THE VETERANS' ADVISORY BOARD ON DOSE RECONSTRUCTION

MEETING III

DAY ONE

The verbatim transcript of the Meeting of the Veterans' Advisory Board on Dose Reconstruction held at the Omni Austin Hotel Downtown, Austin, Texas, on June 8, 2006.

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June 8, 2006

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TRANSCRIPT LEGEND

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

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-- (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)

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VADM, USN (ret)

DESIGNATED FEDERAL OFFICER
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SMITH, IRENE, DTRA
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TENFORDE, THOMAS, NCRP
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TSCHOERNER, BERNARD
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WYANT, CLYDE
YORK, JEAN

P R O C E E D I N G S

1 (9:00 a.m.)

CALL TO ORDER AND OPENING REMARKS
MS. SHARI DURAND, DESIGNATED FEDERAL OFFICER

2

3 **VICE ADMIRAL ZIMBLE:** We'd like to start on
4 time, so if the Board members would please take
5 your seats around the dais...
6 Well, good morning, ladies and gentlemen. Let
7 me first introduce our Designated Federal
8 Officer, Ms. Durand -- Shari Durand -- for some
9 opening remarks.
10 **MS. DURAND:** Good morning, everyone. I'd like
11 to welcome all of you to the third meeting of
12 the Veterans' Advisory Board on Dose
13 Reconstruction. Wonderful to see everybody out
14 in the audience.
15 Let me just explain very briefly my role here
16 is just to keep law and order in the place. I
17 don't think that will be a problem whatsoever.
18 What I would ask -- a couple of things for you
19 to do. If any of you have cell phones or
20 pagers, any other type of instrument on you
21 that will make noise that could interrupt the
22 proceedings, if you would either turn those off
23 or turn them on vibrate so they don't interrupt
24 the speakers as they're going through.

1 We've got at least one individual -- one Board
2 member -- who's listening in and will be
3 discussing by phone, so everyone is aware of
4 that. The proceedings are also recorded
5 verbatim, so we'll have the proceedings as
6 recorded and available.
7 Other than that, those are all the comments
8 that I have. I would also remind the Board
9 members when you're not speaking if you would
10 turn your microphones off so they don't
11 interfere with the other speakers. And we also
12 have a microphone when we get to the point for
13 audience comments; we'd ask that you use that
14 microphone, also. Okay?
15 Admiral Zimble.
16 **VICE ADMIRAL ZIMBLE:** Thank you very much, Ms.
17 Durand. Before we begin, we're very fortunate
18 to have the support of Veterans Administration
19 Regional Office in from Waco, Mr. Carl Lowe is
20 here. He came all the way -- 90 miles down
21 from Waco to be with us the next two days and
22 to -- to answer any questions or provide any
23 assistance to the veterans while -- while
24 you're here. So I've asked Mr. Lowe to please
25 say a few words.

1 **MR. LOWE:** Okay. Thank you. On behalf of the
2 Waco Regional Office and the veterans from
3 north Texas, we want to welcome the Board here,
4 and we're here -- set up outside and if anybody
5 has a question regarding a pending claim or
6 benefits in general, please stop by and see us
7 and we'll try to help you. Don't have to be a
8 -- have a claim with the Waco office. If
9 you've got a claim with Houston, Phoenix,
10 Albuquerque, whatever, we'll try to help you
11 out. But that's what we're here for is to
12 support you and the -- and the veterans in the
13 audience. Okay? Thank you.
14 **VICE ADMIRAL ZIMBLE:** Thank you very much,
15 Carl.

CHAIRMAN'S WELCOMING REMARKS AND INTRODUCTION OF THE VBDR MEMBERS

16 **VADM JAMES ZIMBLE, USN (Ret.)**
17 I'll welcome the -- this will be the third
18 meeting of the Board, and I would like to go
19 around the -- the table and have each of the
20 Board members introduce themselves so we -- we
21 get to know everybody that's here. First
22 however, I would like to welcome the newest
23 member of our Board. That's Dr. Patricia
24 Fleming, comes from Creighton University in --

1 in Nebraska and I'm -- I'm sure she's enjoying
2 the warmer weather that -- that's available
3 here in Austin.
4 But at any rate, if we could start with Mr. --
5 Mr. Harold Beck and we'll just go around the
6 table and everyone introduce themselves.
7 **MR. BECK:** My name's Harold Beck. I was
8 retired from the Department of Energy's
9 Environmental Measurements Laboratory and my
10 background is in radiation dose reconstruction
11 and radiation measurements.
12 **DR. BLANCK:** I'm Ronald Blanck, former Army
13 Surgeon General, currently the president of the
14 University of North Texas Health Science
15 Center.
16 **DR. FLEMING:** I'm Patricia Fleming. I'm a
17 professor of ethics at Creighton University in
18 Omaha, Nebraska. I served on a National
19 Academy of Science committee that assessed
20 various aspects of the Radiation Exposure
21 Compensation Act. I'm also an Air Force brat.
22 My father, Paul Fleming, served in World War
23 II, primarily in the South Pacific in the Army
24 Air Corps, and subsequent to that he joined the
25 Air Force where he worked primarily as a

1 mechanic on the B-52, which was the mother ship
2 of the X-15, so I'm very honored to be part of
3 this -- of this Board.
4 **MR. GROVES:** My name is Kenneth Groves and I am
5 a retired Navy Commander, radiation health
6 specialist. I also had eight years enlisted
7 service as a hospital corpsman. I am the
8 chairman of Subcommittee 4 of the panel, which
9 is the communication and outreach panel, and
10 I'm happy to be back in Texas. I am a graduate
11 -- got my advanced degrees at Texas A&M. Thank
12 you.
13 **DR. MCCURDY:** I am David McCurdy, and I am on
14 the Subcommittee 3 on quality management. My
15 background is in quality -- quality management
16 and radioanalytical measurement quality, and
17 this is my second time here on the committee.
18 **DR. LATHROP:** My name is John Lathrop. I am a
19 scientist at Lawrence Livermore National
20 Laboratory. I have a background in risk
21 assessment, risk evaluation and risk
22 communication. That's why I'm on the Board.
23 **DR. BLAKE:** My name is Paul Blake. I'm a
24 health physicist with the Defense Threat
25 Reduction Agency. I'm in fact the program

