -- refer you back to those staff people
6 that can help you with a specific issue that
7 you might have in your case.

8 Other than that -- oh, the other thing I want
9 to say is we want to give preference tonight to
10 those who are here speaking in behalf of or
11 related to the Mallinckrodt petition and the
12 facility here. We will hear from others, but
13 I'm going to give preference in our speaking
14 order to -- first to those who are here to talk
15 about the local facility.

16 So with that, let me return to my seat and I
17 have a list of people who have asked to speak.
18 It's still not too late, you can -- you can add
19 your name to the list, but I'll take these in
20 the order that -- that I was -- they were given
21 to me, and we'll begin with Dan McKeel.

22 And Dan, we've heard from him before. We're
23 glad to see you back, Dan, to --

24 **DR. MCKEEL:** Yes, sir.

25 **DR. ZIEMER:** -- address the group.

1 **DR. MCKEEL:** Thank you, Dr. Ziemer, and good
2 evening to everybody and the members of the
3 Board. I am Dan McKeel and tonight I want to
4 confine my remarks to put on the facts
5 regarding a FOIA request, a Freedom of
6 Information Act request, that Ed Heisell* and
7 I, of the Missouri Coalition for the
8 Environment, made on March 10th of this year
9 jointly to ORAU, DOE, Oak Ridge, CDC, NIOSH and
10 to Larry Elliott and the OCAS office.
11 Our request was basically three parts. We
12 sought more information about the -- about an --
13 -- indexes to the six boxes of Mallinckrodt
14 records that affected the current petition
15 that's under consideration, SEC-0012.2.
16 We also sought to ascertain which MCW records
17 in the six boxes had been declassified, and we
18 were interested in which MCW records of any
19 kind remained classified today.
20 To date Pamela Bonet* and Deanne Reardon* of
21 ORAU have stated that they do not answer FOIA
22 requests, as DOE handles such requests for
23 them.
24 Lynn Armstrong, CDC ATSDR FOIA officer in the
25 Office of the Chief of Staff there, responded

1 in part in a three-line letter on April the
2 23rd, 2005 by providing a four-page index to
3 contents of the six NIOSH boxes. The CDC
4 response did not address at all our requests
5 two and three dealing with formerly classified
6 and now declassified and still classified MCW
7 records. CDC also failed to state specific
8 exemptions as to why they did not address parts
9 two and three, as they are required to do by
10 the Freedom of Information Act.

11 Amy Rothrock* of DOE Oak Ridge responded
12 officially three and a half months later with
13 their packet reaching us on June 30th, 2005.
14 This response was inadequate in multiple
15 respects and will be appealed, and may be taken
16 to Federal District Court.

17 Mr. Elliott of OCAS, at earlier ABRWH meetings
18 of this group, indicated his office was working
19 on the McKeel FOIA request, but no response has
20 actually materialized from OCAS as of today.

21 In the supplement to the SEC petition
22 evaluation report, Petition SEC-0012.1 and 2,
23 which was dated March 14th, '05 and thus should
24 have been available to those agencies that
25 processed the Heisell-McKeel FOIA request dated

1 3/10/05, yet in their responses -- which was
2 dated April the 23rd of this year -- CDC did
3 not allude to these data, nor did DOE in their
4 response dated 6/28/05. The CDC response did
5 in fact include some of the NIOSH supplement
6 contents of the six boxes that NIOSH acquired.
7 The analysis of the six boxes of records had
8 delayed the decision-making process of the
9 Board on the MCW SEC-0012.2, and that makes the
10 lack of citation of the NIOSH source document
11 even more puzzling.

12 On May 24th, 2005 I had a amazing approximately
13 one-hour long phone conversation with the
14 Department of Energy Oak Ridge's Amy Rothrock
15 about our March the 10th FOIA request. This
16 talk explained a lot about why and how the
17 EEOICPA claims had been delayed by the agencies
18 involved with processing them. That is NIOSH,
19 Department of Energy, Department of Labor and
20 ORAU.

21 Pertinent to the six boxes of NIOSH -- NIOSH
22 MCW data, Ms. Roth-- Ms. Rothrock explained
23 that DOE does not generate new indexes to
24 records. The most surprising revelation made
25 to me was that since 1999 there has been in

1 place a DOE-wide moratorium on destroying any
2 former atomic weapons worker records. Ms.
3 Rothrock said she believed that the records on
4 the 30 percent of MCW workers who do not have
5 radiation exposure data, according to NIOSH,
6 have been lost, probably forever. She did not
7 explain how this unfortunate situation had
8 occurred.

9 In addition, Ms. Rothrock added, a ruling was
10 made in 1999 that all worker records older than
11 25 years were to be declassified. Ms. Rothrock
12 told me that in the -- and I'm quoting her now
13 -- in the 1950's all the worker EH&S, that is
14 environmental health and safety, records had
15 been classified. Some Mallinckrodt Chemical
16 Works records got declassified in 1993 because
17 they pertained to human radiation experiments.
18 Now Ms. Rothrock went on to explain there are
19 about 900 Mallinckrodt worker records that are
20 still classified which should have been
21 declassified according to the 25-year-old rule.
22 She stated that the reasons there was this
23 large backlog six years after the
24 declassification rule had gone into effect
25 included lack of DOE staff and money to process

1 the records. In addition, Ms. Rothrock said
2 NIOSH had requested the same information from
3 her office at least five times for various
4 epidemiologic and mortality studies they were
5 doing. And she was referring now to individual
6 worker records, primarily. Department of Labor
7 and the EEOICPA physicians panels had also
8 requested the same set of records that NIOSH
9 had repeatedly accessed.

10 The agencies do not share information,
11 according to Ms. Rothrock, even though she had
12 personally urged them to do so in the name of
13 efficiency and cost-savings.

14 I have not heard any of this mentioned
15 previously at ABRWH meetings that address the
16 Mallinckrodt second petition or -- or part two
17 of the -- one or two. I will take all of this
18 information from DOE at face value and
19 therefore assume that it is true. If it is, no
20 wonder there are so many bureaucratic snafus
21 that we have heard about so frequently and so
22 vociferously from so many claimants who
23 testified in St. Louis in October 2003,
24 February 2005 and in Cedar Rapids about
25 Mallinckrodt in April of this year.

1 DOE's response to our FOIA request on June 28th
2 consisted of a one-page letter, our original
3 four-page request, and another 205 pages of
4 material. I quote from paragraph three of Amy
5 Rothrock's DOE response letter. (Reading) No
6 documents could be located in response to items
7 two or three of your request other than the
8 enclosed printout of search hits using relevant
9 terms for documents housed in the classified
10 vault that pertain to Mallinckrodt.
11 One data subset (a) was a 35-page listing of
12 documents that were marked item three, and that
13 was our request about classified documents.
14 Eight pages of the 35 were stamped
15 unclassified, so I assume that all the other
16 MCW records in the remaining 28 pages were
17 still classified. Of the total 677
18 Mallinckrodt records, 86 or 12.7 percent were
19 dated 1942 to '48; and this is pertinent for
20 tomorrow, 221 or 32.6 percent were dated
21 between 1949 and 1957; 83 or 12.2 percent were
22 dated after 1957; and the remaining 287 or 42.4
23 percent have no date. The eight pages stamped
24 unclassified contained 86 total records, 64 of
25 which were from the 1949-'57 time period under

1 consideration of the MCW SEC petition 0012.2,
2 which will be taken up tomorrow.