1 manager for the Nuclear Test Personnel Review
2 program. I served 26 years in the Navy and
3 retired about a year and a half ago.
4 **VICE ADMIRAL ZIMBLE:** And I'm Jim Zimble. I've
5 had the pleasure of Chairing this -- this
6 Board. I am former Surgeon General of the Navy
7 and former president of the Uniformed Services
8 University. If we have a Surgeon General of
9 the Army here, it's very important that the
10 Surgeon General of the Navy also be
11 represented. But I would say that, as you have
12 heard already and as you will hear as the rest
13 of the members introduce themselves, we have a
14 very talented and skilled prestigious Board
15 that will serve the veterans, I know, extremely
16 well. And our recommendations I think will
17 prove to be very helpful for -- for all
18 veterans.
19 **MR. PAMPERIN:** I'm Tom Pamperin. I'm Assistant
20 Director for Policy of the Compensation and
21 Pension Service in Washington, D.C.
22 **DR. REIMANN:** I'm Curt Reimann, retired from
23 the National Institute of Standards and
24 Technology, and my background is in chemistry
25 and working with this Board with several others

1 in the area of quality and quality management.
2 **DR. SWENSON:** Good morning. I'm Kristin
3 Swenson, I'm retired Air Force --
4 **UNIDENTIFIED:** Push your mike button.
5 **DR. SWENSON:** Okay. Can you hear me? Good
6 morning. I'm Kristin Swenson. I'm retired
7 from the Air Force. As you can tell, we need
8 some more Air Force representation on the
9 Board. And currently I'm working for
10 RadAmerica in the capacity as a radiation
11 physicist for -- in radiation therapy clinics.
12 **COLONEL TAYLOR:** I leave -- I stand with the
13 dimension of a soldier with 30 years service as
14 a combat arms officer, which includes being
15 under operation -- Shot (Unintelligible) under
16 Operation PLUMBBOB, so 30 years of active duty
17 and now 25 years of working with veterans
18 associations. I'm very honored, very much so,
19 to be here. And we talk about our -- our
20 service associations and I take on these Navy
21 and Air Force and I haven't found a Marine
22 around here, but I'm sure there's one
23 somewhere. And secondly, when we look at where
24 our families were, my grandfather was a horse-
25 drawn or field artillery battalion that served

1 in the battery that fired on Fort Sumter. My
2 father was a company commander in World War II
3 of an engineer company. When Taylor commanded
4 a battery, Harry Truman commanded -- Taylor
5 commanded an engineer company, Harry Truman
6 commanded an artillery battery and Lieutenants
7 Eisenhower and Patton were still in the United
8 States. So I managed to make Korea, Vietnam
9 and my son is a Navy captain, so obviously I am
10 very honored and very proud to be among this
11 very talented, experienced group of people.
12 Thank you.
13 **MR. VOILLEQUÉ:** I'm Paul Voillequé. I'm a
14 health physicist and I serve on -- on
15 Subcommittee 1, of which Harold Beck is the
16 Chair. I'm -- it's the Subcommittee on Dose
17 Reconstruction.
18 **VICE ADMIRAL ZIMBLE:** Thank you very much.
19 There are three additional members of the Board
20 that could not be with us today. They had
21 other obligations that precluded their being
22 here now. However, they have made some
23 significant contributions to the subcommittees
24 and to their final reports that will be
25 presented tomorrow. One of the three members,

1 Dr. Zeman, is with us by telephone and -- Dr.
2 Gary Zeman, would you just introduce yourself?
3 **DR. ZEMAN:** Thank you, Admiral Zimble. My
4 name's Gary Zeman. I'm a retired Navy
5 radiation health officer having served 20 years
6 in the Navy. I cannot trace my lineage back to
7 Fort Sumter like Colonel Ed can, but I've
8 worked in the radiation field since the late
9 1960s, early 1970s. I'm a Certified Health
10 Physicist and I'm currently the radiation
11 safety officer at Argonne National Laboratory
12 in Chicago.
13 **VICE ADMIRAL ZIMBLE:** All right. Thank you
14 very much, Dr. Zeman.
15 That's the Board, and the Board has been
16 working assiduously on -- on many issues that
17 will be presented this afternoon and tomorrow.
18 And of course, as usual, we're very anxious to
19 hear your comments -- you veterans, atomic
20 veterans -- to make sure that we are attending
21 to all of the issues that concern you.
22 I do have to make one more announcement for --
23 we -- we are meeting here at the Omni Hotel
24 because it's centrally located for Texas and it
25 gives us an opportunity to have all the

1 amenities that are required to have this
2 meeting. We recognize that there is one
3 problem, and that is being able to park in
4 downtown Austin without being charged. But
5 thanks to the thoughtfulness and the generosity
6 of DTRA, if you'll let us have your parking
7 passes during the break, we can make sure that
8 -- that you get franked parking so that you
9 won't have to -- to pay the whatever --
10 whatever it is because we really enjoy having
11 you here with us so that we can learn more
12 about the problems -- problems and concerns.