3 The other data subsets provided by DOE,
4 including the following: Two pages with a
5 header, ORAU file cabinets, listing 46 agencies
6 and institutions; 72 sheets -- this is eight
7 and a half by 11 sheets -- with first and last
8 names, not otherwise identified, marked as FC-
9 22 drawer two, dispensary records; six pages of
10 entity names including five entries for
11 Mallinckrodt marked NIOSH film badge Atomic
12 Weapons Employers; 30 pages of records with
13 titles that pertained to Mallinckrodt Destrehan
14 Street and Weldon Spring marked FC-21 drawer
15 one. Two examples of this data subset are
16 plant 6E breakout radiation hazards standard
17 operating procedure, and Mallinckrodt plant
18 6E/7E occupational exposure to airborne
19 contaminants, report 22 -- report June 22nd,
20 1955, HASL, the Health and Safety Lab, MCW 24 -
21 - and in parentheses, OUO.

22 And finally, the last subset with 60 pages of
23 last and first names with the header, shipment
24 01-01-4, Mallinckrodt Chemical Works, box one,
25 personnel wage folders A through Beu. As far

1 as I could tell, there was no correspondence
2 between any of this material and the index to
3 the six boxes that NIOSH and CDC produced of
4 the MCW records, nor was there any direct
5 evidence -- any direct relevance to the
6 Heisell-McKeel FOIA request of March 10th, 2005
7 except as noted below.

8 So finally then, how could this information
9 affect the Board's deliberations of the
10 Mallinckrodt petition at this meeting tomorrow.
11 Point one is, at the very least it raises the
12 distinct possibility that hundreds of relevant
13 documents to the 1949-'57 time period at
14 Mallinckrodt remain classified. It is unclear
15 that any of those documents have been read by
16 NIOSH or ORAU. The DOE response was
17 uninformative about this point.

18 A second point is the backlog of still-
19 classified MCW documents means the public
20 access, and that of SEC petitioners, to these
21 vital documents is unnecessarily restricted.
22 Third, the unwillingness of the various
23 agencies to share information not only impairs
24 the timely processing of MCW EEOICPA claims, it
25 requires duplicated effort to copy the same

1 documents multiple times, which is an added
2 taxpayer burden. The situation has strong
3 overtones of the lamentable lack of cooperation
4 between our intelligence agencies that has
5 captured recent national media headlines.
6 My fourth and overriding concern is that the
7 Board's decision-making ability regarding the
8 MCW SEC-0012.2 petition may be seriously
9 impeded. Nine hundred still classified and
10 possibly unread documents mentioned by Amy
11 Rothrock of DOE on May 24th, 2005 is a large
12 number. Perhaps among the classified documents
13 are reports that show that certain workers of
14 the MCW Destrehan Street 1949-'57 cohort got
15 much higher radiation doses than are currently
16 documented. Or perhaps there have been major
17 criticality accidents that have not been
18 considered by NIOSH and the Board and by
19 Sanford Cohen & Associates, the auditors for
20 the Board.

21 Finally I would urge, and I understand Dr.
22 Ziemer's comment -- this is not directly to the
23 Board -- but I would strongly urge Congress to
24 address this deplorable situation by mandating
25 that the DOE declassification backlog be

1 cleared up immediately, and by making the funds
2 available immediately to enable the Department
3 of Energy to do so.

4 Thank you, the Board, and best wishes as you
5 continue to meet your important obligations.
6 Thank you very much.

7 **DR. ZIEMER:** Thank you very much, Dan.
8 Tracking down records can indeed be
9 frustrating. I think we've shared some of that
10 frustration ourselves, and have in the past
11 actually written to the Secretary of the
12 Department of Energy through the Secretary of
13 Health and Human Services on these kinds of
14 issues. I -- I don't know if there's anyone
15 here from the agencies that can assist you in
16 that effort, but if so, I hope that they will
17 do so.

18 Next, Clarence -- yes, is it Schwensen?

19 **MR. SCHWENDESEN:** Schwensen.

20 **DR. ZIEMER:** Thank you.

21 **MR. SCHWENDESEN:** Thank you.

22 **DR. ZIEMER:** You're up.

23 **MR. SCHWENDESEN:** Good evening and welcome. My
24 name is Clarence Schwendesen. I worked for
25 Mallinckrodt for 15 years, nine at the St.

1 Louis site and six at the Weldon Spring site.
2 I drove a forklift throughout the plant. I
3 witnessed many instances of dust, fumes and
4 spills in almost every building, never dreaming
5 I was being exposed to some of the world's most
6 dangerous chemicals.

7 I developed cancer of the throat in 1990, a
8 tumor at the base of the tongue. I had surgery
9 and was on the operating table for 11 hours.
10 They went very close to the jugular vein and
11 the voice box, but with the aid of 36 radiation
12 treatments, I survived. I now have no survivor
13 (sic) glands. My taste buds were altered so
14 food and drink mean very little to me. I also
15 have had pneumonia twice and have a patchy area
16 of my lung to deal with.

17 I hope the compensation for my fellow workers
18 and families will be received before we die.
19 I'm 80 years old, so time is very critical to
20 me, and to all of us.

21 We did our job providing our government with
22 the weapons to keep us safe and end the Cold
23 War. Now we ask the government to step up and
24 do theirs with all speed. Thank you.

25 **DR. ZIEMER:** Yes, thank you, Clarence. Next,

1 John Nitchman*.

2 **MR. NITCHMAN:** (Off microphone) I decline.

3 **DR. ZIEMER:** Okay. Thank you, John. Ed
4 Lamzik*?

5 **MR. LAMZIK:** My name is Ed Lamzik and I worked
6 at Mallinckrodt 45 years, seven years in the
7 uranium division. I didn't know what to expect
8 tonight. I didn't write anything up. But at a
9 recent meeting when we talked about what we did
10 there to the people that were concerned, I
11 noticed a lot of discrepancies.
12 For instance, someone was timing people in the
13 old days and saying this could be done in three
14 minutes or seven minutes or what. We never had
15 anybody work that fast. When I saw that I
16 thought hey, something's wrong, somebody -- you
17 know, we're talking about exposures now.
18 So I had cancer ten years ago. I don't know if
19 it's caused from being with uranium or not.
20 Besides my seven years at the uranium division,
21 I worked in plant four; 51-A was the original
22 building at Mallinckrodt where all this
23 started. And I ended up being a
24 (unintelligible) operator and so forth, and
25 having that building -- you know, one of the

1 buildings that I was supposed to be in charge
2 of, and I worked in it constantly. And it was
3 really contaminated. After a number of year --
4 oh, it might have been in the eighties already
5 -- they decided oh-oh, it's really bad yet,
6 'cause they would come by and check it every
7 ten years or whatever and it'd be hot. So
8 besides doing the seven years, I worked a
9 number of years -- we weren't doing uranium
10 anymore, but it -- it's where everything
11 originated.

12 That's about all I have to say.

13 **DR. ZIEMER:** Okay. And thank you very much,
14 Ed.

15 Eileen Adams?

16 **MS. ADAMS:** Hi. My name is Eileen Adams and I
17 worked at the Destrehan plant for a very short
18 time. I took a government test and was offered
19 a three-month thing there (unintelligible)
20 government office to do different types of work
21 to replace women and men going on their
22 vacations. Well, since I was low man or woman
23 on the totem pole, I got a lot of different
24 jobs. I never was given a badge, but I was out
25 of the office and down in the parking lot on

1 the street, and mostly I was up in a building
2 above the plant -- a room that had no air, open
3 windows, and a Xerox machine. And that Xerox
4 machine became my friend because I spent a lot
5 of times with it, but I had no protection
6 whatsoever.

7 And 23 years ago I -- since I'm blonde, I have
8 moles, and I have doctors taking them off and
9 checking them, and I had one that was really
10 bothering me. I went and had it checked and he
11 looked at me and he said just put this robe on,
12 we're going across the hall; you need immediate
13 surgery. So by the next morning I was having
14 immediate surgery, which consisted of (off
15 microphone) them taking, from here to here, (on
16 microphone) all my lymph nodes out; from here
17 to here, all my lymph nodes out.