A BRIEFING ON BEIR VII: EPIDEMIOLOGY AND MODELS FOR ESTIMATING CANCER RISKS

13 **DR. ETHEL GILBERT, BIOSTATISTICIAN, RADIATION**
14 **EPIDEMIOLOGY BRANCH, NATIONAL CANCER INSTITUTE,**
15 **BETHESDA, MD**
16 With that, I'd like to introduce our first
17 speaker and the -- that will be Dr. Ethel S.
18 Gilbert. She is a biostatistician in the
19 radioepidemiology branch of the National Cancer
20 Institute. She is a -- she's a graduate of
21 Oberlin College and received her Ph.D. in
22 biostatistics from the University of Michigan.
23 Her research that she's currently doing
24 includes the studies of workers at the Mayak

1 Nuclear Plant in Russia, studies of second
2 cancers after radiochemotherapy, and radiation
3 risk assessment. She's a Fellow of the
4 American Statistical Association and she's an
5 honorary member of the National Council on
6 Radiation Protection and Measurements. She --
7 most -- most importantly for this Board, she
8 was a member of the National Academy of
9 Sciences BEIR -- B-E-I-R, that's Biological
10 Effects of Ionizing Radiation -- meeting Number
11 VII. That was the committee on health risk from
12 exposures to low levels of ionizing radiation.
13 So she -- she comes with a great deal of
14 expertise and we're -- we Board members are all
15 very anxious to hear what she has to say. So
16 welcome Dr. Gilbert, and the floor is yours.
17 **DR. GILBERT:** Thank you, and good morning. I
18 did bring a copy of the BEIR VII report in case
19 some of you have not seen it. And I should
20 mention that, you know, I'll be talking about
21 epidemiology and models for estimating cancer
22 risk, but the report actually includes other
23 topics such as radiobiology and inheritable
24 genetic effects. And I will not be talking on
25 these topics, but I just wanted you to know

1 that the report is more comprehensive than --
2 than what I will be presenting today.
3 All right, I knew I'd do it. There's a sneaky
4 thing. If you punch it, I'll -- it goes crazy.
5 **UNIDENTIFIED:** (Off microphone)
6 (Unintelligible)
7 **DR. GILBERT:** Okay, I'll be -- I'll be careful
8 not to push it again. Right, right.
9 Okay, this is an outline of my talk. One of
10 the tasks of the BEIR VII committee was to
11 review the epidemiologic literature, and I'll
12 be -- I'll start by presenting some highlights
13 of that review, emphasizing important new data
14 that have appeared since the BEIR V report was
15 published in 1990. This was the last -- the
16 previous report that reported on the health
17 effects of low-LET radiation. And I'll also
18 include the IARC 15-country nuclear worker
19 study. Then I'll talk about the approach or --
20 the approach we used for estimating cancer
21 risk, and end by showing some example risk
22 estimates.
23 The report includes a comprehensive review of
24 studies in the four areas that I've listed on
25 this slide, and I'll start with the Japanese

1 atomic bomb survivors. The life span study
2 cohort includes about 87,000 atomic bomb
3 survivors in Hiroshima and Nagasaki, with
4 individual dose estimates. And this has been
5 and continues to be the primary source of data
6 for risk assessment.
7 There are good reasons for this. It's a large
8 population. It's one of the few populations to
9 include all ages and both sexes. We have long-
10 term follow-up for both cancer mortality and
11 cancer incidence. It's a whole body exposure,
12 which means that we can estimate risks for all
13 cancers combined, or for cancers of any
14 specific site. In that sense it's different
15 from medical studies where often you have just
16 one or -- you know, a smaller number of sites
17 that are exposed.
18 We have well-characterized dose estimates for
19 individual study subjects. That's absolutely
20 essential for quantitative risk assessment.
21 And doses are in a useful range. About 30,000
22 of the exposed survivors had doses that were
23 less than a tenth of Sievert -- a tenth of a
24 Sievert, in the low dose range, and that is --
25 this is not entirely a high dose cohort, as

1 sometimes thought. In addition, there area
2 18,000 survivors with higher doses, and this
3 allows risk to be estimated with considerable
4 precision.
5 Since BEIR V was published there have been
6 several new developments in the A-bomb survivor
7 data. We have improved dose estimates. The DSO
8 dosimetry is a result of a major international
9 effort to reassess and improve dose estimates.
10 Although we could be more confident on risk
11 estimates based on these improved doses, in
12 fact the impact on risk estimates is fairly
13 minor. Dale Preston and others conducted
14 parallel analyses using both the DSO2 doses and
15 the older DS86 dose estimates, and they found
16 that the new dose estimates reduced the risk
17 estimates for solid cancer and leukemia by
18 about eight percent. And the shape of the dose
19 response was also not modified by the dosimetry
20 revision.
21 This shows -- at the time BEIR V was published
22 their risk estimates were based primarily on
23 mortality data through 1985. BEIR VII had
24 deaths through the year 2000 available, which
25 nearly doubled the number of cancer deaths that

1 were available for analysis. This was
2 particularly important for those exposed under
3 age 20, where the number of solid deaths was
4 tripled.
5 I think -- I should note there are some minor
6 changes in the slides I'm presenting and those
7 that you have in your handout, and I think this
8 is one place. I think you say -- yours says
9 age exposure less than 10; that should be less
10 than 20, and there'll be a few other minor
11 differences in these slides and those that you
12 have.
13 Perhaps the most important development are the
14 cancer incidence data which have been obtained
15 from high quality cancer registries in
16 Hiroshima and Nagasaki. An advantage of these
17 data is that the diagnostic information is of
18 higher quality than that based on death
19 certificates, which is especially important for
20 estimating site-specific risks.
21 In addition, the incidence data include the
22 many cancers that do not result in death. And
23 here I have compared the number of incident
24 cases and the number of deaths, and you can see
25 that particularly for cancers that have a

1 fairly good prognosis -- such as colon, female
2 breast and bladder cancer -- the number of
3 deaths -- number of cases is far greater than
4 the number of deaths, thus providing a much
5 stronger basement -- basis for risk assessment.
6 A dose-response analysis for non-cancer
7 mortality has now been clearly demonstrated,
8 although the increase in risk in terms of a
9 percentage is much smaller than that for
10 cancer. The data, however, are inconclusive
11 regarding the shape of the dose response and
12 regarding modifying effects of age at exposure
13 and other factors. For example, the dose --
14 the data are compatible with both a linear dose
15 response, but also compatible with a threshold
16 as big as a half a gray. So it's very
17 uncertain as to whether this effect exists at
18 very low doses and, if so, what its magnitude
19 would be. And for that reason BEIR VII does
20 not estimate risks for non-cancer mortality.
21 Turning now to medical studies, there are a
22 huge number of studies of patients who received
23 radiotherapy for malignant and benign disease,
24 and also for persons who were exposed to
25 radiation for diagnostic reasons. And here

1 I've listed some of these studies. This is a
2 very busy slide, but I just wanted to give you
3 a flavor of the number and variety of studies
4 that have been conducted.
5 Although there are a huge number of studies,
6 the number that are truly valuable for
7 estimating risks at low doses is -- is much
8 smaller. Many of the studies lack individual
9 dose estimates, and therapeutic doses can be
10 very high, as much as ten or more gray, and
11 this makes them of limited usefulness for
12 quantifying risks at low doses.
13 The medical data are strongest for thyroid and
14 breast cancer where we have several studies
15 that have individual dose estimates and doses
16 that are in a useful range. And I wanted to
17 note particularly two important pooled
18 analyses, one of thyroid cancer and one of
19 breast cancer. And these analyses bring
20 together data from the atomic bomb survivors
21 and data from several relevant medical studies,
22 and based on these combined data they provide
23 models for estimating risks for these two
24 sites, thyroid and breast.
25 Okay, next up are the occupational studies, and

1 the report reviews studies in each of the areas
2 that I've mentioned here. I'm only going to
3 talk today about the nuclear industry workers.
4 Exposures to nuclear industry workers are
5 deliberately limited as a protection to the
6 worker, and thus these studies potentially
7 provide a direct assessment of risk at low
8 doses and dose rates. A strength of these
9 studies is that there are dose estimates
10 available from individual personal dosimeters
11 worn by the workers. There have been several
12 studies of workers at individ-- many studies of
13 workers at individual facilities. To increase
14 sample size and precision of risk estimates,
15 combined analyses have been conducted on both a
16 national and an international scale.
17 And here I've just mentioned two of the more
18 informative studies that were available to the
19 BEIR VII committee. The first is the IARC 3-
20 country study which includes about 100,000
21 workers in the United States, the United
22 Kingdom and Canada. And the second is the
23 National Registry of Radiation Workers study
24 that includes over 100,000 workers in the
25 United Kingdom. There is, however, overlap in

1 these studies. They're not totally
2 independent.
3 At almost exactly the same time as the BEIR VII
4 report was released, the first findings of the
5 IARC 15-country study were released. This was
6 too late for this study to be fully
7 incorporated into the BEIR VII report, although
8 there is an appendix on the study. The first
9 publication is in the *British Medical Journal*.
10 That should be 2005, not 2006. There's a more
11 detailed paper that's expected soon.
12 This is the largest worker study ever
13 conducted. About 400,000 workers were included
14 in the dose-response analyses, with about 6,500
15 cancer deaths. The study includes most of the
16 workers in the previous studies in the U.S.,
17 U.K. and Canada, although some of the higher
18 dose workers were excluded because they had
19 potential for exposure to neutrons and
20 radionuclides.
21 In addition, there are several new studies in
22 the U.S. and other countries. And I wanted to
23 note that this was definitely a collaborative
24 effort, and there were several meetings of the
25 investigators from the various countries,

1 special subcommittees, that met several times
2 to develop a protocol and plan the approach
3 that was to be used.
4 Here I've listed the countries that were
5 included, the 15 countries. And I have also
6 shown the number of cancer deaths that each
7 country contributed, and you can see that the
8 United States and the United Kingdom clearly
9 dominate here. Japan is next, however it was -
10 - to be included in the analyses of solid
11 cancers or all cancers except leukemia, it was
12 required that the country have some data on
13 socioeconomic status, and Japan didn't have
14 that so they were excluded from that particular
15 analysis.
16 You can also see that for -- in many of the
17 countries their nuclear industries were small,
18 rather young. The workers were young. So some
19 of these smaller countries contribute rather
20 few cancer deaths.
21 Just a little bit more detail on the United
22 States, and I'll just mention that Hanford and
23 Oak Ridge have been included in the 3-country
24 study, but the Idaho study and nuclear power
25 plant worker study were new additions.

1 The study gave extensive attention to
2 dosimetry, and the objective of this effort was
3 to develop factors for converting recorded
4 doses to organ doses, and to evaluate the
5 uncertainties in these factors.
6 Here I've shown some results for leukemia for
7 the three studies that I have mentioned, and I
8 have also shown comparable estimates based on
9 the atomic bomb survivors, both linear
10 estimates and linear quadratic estimates. The
11 latter are those that have been used in most
12 risk assessments. And you can see that for the
13 3-country study we did find a significant
14 effect, the confidence limits interval does not
15 include zero. For the NRRW and the 15-country
16 study the result was not quite statistically
17 significant, but the estimates from all three
18 studies are fairly comparable and sort of in
19 between the linear and linear quadratic
20 estimates from the A-bomb survivors.
21 And this shows some results for all cancers
22 excluding leukemia where the 3-country study
23 and the NRRW, the estimates are very close to
24 zero, but you can see that the upper confidence
25 limit -- oops, what do I do now -- but the