18 My daily life consists of wearing a very heavy
19 rubber support stocking, of which I have to
20 have six or eight a year for \$300 each. Nobody
21 covers this. Then I have this little pump I
22 use to get the fluid out at night, and I have
23 that for two or two and a half hours, and that
24 little darling -- which is our third one -- now
25 comes to \$2,000, and if you pay \$500 they'll

1 give you the boot, which if you don't have the
2 boot to put on it isn't going to help you.
3 And when I first realized I had this melanoma
4 and talked to the doctor, he said well, blondes
5 sometimes do this. And I said let me tell you
6 something. I'm of Irish descent. We all know
7 how fragile our skin is. I don't sun worship.
8 I'd like to have a tan, but I don't tan. So he
9 said well, it's a melanoma and it's in stage
10 four. So that's when I had the surgery. And I
11 -- he said well, what -- what could have caused
12 it, and I said I think it was the exposure I
13 had at the plant with fallout. Our stockings
14 used to fall off our legs. I said I never had
15 the sun do that.
16 So we never did decide what it was, but I
17 called -- when I found out this organization
18 was here, and I was told that melanoma wasn't
19 covered. And I was told that our stockings
20 didn't fall off our legs. Then I found out
21 later that they were paying on melanoma. I
22 also found out that some of the Mallinckrodt
23 employees were being given a stippance (sic) to
24 cover the loss of their hose. We had a very
25 casual joke between all the women is don't wear

1 a nylon blouse. And they -- I called back and
2 I said I -- you know, you're paying on
3 melanoma. Well, you'll have to send us some
4 information, which I did. I didn't hear from
5 them, of course. And then I called back and
6 they said well, we're tracking you. And I said
7 what are you tracking? I didn't have a badge.
8 If I'd had a badge I would have known.
9 But I do have to tell you that at the end of
10 three months I quit because I thought this was
11 crazy to be doing something that pitted the --
12 my car paint and made holes in my stockings,
13 and I couldn't imagine what it must be doing to
14 the rest of me.
15 But anyway, I live with it now and there's no
16 way they're going to track my exposure except
17 that I have never felt I had this from the sun
18 because I wasn't a sun worshipper.
19 But I do feel that the exposure was there.
20 This building I went in with the no air had
21 fallout dust laying everywhere, and it also was
22 in my hair. And I now have had two cancers on
23 my head and I'm about to have one removed
24 again. So I think some of this -- you know,
25 they keep saying we're tracking. What can they

1 track? You know, they should say yes or no
2 because I wasn't given that badge to wear.
3 Thank you.

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

5 **MS. SCHNEIDER:** I want to thank the Board for
6 coming to St. Louis, and you heard me back in
7 February. I worked in the office and I think
8 that the exposure for office workers cannot be
9 discounted. Our skin was exposed. We were
10 exposed to breathing contaminated air and
11 drinking contaminated water. My contact with
12 coworkers from my area shows that many of the
13 office workers have developed colon, breast and
14 kidney cancers. Many employees sacrificed
15 their lives and/or had their lives cut short by
16 working for their county's -- country's needs.
17 Employees had no knowledge they were being
18 exposed to radiation, and Mallinckrodt had no
19 concern for their health.

20 Because work in St. Charles County was scarce,
21 we didn't question the purpose of the plant.

22 Now, because of residual radioactivity, the
23 Weldon Spring area was decontaminated.

24 On 6/29/05 the Associated Press quotes Richard
25 Monson*, professor of epidemiology at Harvard

1 School of Public Health -- his quotes --
2 Scientific research base shows there is no
3 threshold of exposure below which low levels of
4 ionized radiation can be demonstrated to be
5 harmless or beneficial. Each unit of
6 radiation, no matter how small, is still
7 assumed to cause cancer. End of quote.
8 There's a very high cancer rate in employees
9 many years after working at government
10 radiation-related sites. Exposure after the
11 fact is a lot of scientific guesswork, as few
12 records exist. The burden of proof is placed
13 on the victims or survivors. Still-living
14 workers are getting despondent and many have
15 given up of ever being compensated for cancer
16 suffered because of radiation exposure. Fact:
17 We have cancer because of exposure to
18 radiation.
19 At the time of my employment I was a mouth-
20 breather and I have never smoked. Since 1975
21 I've had three different cancers -- colon,
22 breast and the leiomyosarcoma, which is cancer
23 of the connective tissue and muscle. Only
24 8,000 cases in the United States, but a very
25 common cancer in Nagasaki and Hiroshima.

1 Cancer risk from radiation exposure continues
2 throughout life, according to Dale Preston,
3 director of statistics at the Radiation Effects
4 Research Foundation headquartered in Hiroshima.
5 Mr. Preston also states that the younger you
6 were at the time of exposure, the higher your
7 risk of developing cancer. I was 23, 24 years
8 of age when exposed. I've had genetic
9 counseling which indicates none of my cancers
10 are hereditary, so where did the risk come
11 from?

12 This -- my feeling is that this program is
13 nothing more than a lottery. I saw my
14 oncologist. He said I should buy a lottery
15 ticket because chances of surviving my latest
16 cancer are less than five years, and it's now
17 almost four years. But I feel I'm already in
18 the Mallinckrodt lottery. The emotional trauma
19 and the cost of treatment for a major cancer
20 are astronomical. If claims are being
21 processed in a timely manner, whose time? The
22 dollars are going to the bureaucrats, not to
23 the victims. I've had two of the 22 primary
24 cancers and still waiting compensation. Will I
25 still be alive to see the compensation?

1 Denise Brock was going to provide some
2 information on the exposure of radiation to the
3 office workers, but I don't think she came down
4 -- are you here, Denise?

5 **MS. BROCK:** I'm here.

6 **MS. SCHNEIDER:** If so, I'd like Denise to speak
7 about that, and thank you very much.

8 **DR. ZIEMER:** Thank you very much, Marilyn. And
9 Denise, you're welcome to address --

10 **MS. BROCK:** Thank you. I just wanted to state
11 for the record that Victor Amantea is a former
12 Mallinckrodt employee. He is very ill, but he
13 did send a written letter in to NIOSH, as well
14 as Department of Labor, referencing or speaking
15 about the office workers and the amount of
16 exposure that they had. He spoke in particular
17 about Marilyn, and he is a worker -- a former
18 worker. He's very ill but he is still living,
19 and I was hoping that possibly -- I don't think
20 he's ever been interviewed by anyone as a
21 coworker, and I think he could give some very
22 valuable information. He was going to make it
23 to this meeting but, again, he is very, very
24 ill and wasn't able to even make the short
25 trip. So if somebody could just make sure and

1 check with him, I think he could be of great
2 help to some of these office workers. Thank
3 you.

4 **DR. ZIEMER:** What's his name again, Denise?

5 **MS. BROCK:** Victor Amantea.

6 **DR. ZIEMER:** Could you spell that?

7 **MS. BROCK:** Sure, it's A-m-a-n- like Nancy t-e-
8 a.

9 **DR. ZIEMER:** Thank you.

10 **MS. BROCK:** Sure. Thank you.

11 **DR. ZIEMER:** Mary Generi. We've heard from
12 Mary before.

13 **MS. GENERI:** Yes, I was here last --

14 **DR. ZIEMER:** That's a name I don't forget. I
15 like that name.

16 **MS. GENERI:** Well, I worked in the same
17 building as Marilyn, so she said a lot that
18 covers a lot. I had kidney cancer and my
19 kidney was removed. Where I worked, in one
20 part of the office there was like seven of us
21 that worked within about four feet, and six out
22 of the seven have had cancer. And I don't know
23 about the seventh one because she doesn't live
24 around here. So I think that should tell you
25 something.