1 upper confidence limit does include the value
2 from the atomic bomb survivors.
3 **DR. LATHROP:** Excuse me, can I interrupt with a
4 question? Is this one percent or five percent
5 of confidence -- or 99 or 95 percent?
6 **DR. GILBERT:** They're 95 percent confidence
7 intervals.
8 **DR. LATHROP:** It's 95?
9 **DR. GILBERT:** Right, they're 95 percent
10 confidence intervals.
11 **DR. LATHROP:** All right.
12 **DR. GILBERT:** Sorry, I probably should have
13 labeled that, but I didn't.
14 The 15-country study has a much higher risk
15 estimate, as you see, and it is statistically
16 significant. However, you can also see that
17 the confidence limits on that estimate are
18 really very wide. These estimates are adjusted
19 for socioeconomic status, which is intended to
20 serve as a surrogate for smoking and other
21 lifestyle factors. However, that's not quite
22 the same as having actual data on such factors.
23 And here I've shown estimates for various
24 categories of cancer according to the extent
25 that they are related to smoking, and you'll

1 note particularly down toward the bottom that
2 the estimate for lung cancer is much higher
3 than -- than other estimates, so that does
4 suggest that there might well be some bias
5 related to smoking in this study as we did not,
6 as I say, have smoking data.
7 And the -- this is just a statement from the
8 paper that says, taken together, these findings
9 indicate that a confounding effect by smoking
10 may be partly, but not entirely, responsible
11 for the estimated increased risk for mortality
12 from all cancers other than leukemia. But
13 since we don't know how much of it is due to
14 smoking, it makes these estimates a little --
15 it's hard to know what exactly to do with these
16 estimates.
17 Okay, this shows some estimates for some of the
18 larger studies that were included in the 15-
19 country study, and the dashed vertical line is
20 the estimate for the combined analyses, which
21 is also shown at the bottom of the slide. And
22 you can see that for the individual studies, in
23 many cases the confidence intervals are very
24 wide. Most of them are compatible with the
25 estimate -- the combined estimate. Canada you

1 see at the top is a bit of an outlier; however
2 a formal test for heterogeneity was not
3 significant.
4 And then I've just shown the estimate with
5 cancer -- with Canada excluded, and you can see
6 that it's not statistic-- it was not
7 statistically significant. It is a bit lower
8 than the estimate for all countries, but it's
9 still a fairly high value. And the estimate
10 remains statistically significant when other
11 studies were excluded individually.
12 **DR. MCCURDY:** Excuse me -- excuse me. Are
13 these strictly photon exposures?
14 **DR. GILBERT:** The effort -- the -- yes, it was
15 intended to be --
16 **DR. MCCURDY:** External.
17 **DR. GILBERT:** External, right. Now they may --
18 that was -- as I mentioned earlier, they --
19 they excluded workers who had potential for
20 neutron exposure or for internal exposures
21 'cause they wanted to keep this sort of clean
22 and they couldn't quantify the doses from those
23 other exposures.
24 Although these studies have the advantage of
25 providing a direct assessment at low doses and

1 low dose rate, they are subject to limitations.
2 At doses that are typically received by a
3 nuclear workers, the increased in risk for the
4 higher dose workers is likely to be, at most, a
5 few percent. And even with very large studies,
6 risk estimates this small cannot be estimated
7 with great precision, and we saw that
8 illustrated I think in the 15-country study.
9 In addition, these studies have a very strong
10 potential for confounding, which I think is not
11 always well-appreciated. In an epidemiologic
12 study you can almost never rule out the
13 possibility of a ten to 20-percent bias. When
14 you're trying to estimate risks that maybe are
15 two or three percent, that can really do you
16 in, as you can imagine.
17 Okay, just a few words about environmental
18 studies. The report reviews studies in the
19 following areas. For the most part, these
20 studies are of limited usefulness for
21 quantitative risk assessment. Most of the
22 studies do not have dose estimates, and even --
23 and also most of the doses would be very, very
24 low, even lower than the worker studies, so
25 we'd have all the similar kinds of problems but

1 even worse.
2 There are some studies that show some promise
3 for the future, the Cherno-- studies as a
4 result of the Chernobyl accident and releases
5 from the Mayak nuclear facility.
6 Okay, now we're ready to talk about our
7 approach for estimating cancer risk, and first
8 I'll just note that I have a statement -- a
9 quote from the statement of task for BEIR VII.
10 "The primary objective will be to develop the
11 best possible risk estimates for exposure to
12 low dose, low-LET radiation in human subjects."
13 And the BEIR VII committee defined low dose as
14 being below a tenth of a gray.
15 Our objective was --
16 **DR. LATHROP:** Excuse me, can you just give us
17 some benchmarks for how a gray (off microphone)
18 compares with, for instance, natural background
19 exposure?
20 **DR. GILBERT:** Natur-- let's see --
21 **DR. LATHROP:** Compared -- you know, the
22 benchmark I like to use is the typical American
23 gets about 360 millirem, so remind me about a
24 gray and things like that.
25 **DR. GILBERT:** Well, a gray would be -- is of

1 course 1,000 millirem.

2 **DR. LATHROP:** 1,000 millirem, okay, so about
3 three times the annual background and medical
4 exposure for an American (unintelligible).

5 **DR. GILBERT:** Let's see, well, a ten-- let's
6 see, you'd get -- I never can do mathematics
7 when I'm standing at a podium. I used to have
8 a slide on this. Natural background is about a
9 hundredth of a gray per year -- is that right?
10 No...

11 **DR. LATHROP:** (Off microphone) (Unintelligible)
12 (On microphone) Okay, so if a gray is 100
13 times a rem, it's about 300 times the natural
14 background for an American.

15 **DR. GILBERT:** It's a lot bigger than what most
16 Americans would get.

17 **DR. LATHROP:** 300 times natural background and
18 medical exposure for an American. Okay, I just
19 wanted to remind myself, and (unintelligible) -
20 -

21 **DR. GILBERT:** Well, I think a ten-- okay, let's
22 go back.

23 **DR. LATHROP:** A gray is big.

24 **DR. GILBERT:** A tenth of a gray, which is the
25 upper limit, is about ten years of natural

1 background. Maybe that would help.

2 **DR. LATHROP:** Okay. Well, we still have a
3 factor of three there, but okay.

4 **DR. GILBERT:** Something -- well, if you don't
5 include --

6 **DR. LATHROP:** It's quite large compared to
7 background.

8 **DR. GILBERT:** -- you don't include radon. I
9 mean that's -- radon's kind of another story.
10 Sorry.

11 Okay. Our objective was to estimate lifetime
12 risk, allowing for dependencies on dose, sex
13 and age at exposure. Risks undoubtedly depend
14 on other factors, but data are generally
15 inadequate to quantify them. By lifetime risk,
16 we mean the risk of developing cancer over an
17 exposed person's life span.

18 BEIR VII gave equal attention to cancer
19 incidence and cancer mortality, and we provide
20 separate estimates for leukemia, for all solid
21 cancers, and for cancers of several specific
22 sites. And here I've listed the sites for
23 which we provide estimates. I might just note
24 uterus and prostate, which aren't normally
25 considered to be radiogenic cancers. The

1 reason we included those cancers was primarily
2 to get them out of the all solid cancer
3 category. And in fact I understand this group
4 has -- or some of this group had some questions
5 about why we included prostate cancer, and in
6 fact the risk estimate for that cancer ends up
7 being very small, but with a huge confidence
8 interval that includes zero. I don't think I
9 have a slide on that, but I'll just mention
10 that.
11 We did not include skin cancer. To do a good
12 job of this would require the use of special
13 data such as the Ron et al paper on skin cancer
14 in A-bomb survivors. That was a bit beyond the
15 resources we had to do some of these special
16 evaluations. In addition, our sponsors really
17 insisted that everything be based on the DSO
18 dosimetry, and some of these special studies
19 such as the skin cancer study have not yet been
20 linked up with DSO dosimetry or updated.
21 There are in a sense two steps to estimating
22 lifetime risk. First we use data from
23 epidemiologic studies to develop risk models.
24 We then apply the models to estimate lifetime
25 risk from low dose exposure to a U.S.

1 population. And by developing risk models, I
2 mean expressing risk as a function of dose and
3 other factors such as sex, age at exposure and
4 so forth.
5 Well, what data did we use for this first step,
6 developing our risk models? For breast and
7 thyroid cancers we used the risk models that
8 were developed from the combined analyses of
9 the A-bomb survivor data and relevant medical
10 studies. For all other cancer sites we used
11 the -- the A-bomb survivor incidence and
12 mortality data, primarily the incidence data.
13 We developed models for both the excess
14 relative risk where risk is expressed relative
15 to the baseline, and the absolute risk where
16 it's expressed independent of the baseline.
17 And both these measures depend on dose and
18 other factors.
19 For solid cancers risk was expressed as a
20 linear function of dose, for leukemia as a
21 linear-quadratic function of dose, and these
22 choices are supported by the epidemiologic data
23 and also by radiobiological considerations.
24 This just shows the dose-response analy-- the
25 dose response for solid cancer incidence in the

1 life span study, the Japanese life span study.
2 And you can see it's a pretty remarkably linear
3 dose response.
4 I'll just mention we evaluated the dependency
5 of risk on age at exposure to attained age.
6 Our models were similar to those that had been
7 used by RERF investigators, although our model
8 had these measures decreasing with increasing
9 age at exposure only over the range zero to 30
10 years.
11 Our next step is to apply the models to
12 estimate lifetime risk from low dose exposure
13 to the U.S. population. There are two -- more
14 than two issues, but there are two issues of
15 special importance: The use of the model to
16 estimate risk at low doses and low dose rates,
17 and transporting risk from Japanese A-bomb
18 survivors to a U.S. population. Both these
19 issues are discussed in Chapter 10, Integration
20 of Biology and Epidemiology. And this chapter
21 brings together findings from both disciplines
22 on these issues, as well as some other issues.
23 To use the -- to develop estimates for use for
24 low doses and dose rates, like many past risk
25 assessments, we've reduced linear estimates by

1 what's called a dose and dose rate
2 effectiveness factor. Many past risk
3 assessments have used a DDREF of 2. The BEIR
4 VII DDREF was derived from a Bayesian analysis
5 of the A-bomb survivor solid cancer incidence
6 data and data from relevant studies in mice.
7 And we estimated the DDREF to be in the range
8 1.1 to 2.3, and the point estimate was about
9 1.5. And we refer to this as the LSS DDREF
10 because it was estimated in a way that took
11 into account the fact that we were going to
12 apply it to the A-bomb survivor cancer
13 incidence data.
14 Next up, transporting risk, and just to -- for
15 those of you that aren't aware of this issue,
16 this shows baseline incidence rates for U.S.
17 and Japanese females. And you can see that for
18 stomach and liver cancer, the baseline rates
19 are much higher in Japan than are in U.S.,
20 whereas for lung and breast cancer they're much
21 higher in the U.S.
22 Well, how does this affect radiation risks?
23 There are two approaches that have been used in
24 the past. With the absolute risk transport
25 it's assumed that the radiation risks are

1 independent of the baseline rates, at least
2 with regard to country. And that was the
3 approach that was used by the BEIR III report.
4 With relative risk transport it's assumed that
5 the radiation risks are proportional to the
6 baseline risks. That was the approach used by
7 BEIR V. And neither of these reports provided
8 much discussion of this issue. Intermediate
9 approaches have also been used.
10 Well, how do we decide? I'm not going to go
11 through this in detail. This just mentions
12 some approaches for trying to decide which is
13 the appropriate method. I'll just say that
14 Chapter 10 provides a very thorough discussion
15 of all of these approaches. Unfortunately none
16 of them provides a definitive answer to the
17 question, although we did think there was a
18 little more support for relative risk transport
19 than for absolute risk transport.
20 **DR. LATHROP:** Well, if I can interrupt, I'm
21 just curious about -- it sounds like a fairly
22 significant source of uncertainty. Is this
23 propagated out to -- to error bars in the --
24 **DR. GILBERT:** If you'll -- if you'll wait a
25 minute, I think we'll get to that. Okay?