1 I -- in the cafeteria I have -- I didn't -- I
2 trusted Mallinckrodt. I loved working for
3 Mallinckrodt, so I thought everything they did
4 was right. And later I found out -- like when
5 I was in the cafeteria, I saw some of these
6 tables that no one would sit at. You know, it
7 was kind of like way in the back, and I saw
8 like yellow dust on them. I didn't think
9 nothing of it, but now, as I hear things, I
10 think that was probably some of that dust from
11 the plant.

12 And I worked close to the mail clerks and then
13 I went downstairs and I was receptionist, and
14 so I was around a lot of different people. And
15 the mail clerks, they had these styrofoam
16 containers that they would bring into the
17 office and they said they were taking them
18 downtown, and they had mail all over the office
19 and I know two of the mail clerks that have
20 cancer, and I don't know about the rest of
21 them, but one's dead, and that was David
22 Johnson. And then I talked to another one not
23 too long ago and he would have loved to have
24 come to the meeting but he's out of town. He
25 said in the future he will, and he had cancer,

1 too. So I'm kind of thinking maybe that ought
2 to tell us something.

3 I really thank everyone for coming and letting
4 us talk. Thank you.

5 **DR. ZIEMER:** Thank you, Mary. Now before I
6 move on to individuals who are not specifically
7 associated with Mallinckrodt, let me give
8 opportunity -- are there any other Mallinckrodt
9 folks here that wish to address the group?

10 Yes, please. State your name for the record.

11 **MR. VOGT*:** My name is George Vogt, and I thank
12 the Board for giving me the opportunity to tell
13 you about my problems and the time I spent at
14 Mallinckrodt. I spent (unintelligible) really
15 about 48 years down there, except two years
16 when I was in the service, World War II, and
17 two years in Korea. But all the rest of the
18 time I was at Mallinckrodt.

19 My job down there was a tinner, a sheet metal
20 worker, and I don't think there was a building
21 down there that I had not worked in -- office,
22 down in the basements or anywhere, plant 6.

23 But I recall -- recall one of the buildings we
24 worked in down there, they had geiger counters
25 laying in the corners, and you could hear these

1 things (indicating) crack like that. Well,
2 anyway, the one time it went off, told
3 everybody get out, get out. Well, we all wore
4 badges, and they never ever told me -- ever
5 told us that well, you have too much radiation
6 in your badge (unintelligible) time.
7 But as a -- as a tinner, we took -- we had to
8 take down and replace the ductwork on vats and
9 that. And taking this ductwork down, sometimes
10 you'd be full of dust, full of this chemical
11 that was in the -- in the ductwork. And I
12 don't know whether this was caused -- since --
13 since this time, since I've retired from
14 Mallinckrodt -- I retired in 1989 -- I have
15 come up with two cancers. I had -- I had
16 prostrate (sic) cancer, which I -- I don't have
17 it no more. They cut it out of me.
18 Now -- and since 1993 I've ended up with three
19 tumors in my bladder, and they're all
20 cancerous, one at a time. First time I find
21 out I had a tumor and they went in and they cut
22 it out of me. This was fine. So four months
23 later when I -- you know, you go back -- go to
24 a doctor and he'll find something wrong with
25 you, and I went back again, sure enough, here

1 was another one. So by the fate, here I'm --
2 it seems like a routine that I'm going to -- I
3 said how can I -- how can you -- can this
4 happen, how can I get rid of these? Oh, we'll
5 take your bladder out and you won't have to
6 worry about that no more. Well, hell, I can do
7 that, I guess, but I -- I'm in the same stage -
8 - the 19th of this month I'm going to have
9 another one taken out. So I don't know, if I
10 could get -- get help with some of my doctor
11 bills, I would appreciate that. I thank you
12 for this effort.

13 **DR. ZIEMER:** Thank you. Any -- any other
14 Mallinckrodt folks -- yes.

15 **MR. STEIGER*:** My name is Ron Steiger. My wife
16 was an employee of Mallinckrodt and she was a
17 lab technician in the uranium division. She
18 was hired there out of high school. The reason
19 she was hired -- I finally found out after
20 searching the records and getting somebody to
21 find them and get them to me from Oak Ridge --
22 that at the time there was a very -- there was
23 a shortage of workers because of the draft for
24 Korea. And they probably -- she probably would
25 not have got the job if it wasn't for filling

1 in for somebody who went to serve. After I
2 found this out I figured she had more of a --
3 she had a more dangerous job than I did and I
4 was in the Marine Corps.

5 Six months -- or she -- she worked there six
6 years -- how did it go. Six years after she
7 left there, she was pregnant with our third
8 child and was diagnosed with Hodgkin's. She
9 lived ten years with Hodgkin's and put up with
10 a lot of inconveniences, believe me. So my --
11 my problem was that my kids didn't have a
12 mother. That's all.

13 **DR. ZIEMER:** Thank you. Any -- one final
14 opportunity, Mallinckrodt folks, anyone else?
15 Okay, then I have Richard Miller. Richard
16 Miller, Government Accountability Project.

17 **MR. MILLER:** Good evening. My name is Richard
18 Miller. I'm with Government Accountability
19 Project. This is working better. Thank you
20 for taking comments this evening.

21 I'd like to talk a little bit about
22 Mallinckrodt Special Exposure Cohort from 1942
23 to 1948. When that was up before deliberation
24 and you all voted on it in St. Louis a few
25 months ago, one of the issues that arose was

1 what dose can be reconstructed and what dose
2 cannot. And the Special Exposure Cohort
3 evaluation report focused on not being able to
4 reconstruct internal dose. In fact, I think if
5 you look in the SEC report it'll even indicate
6 that for certain periods they can reconstruct -
7 - NIOSH can reconstruct external dose.
8 And so it was with some puzzlement that I
9 recently had a conversation with the Labor
10 Department and said so, are you going to be
11 able to start adjudicating any of the external
12 dose cases -- you know, if you can do external
13 dosimetry (sic) -- for skin cancer, in
14 particular. And the answer was that at this
15 time DOL hadn't made up their minds, but that
16 they were leaning against doing so and that
17 they may return those cases back to NIOSH. And
18 since they're non-SEC cancers, it was -- it was
19 -- this is -- this is some ambiguity.
20 And I said well, it's funny 'cause this issue
21 was raised before the Board and I know, Dr.
22 Ziemer, you asked for specific clarification in
23 framing the motion, and in particular Jim Neton
24 was asked about this question, will external
25 dose cases like skin -- particularly skin -- be

1 reconstructible for the '42 to '48 period and
2 only dealing with Mallinckrodt. And the answer
3 was we'll be able to do that. At least that's
4 what was on the record.

5 So I kind of pushed DOL a little bit on this
6 and said geez, you know, it's on the record and
7 -- and the answer I got back was well, Jim
8 Neton may have -- not have been correct.
9 And so I just think this is an unresolved
10 policy issue that as you think about this
11 question, and I asked DOL about this a little
12 bit and I said well, what's really the problem?
13 And you know, part of it had to -- was it --
14 was it in the wording of the SEC petition
15 itself or was it some -- some other matter that
16 -- that -- that would serve as an impairment.
17 And there was an indication that possibly
18 wording would be an issue.

19 So I just wanted to raise this as an issue,
20 particularly if you're going to be looking
21 forward, and to the extent I don't know how you
22 all are going to deliberate on the -- on the
23 next SEC petition from Mallinckrodt, but it's
24 an awfully important issue about what's going
25 to happen to the non-SEC cancers. And if -- if

1 you are acting in reliance on testimony from
2 the agency, I think it's going to be important
3 if we're dealing with a non-SEC issue to make
4 sure that DOL's views are heard since at the
5 end of the day they're going to adjudicate
6 those cases.

7 The second issue I wanted to raise this evening
8 had to do with self-identified Special Exposure
9 Cohorts. I think we've heard at two or three
10 different meetings from Larry Elliott and
11 others that NIOSH has been tasking its
12 contractor to prepare self-identified SECs,
13 those for which they've spotted them and I
14 assume that they're going to provide a report
15 and the Board has been I guess promised that a
16 report would be forthcoming. It seems to me
17 that there's really three questions -- or two
18 or three questions in that area.

19 The first is, where's the report? My
20 understanding was it was a deliverable that
21 ORAU is supposed to provide as of December 31st
22 to NIOSH.

23 Secondly, to the extent that report's been
24 prepared, we've heard that there was comments
25 that were -- NIOSH had sent back to ORAU on it,

1 but still no answer back on exactly okay, then
2 so what were those comments and were they
3 received and did ORAU respond and where's the
4 report? Because if there were self-identified
5 SECs out there, it seems to me there's an awful
6 lot of efficiency to be gained in this program
7 and moving things along if we can find out what
8 they are and people can know about it or
9 petition appropriately.

10 It also seems to me that there ought to be
11 cases that are self-identified under 42 CFR
12 Part 83.14 where if NIOSH has tried to do a
13 dose reconstruction and can't complete it, the
14 flag should go up, as the rule provides. How
15 many cases are there, where are they and can we
16 get some kind of report on how many self-- you
17 know, how many self-spotted -- you know, how
18 many -- how many cases are spotted under 83.14?
19 And the third is, are there categories or
20 groups -- subgroups at various facilities for
21 which NIOSH is postponing or can't, at least at
22 this time, do dose reconstruction. Give you an
23 example, glovebox workers. To the extent that
24 there were unshielded gloveboxes and to the
25 extent that dosimetry badges weren't positioned

1 in a way to be able to even come up with a
2 reasonably good estimate, some of the glovebox
3 workers may fall into a unique category.
4 And there may be others that fall into the same
5 type of category, and it would be interesting
6 to find out if there are categories of delayed,
7 deferred or not-acted-upon because they don't
8 have a solution or they're trying to develop a
9 Technical Information Bulletin, or maybe it's
10 just not -- a good solution out there. But it
11 seems to me if there's sort of low-hanging
12 fruit in the category of SECs in that area, or
13 at least areas where there's major delay
14 foreseeable because there are fundamental
15 problems in doing SEC -- doing dose
16 reconstruction, they should be self-identified
17 as well, because after five years now sort of
18 people are -- you know, you can sort of hear
19 the broken record and it's -- and it's a
20 meaningful one, which is how long do we wait to
21 get answers on this. And it seems to me NIOSH
22 should be more forthcoming in those three
23 areas.
24 The next area I'd like to -- to -- to -- to
25 touch on a little bit is the Board moving

1 forward on an awful lot of backlog. At least
2 from the outside at least you all have had an
3 enormously busy schedule, and with the SECs
4 coming in and the deadlines that are imposed by
5 law, you have to act or at least receive these
6 things and -- and -- and deal with them
7 forthwith. The problem is is that other
8 important matters that have been sitting around
9 for six, eight months or longer are not getting
10 acted on.

11 One that stands out in my mind is the Savannah
12 River site profile review, which is the very
13 first site profile review I believe that you
14 got of a meaningful one, and -- of the DOE
15 sites, and it has not been taken up. And yet
16 that site profile review is needed to resolve
17 the dose reconstruction reviews, as I -- my
18 recollection is is that four or five of the
19 first dose reconstruction reviews can't be
20 addressed until the site profile's -- review's
21 finished on the -- on Savannah River. And the
22 high five issue I think was one of the issues
23 that was in contention there.

24 So I was sort of wondering what can be done to
25 accelerate -- not that you all aren't working

1 hard and that there aren't subcommittee
2 meetings and conference calls and so forth, but
3 it seems to me when the Board shifted from
4 going to four meetings a year from its previous
5 schedule of six meetings a year, some degree of
6 momentum, coupled with these SECs moving in and
7 filling your calendar, has sort of crowded out
8 the ability and a lot of things are lagging --
9 the Hanford site profile review I understand is
10 completed and is an enormous undertaking in and
11 of itself.

12 And of course we have the procedures review,
13 which for some very small amount of time is on
14 the agenda here, but not sufficient to
15 undertake what is a huge, 285-page document
16 with oodles and oodles of procedures, some of
17 which are going to require further work, but
18 other of which really need to be taken up
19 meaningfully.

20 And my worry is is that if you let your
21 procedures review go so long and there are
22 generic issues that require to be corrected,
23 the number of reworks that have to be done
24 grow, the cost of the program for
25 administration goes up -- or the imperative is

1 gosh, is it really worth reworking these 'cause
2 the cost is so great. So it seems to me that
3 on areas that involve big, cross-cutting,
4 costly -- potentially costly reworks, those
5 things ought to get taken up and front-loaded
6 as soon as possible. And again, you know,
7 procedures review were delivered to the Board
8 in January of this year.

9 Again, no fault on how hard the Board's
10 working, but I'm questioning whether four
11 meetings a year can get it all done. And I
12 don't think it does, and I think -- I think --
13 I think that there's some -- some -- some
14 expectations that are going to -- and
15 frustrations that will grow if this doesn't
16 find a way to resolve itself more quickly.

17 I'd like to then bring two other issues to your
18 attention. The first is -- is -- I had the
19 pleasure -- after leaving here in St. Louis
20 last year, I drove over to Paducah for the site
21 profile meetings that were held by NIOSH in
22 Paducah and -- and I had a chance to review the
23 internal dosimetry report that was done by ORAU
24 and NIOSH issued. And the internal dosimetry
25 report there raised I think a cross-cutting

1 issue that you've dealt with quite a bit.
2 This particular internal dosimetry review -- or
3 site -- Technical Basis Document largely
4 focused on both uranium uptakes and
5 transuranium uptakes. And of course
6 transuranics were one of the big drivers that
7 sort of got Congress to focus a lot on
8 unreconstructible or difficult to reconstruct
9 dose and Paducah of course was really put on in
10 the SEC with the discovery of over 40 years for
11 which the site chose not to bioassay workers
12 for transuranium compounds, particularly
13 plutonium and neptunium and -- and some of the
14 fission products like Tc-99 and -- so when we
15 reviewed the internal dose Technical Basis
16 Document, we discovered that the person who was
17 the primary site expert was a former Martin
18 Marietta subcontractor, Carol Berger*, whom
19 many of you know.

20 And Carol was working for IT Corporation at the
21 time she was preparing this, under contract to
22 Martin Marietta. And when she prepared the
23 report for NIOSH, she relied on her previous
24 work that she had done back in the late 1980's
25 on transuranium uptakes. And what we

1 discovered -- from our review, at least -- was
2 that it overlooked an awful lot of new
3 information that has subsequently come out from
4 a DOE-sponsored study and -- and that -- and
5 that the activity levels were as high as 90
6 percent activity levels for neptunium for some
7 workers. Startlingly high levels, and yet her
8 report only had ten, 15, 20 percent activity
9 levels for these transuranics, particularly
10 neptunium.

11 And so we looked at these -- these relatively
12 low alpha counts compared to -- well, fractions
13 of activity compared to what had been reported
14 in Union Carbide health physics monthly
15 reports. And we said geez, there's a huge
16 discrepancy here.