1 **DR. LATHROP:** Okay.
2 **DR. GILBERT:** Okay. But I might just say that
3 it's -- it's a -- it isn't as much as a source
4 of uncertainty if you're looking at all cancers
5 combined. If you're looking at specific
6 cancers, such as stomach cancer, it's a very
7 high -- it's a very important source of
8 uncertainty.
9 Okay, so how do we handle this? Well, for
10 breast and thyroid cancer we were able to use
11 data that included non-Japanese persons. For
12 other cancers we provide estimates based on
13 both approaches, both the relative and absolute
14 risk transport and -- so that you can see that
15 range and see the level of uncertainty. And
16 for the point estimates we used a weighted mean
17 of the two estimates.
18 And this just shows an example. This is
19 stomach cancer incidence in males. In this
20 case you'll remember that rates in Japan are
21 much higher than the rates in the U.S. for
22 stomach cancer. And the estimate based on
23 relative risk transport -- oh, I should mention
24 that what I've shown here are lifetime risks,
25 and they're expressed as the number of cases

1 per 100,000 persons exposed to a tenth of a
2 gray. And the estimate based on relative risk
3 transport was about 25, whereas that based on
4 absolute transport was more than ten times
5 higher, about 280. We used a weighted mean,
6 and then to get our final estimate -- final
7 point estimate, we reduced that by a DDREF of
8 1.5. And the report actually shows this kind
9 of information for all of the risk estimates
10 that are presented, and I've shown here just a
11 few more examples. There are a lot more
12 examples in the report itself.
13 **DR. LATHROP:** Excuse me. On the weighted mean
14 --
15 **DR. GILBERT:** Uh-huh.
16 **DR. LATHROP:** -- what weights and was it --
17 **DR. GILBERT:** Okay, I'll go back.
18 **DR. LATHROP:** -- a -- a logarithmic mean? I
19 mean (unintelligible) --
20 **DR. GILBERT:** Right, it's a --
21 **DR. LATHROP:** -- 25 and 280 and I see 52 --
22 wow.
23 **DR. GILBERT:** Sorry. This is to --
24 **DR. LATHROP:** You're all over the board.
25 **DR. GILBERT:** Right, this gives the detail on

1 this -- on what -- a couple of slides back you
2 have the detail. The reason lung had a little
3 different approach than the other cancers was
4 because in the A-bomb survivors smoking and
5 radiation tend to add rather than multiply in
6 their effects on lung cancer risks, and it's
7 thought that the reason for differences in lung
8 cancer risks are primarily due to the
9 differences in smoking.
10 Okay. This has not generally been thought to
11 be a source of uncertainty for leukemia, but in
12 fact we see that the two estimates differ by a
13 factor of two or more, so perhaps it should be
14 considered for leukemia as well as for other
15 cancers. Our estimates for all solid cancers
16 were obtained by summing the site-specific
17 estimates.
18 Now we're finally ready for some example risk
19 estimates. This is a graphic that's from the
20 public summary, and it indicates that if 100
21 people were exposed to a tenth of a gray, we
22 would expect one cancer from this exposure and
23 42 cancers from other causes. Now of course a
24 tenth of a gray is the upper limit of what was
25 considered low dose, and most environmental and

1 diagnostic exposures are much lower than a
2 tenth of a gray, and the risk would be
3 accordingly lower.
4 Before I go further, I just wanted to note that
5 we did conduct an uncertainty assessment, and
6 the estimates you'll see in some of my
7 remaining slides will -- are accompanied by 95
8 percent subjective confidence intervals. The
9 uncertainties that we evaluated were the
10 statistical uncertainties, the uncertainty in
11 the DDREF, and the uncertainty in transporting
12 from the A-bomb survivors to the U.S.
13 population.
14 And here I've showed estimates for both solid
15 cancers and for leukemia. You can see that for
16 solid cancers the incidence estimates are about
17 twice those for mortality, and that reflects
18 the fact that about -- only about half of
19 cancers actually result in death. The
20 estimates for females are higher than those for
21 males. For leukemia the incidence estimates
22 are also higher than the mortality, but not by
23 -- not to the degree that we found for all
24 solid cancers. In this case females have
25 slightly lower estimates.

1 And this just shows several examples for
2 cancers of specific sites in females. You can
3 look at those at your leisure, I guess.
4 The slides I've showed you so far are for a
5 single exposure of a tenth of a gray to a
6 population of mixed ages. We also provide
7 estimates for people exposed at very specific
8 ages for an exposure of one milligray per year
9 to reflect an environmental exposure, or an
10 exposure of ten milligray per year from ages 18
11 to 65 to reflect an occupational kind of
12 scenario. And estimates for each scenario are
13 shown for both cancer incidence and mortality,
14 and for each of 12 specific cancer sites, so
15 there are lots of tables in this report.
16 And these just show -- maybe I can skip over
17 these pretty fast -- just shows some
18 illustrations of estimates for specific ages,
19 for the different exposure scenarios.
20 I did want to talk about this one where we
21 compare BEIR VII estimates with those from some
22 past reports, and I've also shown the DDREF
23 that was used. BEIR V recommend-- made a
24 general recommendation to use a DDREF, but
25 didn't provide a specific value so I've just