17 And the other discrepancy that stood out at us,
18 probably more troubling, was that NIOSH was
19 relying upon a Martin Marietta employ-- or
20 IT/Martin Marietta individual to prepare -- in
21 effect to serve as the subject matter expert
22 for the preparation of the site profile. And
23 what she did was she took her work from 1989,
24 roughly, when she did her work for Martin
25 Marietta, and she cut and pasted the tables

1 into the NIOSH site profile -- just cut and
2 pasted them -- uncited, cut and pasted.
3 And -- and we went back and looked at her
4 earlier work, which was also uncited, and what
5 was most troubling I think was that there was
6 no scrutiny that this would pose a potential
7 for conflict of interest, that people are
8 reviewing their own work. The -- the
9 professional question was -- professional
10 conduct question was should people be brought
11 in as subject matter experts, as they have at
12 Hanford and of course at Rocky and elsewhere,
13 in Idaho, with no question that they're all
14 honorable people, but they're busy reviewing
15 their own work product. And in many -- and in
16 this particular instance, cut and pasted her
17 own previous work, which was in -- which we
18 believe to be in error, and put it in NIOSH and
19 it was signed off through four levels of review
20 by all the people you see on the front page of
21 the site profiles, and out the door it went.
22 And we went my God, a cut and paste job from
23 Martin Marietta, is that what NIOSH is buying?
24 Is that what this program has turned into, is
25 basically that the agency now has turned over

1 its -- to the DOE health physics community that
2 we sought in the legislation to remove from
3 running the dosimetry programs.

4 Now we know that everybody who has knowledge
5 and site-specific knowledge is a resource. And
6 nobody is saying those people shouldn't be
7 tapped as a resource. But should they be the
8 primary subject matter expert? Now she was not
9 the primary author of the site profile, but her
10 employee was. And he's in no position to say
11 that you're conflicted, boss.

12 And so I bring this to your attention -- and
13 NIOSH, in response -- I wrote a memo to Jim
14 Neton and Dick Toohey about this, and I laid
15 out our concerns and -- and just last week
16 Larry Elliott asked me for the supporting
17 documents from our February memo, so it's nice
18 to know that somebody at least was wanting to
19 actually look at the source documents a few
20 months later. And we also heard back from
21 NIOSH that they were going to evaluate the
22 conflict of interest issue. But five months
23 later, we have no answer on the conflict of
24 interest. And so I just bring this to your
25 attention because I don't know that there's an

1 internal resolution process.

2 And I bring this to your attention for another
3 reason, because in -- when the meeting was held
4 in New Mexico of the Advisory Board, Larry
5 Elliott said that he was going to undertake an
6 internal self-audit in NIOSH of conflict of
7 interest issues, both amongst the Federal staff
8 and the contractor and subcontractor staff.
9 Now I don't know whether that report's been
10 done, whether that self-audit exists. But I
11 think it, again, ought to be made public
12 because this is the kind of thing I would hope
13 would get rooted out.

14 The final issue has to do with the degree to
15 which worker input really makes a difference.
16 Now there are varying degrees of expertise and
17 varying degrees of site-specific knowledge, but
18 once the Board made the decision to go forward
19 and invite worker input and union input and
20 site expert input, I think the project had the
21 potential for being dramatically enriched,
22 because at least there was a new source of
23 information and a reality check.

24 And I had the opportunity to work with a very
25 tiny little obscure facility that most of you

1 have never heard of that processed uranium in
2 Springfield, Massachusetts called Chapman
3 Valve. And at the Chapman Valve facility they
4 basically machined uranium, they had a grinding
5 operation, they ran lathes, they did some of
6 the same kind of stuff they did at Y-12 in
7 terms of machining uranium.

8 But what happened in this particular facility
9 was we had a meeting. We brought the workers
10 together. We thought let's see if we can't do
11 better, having the few survivors and those who
12 have some knowledge of the facilities
13 interacting with NIOSH early rather than sort
14 of after the fact like happened at Bethlehem
15 Steel where it didn't work out so well. And --
16 and so a group of workers were pulled together
17 and -- and it was cold and in the winter, and
18 NIOSH came up on Valentine's Day and there was
19 a meeting. And the workers brought some
20 documents and there were a number of
21 substantive technical issues, like there was an
22 incinerator at the facility and documents were
23 brought forth, and no one knew the incinerator
24 was there and it wasn't in -- it's a source
25 term. I mean as we heard from the uranium

1 presentation from Joe Fitzgerald today, these
2 incinerators can be significant sources of
3 information -- of -- of -- of -- of emissions,
4 and this was a uranium chip burner. In fact,
5 it was such a crude device that it had a stove
6 pipe that went out through the wall of this
7 building.

8 And you know what they found under the stove
9 pipe in what was supposedly a facility handling
10 natural uranium? Enriched uranium. And so the
11 question was raised, how could O-- O-- actually
12 it was ORISE did the -- did the site work --
13 how could they find enriched uranium here? Is
14 this an anomaly?

15 And so a number of technical questions were
16 raised -- particle size, whether the data was
17 representative and so forth -- and lo and
18 behold, all of this was laid out very neatly
19 and ORAU came in for the visit and -- and NIOSH
20 came in and sent some staff in. And then what
21 happened was the next day, on February 15th,
22 NIOSH -- ORAU signed off on the site profile
23 and several days later NIOSH signed off on it
24 and published it, and that input was never
25 considered.

1 It turned out actually that a written memo
2 followed up about two weeks after NIOSH was
3 there, about the first of March, so there was a
4 two-week period after they left, and none of us
5 knew that the site profile had been released.
6 No one had it announced to them in advance that
7 well, we're glad to hear from you tonight but,
8 by the way, we're signing off on it tomorrow.
9 That would have been courteous, at least, and
10 no one would have had the expectation that
11 anybody was going to listen.
12 So I offer that as an object lesson because I
13 had the chance to follow it through. And I
14 don't know whether this is an anomalous
15 situation and maybe just fell through the
16 cracks, but it seems to me that if you're going
17 to -- if NIOSH is going to follow the Board's
18 advice and they're going to hire contractors
19 and they're going to pay to fly them in from
20 Tennessee and have them drive in from New
21 Hampshire and have them fly in from Cincinnati
22 and we're going to have them put them up in
23 hotel rooms and we're going to spend the money
24 for support staff, government money, to hear
25 what workers have to say, and the next day they

1 sign off and none of the comments were
2 considered. So when NIOSH came to -- to the --
3 to the western Massachusetts to present on the
4 new compensation program and the residual
5 radiation provisions, they were asked -- say,
6 did you take account of any of the comments you
7 received? And the answer that was stated back
8 to the public was no, we didn't. We didn't
9 have time. We had to get the dose
10 reconstructions done.

11 So I don't know. I mean I'm hoping that NIOSH
12 is going to take a second look at this. I'm
13 hoping they're willing to look at the comments.
14 I think that they're substantive. I think
15 you'll understand that, for example, an
16 undisclosed incinerator could in fact be a
17 source, particularly as crude as those were in
18 the old days. And that things of that nature
19 would want to be taken up before you publish
20 your site profile. And so we express a little
21 disappointment I guess with NIOSH's progress in
22 -- in taking public comment and worker comment
23 and actually incorporating it into their
24 product before they pump it out the door.

25 **DR. ZIEMER:** Okay. Thank you, Richard. Now I

1 thought we had limited it to four meetings
2 because of your travel budget, Richard, but
3 that's not the case. Is that right? You don't
4 have to answer that.

5 **MR. MILLER:** Paul, what's the budget for this
6 Board? I think it's about a million and a half
7 a year.

8 **DR. ZIEMER:** Okay, Richard, *touche -- touche*.
9 Ed Walker is here. Ed is -- represents
10 Bethlehem Steel workers. Ed, welcome.

11 **MR. WALKER:** Thank you, Dr. Ziemer and the
12 Board, for letting me have the chance to speak
13 again and good evening to all here.
14 I'd like to talk a little bit -- well, first of
15 all, it seems like I'm -- if it seems to you
16 like I'm following you around, it probably is
17 because I am. But I'm glad you didn't go to
18 California 'cause I don't know if I could
19 handle that.

20 I'd like to speak a little bit about the site
21 profile at Bethlehem Steel. The site -- we had
22 our technical base (sic) document completed in
23 March of 2003. The site profile meeting, the
24 first one we had with site experts, was in July
25 1st of 2004, approximately 16 months after our

1 technical base (sic) document was released.
2 And people were being denied -- and some
3 approved -- is before they ever talked to one
4 person at the site -- at the site that worked
5 there, the workers. And this -- and what I'm
6 going to bring up a little later -- you'll see
7 why it's kind of upsetting of the information
8 that was brought out.

9 I got a call -- we had our meeting in July 1st
10 of '04, again, 16 months after the technical
11 base (sic) document. I was called about a
12 month before that, possibly two, and I can't
13 remember where the call came from. It was a
14 simple question, is the facility still
15 standing; is the ten-inch bar mill still
16 standing. Now mind you, this is 16 months
17 approximately after the technical base (sic)
18 document was out. Nobody knew if the building
19 was standing, and it came I believe from NIOSH.
20 Okay? It was just a quick call, one question,
21 is the facility standing.

22 I would have certainly thought that that long
23 after we had our technical base (sic) document,
24 somebody would have known what was going on.
25 So after we had that meeting on July 1st,

1 approximately a month later I was talking to
2 somebody from Oak Ridge, I'm not mentioning
3 names, but I says lookit, I says our site
4 profile was completed. And he says yes, we
5 used Simonds Saw -- part of Simonds Saw to --
6 site profile to add what we couldn't find at
7 Bethlehem Steel. And I says well, that could
8 make sense. At that point I felt it could.
9 And I says okay, well, it's only -- it only
10 makes sense to me that if you use Simonds Saw,
11 then you must have Simonds Saw site profile
12 completed.

13 And it went silent on the phone for quite a
14 while, and he says no, it isn't. I says you
15 mean to tell me our -- our technical base (sic)
16 document has been completed now about 17 months
17 and it's based on Simonds Saw information, and
18 you don't have the technical base (sic)
19 document from Simonds Saw? And he says that's
20 correct. I understand that just recently,
21 within a month or so, Simonds Saw was
22 completed. But our document was completed in
23 March of the year 2003 and Simonds Saw was just
24 completed, and ours was based on theirs.
25 I'm not a scientist, I don't -- you all know

1 that by now, but it just doesn't make sense to
2 me and to our group.

3 And I want to talk a little bit -- when we talk
4 about what the worker input had, and this is
5 new information and this is what Jim was
6 referring to today, alluded to today, this
7 cooling bed -- and I mentioned it at the last
8 meeting here in St. Louis. There was a large
9 area, and I mentioned that it's over the size
10 of a football field, and it's about as wide as
11 a football field is what they called a cooling
12 bed area at Bethlehem Steel. Bethlehem Steel
13 building is approximately 900 feet long and
14 about 100 feet wide was the ten-inch bar mill.
15 A third of that was cooling bed. There was
16 also straightening areas. There was also the
17 mill where they rolled it. There was also a
18 billet preparation. So 90,000 square feet of
19 building was there. Almost 30,000 was cooling
20 bed, and this area was never picked up by
21 anyone. And in some cases -- it wasn't
22 someone's fault because I just found it myself
23 within -- since I was here at the last meeting.
24 I start digging in to find out what this
25 basement area was under this cooling bed.

1 After it come out of the rollers this 1100
2 degree uranium rods went into a rolling bed
3 that had rollers and it spread it out, and you
4 can picture yourself setting (sic) at a
5 football game and these rods coming out of the
6 goal posts on one end and going behind the goal
7 posts on the other end, almost as wide as the
8 football field, being spread out in what they
9 called the cooling bed at Bethlehem Steel. It
10 was on rollers. And this cooling bed was about
11 four feet off of the floor. Underneath was a
12 basement area.

13 And I went and I got experts, guys that worked
14 there, and I had to send in affidavits to Mr.
15 Elliott last week, I just got these, and I got
16 more people that are coming in that I've
17 contacted with more information. When you were
18 in that basement area, this uranium was rolling
19 not as high as this ceiling open, you could see
20 it, 1100 degrees, going over rollers and
21 sliding on bars, dropping down scrapings like
22 peppering on your steak or hamburger, whatever
23 you have. It would pepper down on it and you
24 people were working down there.

25 In that area it was impossible to clean.

1 There's pillars in that area that are about --
2 concrete pillars that are about three-foot
3 square that hold up motors up underneath those
4 rollers. Those rollers -- there's well over
5 200 motors in that area the size of a football
6 -- keep that in mind, you're looking at a
7 football game and another third -- you go past
8 the goal post on the other end another 30
9 yards, and that -- and that hot uranium that
10 comes off -- the scaling that drops off goes
11 into this pit area. It gets into those motors
12 and not only the motors that run the rollers,
13 there's other machinery that has to be driven
14 and there's larger motors -- that I haven't
15 quite got a handle on just how many; I'm
16 guessing it's somewhere around 40 or 50 larger
17 motors -- and there's miles and miles of
18 conduit and gears.

19 Now in the declassified documentation they say
20 they cleaned this up over the weekend. They
21 rolled uranium over the weekend. It's
22 impossible. You couldn't get a cleaner down in
23 there, a vacuum, to vacuum. It had to be
24 cleaned out by hand. Men worked down there,
25 and a couple of people laughed at me when I

1 says men couldn't work there because of that
2 hot stuff. You stand next to a fire, a big
3 bonfire, and that stuff that goes up in the air
4 and comes down is red hot. And I'll take a
5 polygraph test on this in a heartbeat, I've
6 walked with people, I've walked behind them,
7 people have touched me, grabbed me on the
8 shoulder and says you're on fire. And this
9 area was hot and these things would land on
10 your shoulder and to stop your clothes from
11 burning, you have to brush it off. There was
12 no protection.

13 And the grease that come off those motors --
14 they were automatically greased; as I said, I'm
15 still bringing in information on it -- and
16 oiled -- fell down onto this lower area on top
17 of these piers, on top of this -- these conduit
18 pipes and onto the motors and into the motors,
19 and periodically would flame up and burn. They
20 would start -- some of the hot stuff would come
21 down and it would flame up and burn. Or if a
22 motor burned out that was driving those rollers
23 up above, they would flame right up and burn
24 out and sometimes it was a month before they'd
25 replace -- sometimes there could be four or

1 five motors burned out at one time before they
2 would shut down or find time to replace these
3 motors. So what, they're -- they say. So
4 what. The so what is that when that uranium
5 rod -- or steel rod, but -- they were all the
6 same -- when they went over there, those
7 rollers weren't rolling, so they slid across
8 them, which would spark and drop stuff down
9 into this lower area.

10 This area never had any air samples taken.
11 There was no air samples recorded in this area
12 at all. And there was never any survey done.
13 There was never no smear test down in that
14 lower area, and there never can be. So how can
15 we tell, with burning -- possibly uranium in
16 this area over the size of a football field,
17 and it was never gotten -- it was never
18 surveyed or anything or any air check or
19 nothing, and the men worked down there time and
20 time again.

21 Today -- in the late seventies or the early
22 eighties they encased this whole thing in
23 concrete. Wasn't that convenient? All the
24 motors and everything were left there. They
25 just backed up with trucks and filled the whole

1 area up. They sold the plant and there's no
2 residual contamination in the area. Bethlehem
3 Steel is one -- if not the only one in western
4 New York that don't have residual
5 contamination. The rest of the facilities
6 around are eligible for residual, but not
7 Bethlehem Steel. Doesn't that sound awful odd
8 to you?

9 We're talking today -- Dr. Neton was talking
10 about the dust in the large area and how it
11 would -- it wouldn't be very thick in a large
12 building. That building, as I said, was 90,000
13 square feet. And from one end to the other,
14 when uranium went through there, from the
15 processing, through the mill that actually
16 rolled it -- the six rollers -- through this
17 cooling bed, through the shears and into the
18 straightening area and the packing area, that
19 whole building was wide open with no
20 ventilation. Simonds Saw had a small area,
21 which wouldn't be -- they wouldn't have the
22 contamination. Simonds Saw had ventilation.
23 Now I want to ask you, just think about it, if
24 this room was filled up with dust, this whole
25 room, would you rather be in here with no

1 ventilation or would you rather be in the men's
2 room where they've got ventilation and it's
3 gone in a couple of minutes? And I -- and I
4 can bring you affidavits and I think in some of
5 the affidavits that I sent in the men sat in
6 that lower area. There's no way -- there's
7 areas in there that was impossible to get to.
8 You ask the site workers, impossible to get
9 into, so when they couldn't shovel it and broom
10 it out of that lower basement area, they used
11 high-pressure hoses to blow the dust.
12 When they'd come on around with these high-
13 pressure hoses down there to dust it out, the
14 dust went right up into the rollers -- and
15 there was rollings above at that time, probably
16 steel or whatever. It hit that heat and it
17 would take it right up through that whole plant
18 again. So that dust area in the large area, I
19 can't buy. Just common sense says that's not
20 going to happen.
21 And we talked about heat today, and of all the
22 -- the breathing that people took about
23 breathing in -- what you're breathing in when
24 you're doing this type of job and when you're
25 doing that type of job, when you're pushing a

1 wheelbarrow or if you're baking a cake or
2 whatever it might be in the heat. I'm going to
3 tell you, the heat in that area -- I worked
4 there, and not only -- not only the ten-inch
5 bar mill, the heat in that area was
6 astronomical. You could walk down next to
7 those rod, whatever they'd be, steel or uranium
8 -- uranium was only like 1200 degrees -- and
9 you would have to shield your face sometimes
10 because the heat -- go stand next to a fire.
11 Build a big bonfire in your back yard. Go out
12 there and look at the stuff that's coming off
13 of it and then walk and see how close you can
14 get to it.

15 That girl that took the movies out in
16 California, that film is out and I think, Jim,
17 you have a copy of it. And if you look at the
18 actual pictures from Bethlehem Steel you'll see
19 people walking -- and it's like an explosion,
20 like yesterday when the fireworks went off, all
21 these burning chips -- the heat was
22 astronomical in those buildings. No
23 ventilation, with those furnaces going, and I
24 can attest to this -- again, I'll take a
25 polygraph test -- you could walk outside in the

1 steel plant and they ingots, what they called
2 ingots there -- like 11 foot high, four-foot
3 square on the bottom, three foot square on top
4 -- that are red hot that are on cars -- maybe a
5 half a mile of railroad cars -- cooling before
6 they make them into billets. That's the
7 procedure before it gets to the billets.
8 So heat -- and when you're breathing -- every
9 day when we went into some of those furnaces,
10 like the salt bath and when we went into some
11 of the other furnaces, the temperatures were --
12 you -- sometimes you couldn't stay in there
13 more than five minutes. I was a brick layer.
14 You'd sit down your -- your brick hammer, and
15 if you didn't pick it up or set it on top of a
16 brick coming in, a new brick you set it on the
17 old (unintelligible), that wooden handle would
18 burn out of the brick hammer.
19 And that's how it was every day. That wasn't
20 once a week or once a month, that was every
21 day. And again, I can bring you all -- all the
22 witnesses for sworn affidavits.
23 Then we find there was also experimental work.
24 I found that out, that not only did we have
25 this new area down below, but they brought in

1 finished product, production rolled rods from
2 Simonds Saw. This is documentated (sic),
3 declassified from the government. They brought
4 them to Bethlehem to dip them in a salt bath
5 and -- and heat them up, take them out, cool
6 them down and straighten them, and they send
7 them to Hanford for experimental work. There
8 was no rolling procedure, so obviously there's
9 no air samples taken or any survey on that at
10 all.

11 We don't know how many -- how much -- how many
12 times this took place, how many experiments
13 they done beside the rolling procedure at
14 Bethlehem Steel, but it's enough to tell you
15 that when it's experimental, we don't know what
16 they done. So they say well, if you can find
17 us records -- well, we can tell what happened.
18 Bethlehem Steel did not have the records.
19 Bethlehem Steel -- I can bring you a man with a
20 signed affidavit that worked in the office when
21 he got out of high school as a clerk. And he
22 told me -- and he says he'll sign an affidavit
23 for me -- he says there was guards placed
24 around his office, and when they came in and
25 made out the government reports that these guys

1 would come over and take the reports, plus the
2 carbon paper -- these were old days -- they
3 took the carbon paper right out of the
4 typewriter and that's -- they couldn't go -- if
5 they would go to the men's room or the ladies'
6 room, somebody would follow them right into the
7 bathroom. So they have the records.
8 And now it looks like Bethlehem Steel went
9 bankrupt, so we don't have the records. Why
10 don't you look down at Bethlehem and see what
11 you can find? For 50 years they kept the
12 records, so how are we going to find records
13 that the government had? And if they're lost,
14 the only one that has them is the government.
15 And why did they only release so many? So
16 these are some real serious questions that I
17 think we deserve answers to. I really do.
18 And the men that were lied to, we worked
19 without protection down here, and that alone is
20 enough. Now I know you've all got parents and
21 a lot of you have children and grandparents,
22 and if it was one of your family that was from
23 Bethlehem Steel, I would fight for them as much
24 as you. I don't care whether -- whose it is,
25 what's right is right and what's wrong is

1 wrong. And I'm begging you to look into this
2 and give us a fair shake at Bethlehem Steel.
3 I -- maybe I'm just a sentimental guy, I don't
4 know, but I would fight for anyone if I heard
5 this was going on. I don't care if he's from
6 California, he deserves someone to fight for
7 him. And these poor fellas that came back from
8 fighting a war and made all of this possible,
9 this beautiful hotel and the rooms that you can
10 stay in, come back -- young kids getting killed
11 just like today over in Iraq, and they come
12 back and the government lies to them and
13 exposes them to this, and now we're arguing how
14 much did you get. Did you get this much?
15 Well, we can't pay you, but if you got that
16 much, we can. And this is a shame. This is --
17 the injustice in this program is a shame. And
18 some of the -- some of the things that we've
19 been told and what -- what -- like your
20 grandmothers and my grandmothers, to send them
21 a questionnaire and ask them what their husband
22 done 50 years ago in the plant when they don't
23 have a clue, a lot of them never got out of
24 school, and then send them a letter saying if
25 you don't sign off on this paper we're going to

1 drop your case. This is ludicrous.
2 So I hope when you're -- I know you're working
3 hard and you're all fighting for the right
4 thing, I hope, I mean I'm pretty sure you are,
5 just give us some consideration and -- this
6 goes for Mallinckrodt people, too, not just --
7 not just Bethlehem Steel. This is going on
8 around the country. So thank you very much for
9 the time.

10 **DR. ZIEMER:** Thank you, Ed. Ed has been doing
11 at Bethlehem what Denise has been doing here,
12 and I know that your colleagues appreciate all
13 your efforts.

14 **MR. WALKER:** Thank you.

15 **DR. ZIEMER:** That completes our public comment
16 period for this evening. Thank you all for
17 being here. We have an open meeting beginning
18 tomorrow morning at 7:30. I hope to see many
19 of you there. Thank you, and good night.

20 (Whereupon, the session concluded at 9:00 p.m.)

C E R T I F I C A T E O F C O U R T R E P O R T E R**STATE OF GEORGIA****COUNTY OF FULTON**

I, Steven Ray Green, Certified Merit Court Reporter, do hereby certify that I reported the above and foregoing on the day of July 5, 2005; and it is a true and accurate transcript of the testimony captioned herein.

I further certify that I am neither kin nor counsel to any of the parties herein, nor have any interest in the cause named herein.

WITNESS my hand and official seal this the 18th day of July, 2005.

STEVEN RAY GREEN, CCR

CERTIFIED MERIT COURT REPORTER**CERTIFICATE NUMBER: A-2102**