1 shown the estimate without any DDREF.
2 This shows all the estimates as if the DDREF
3 used by BEIR VII had been used. This is just
4 so you can compare them, what -- how they would
5 differ aside from the difference in the DDREF.
6 Given that all these estimates have an
7 uncertainty factor of at least 2, they're
8 really not that different. And the differences
9 that you see can be accounted for by the
10 difference in DDREF, by the different approach
11 to transport, and particularly due to the fact
12 that BEIR VII had much more extensive data to
13 work with than did these earlier reports. This
14 just shows the same sort of thing for leukemia.
15 And I wanted to say just a bit more about
16 uncertainties. Here I've reviewed the sources
17 of uncertainty.
18 Okay, what I've shown here is in the last
19 column I've shown the ratio of the upper 95
20 percent subjective confidence interval to the
21 estimate. And you can see that for all solid
22 cancer the overall uncertainty is about a
23 factor of 2. It's also that for breast cancer
24 because we have a lot of data on breast cancer.
25 For some of the other cancers, such as liver

1 and the stomach, the uncertainty is far larger.
2 Now in the body of the table I've shown the
3 percent of the variance that's due to each of
4 the three sources that I've indicated. And in
5 the case of all solid cancer you can see that
6 most of the uncertainty is due to the
7 uncertainty in the DDREF. For stomach cancer,
8 however, most of the uncertainty is due to
9 transport. For cancer of the ovary, down at
10 the bottom, most of the uncertainty is due to
11 just the statistical because, you know, there
12 aren't as many cases of ovary cancer so -- so
13 it -- just the statistical estimate is more
14 uncertain.
15 To conclude, I'll just summarize some of the
16 features of BEIR VII. We give equal attention
17 to cancer incidence and mortality. They're
18 based on greatly strengthened epidemiology
19 data. We have updated mortality data, cancer
20 incidence data, and also medical data were used
21 for estimating risk of cancers of the thyroid
22 and breast.
23 We have an expanded list of cancer sites over
24 what was done in BEIR V. The DDREF was
25 estimated in a way that was specific for

1 application to the LLS data, and we've given
2 explicit attention to the transport of risk,
3 and we provide a quantitative evaluation of the
4 major sources of uncertainty.
5 Thank you very much.
6 **BOARD MEMBERS QUESTIONS AND DISCUSSION OF THE RELEVANCY**
7 **OF THIS PRESENTATION**
8 **VICE ADMIRAL ZIMBLE:** Thank you very much.
9 Board members, do you have any comments or
10 questions?
11 John.
12 **DR. LATHROP:** Yes, is there going to be a BEIR
13 -- a BEIR IX? I mean we've had BEIR what, III,
14 V and VII. It's sort of like Beethoven, it
15 tends to go to the odd numbers. But are we
16 getting stable here? Are we getting a societal
17 idea of what the risk is, that you're feeling
18 confident that we've pretty much got it nailed?
19 Or is this an ongoing thing and in a few years
20 we'll have other numbers?
21 **DR. GILBERT:** (Off microphone) Well, I can't
22 make any predictions as to whether there'll be
23 a BEIR -- (on microphone) a BEIR IX, of course.
24 I think in terms of the statistical stability
25 of numbers, you know, the -- that's not

1 changing too much. It seems to be pretty
2 stable. The main uncertainties are coming in
3 because of transport and DDREF. Now if we have
4 -- if we were to have some major new insights
5 regarding those issues, then there might be a
6 need for a further risk assessment. And also I
7 guess there could be a need for a further
8 assessment of the very youngest survivors. A
9 lot of the A-bomb survivors are still alive, so
10 particularly for the younger survivors there
11 could be additional information that would be
12 coming in.
13 **DR. LATHROP:** Okay. Thank you.
14 **VICE ADMIRAL ZIMBLE:** Any -- any other
15 questions or comments? Oh, yes, Tom -- Mr.
16 Pamperin.
17 **MR. PAMPERIN:** Doctor, I won't even pretend to
18 suggest that I understood everything you said.
19 However, I -- I have a couple of questions that
20 I would ask you to expand on. I think I heard
21 you say that this study did not address skin
22 cancer. Is that correct?
23 **DR. GILBERT:** We didn't provide risk estimates
24 for skin cancer. I mean the -- the
25 epidemiologic evidence on skin cancer is

1 reviewed in the report, but...

2 **MR. PAMPERIN:** Okay. And again, as -- insofar

3 as the Department of Veterans Affairs

4 determines service connection for radiogenic

5 diseases, after we get an estimate of dose we

6 use the IREP model to create a probability of

7 causation. Does the absence of a dose estimate

8 in the BEIR VII have any impact on that

9 process?

10 **DR. GILBERT:** Of a dose estimate or of a risk

11 estimate?

12 **MR. PAMPERIN:** On the risk estimate -- since

13 you don't provide --

14 **DR. GILBERT:** Well, how these would eventually

15 been -- be used for, you know, your purposes

16 obviously -- I mean the IREP I know does have -

17 - does have risk estim-- or, you know,

18 probability of causation estimates for skin

19 cancer. And I guess someone will have to

20 evaluate how they want to incorporate what's in

21 BEIR VII into that, and whether that would --

22 we're not saying that there's no risk from skin

23 cancer. That -- that's -- that's not what

24 we're saying here. We're saying we didn't feel

25 -- we weren't -- we could develop a credible

1 estimate.

2 **VICE ADMIRAL ZIMBLE:** Okay. Thank you very
3 much.

4 **DR. MCCURDY:** I have a question. You had one
5 slide here which gave the lifetime risk for
6 incidence of solid cancer and leukemia, and it
7 was based upon 100 milligray and -- which you
8 indicated you had one cancer --

9 **DR. GILBERT:** Oh, the -- the figure --

10 **DR. MCCURDY:** -- with the exposure, 42 -- 42
11 cancers from other causes. It was the one with
12 the blue background.

13 **DR. GILBERT:** Right, right. I'm not sure I
14 know how to get back to the slide presentation,
15 but --

16 **DR. MCCURDY:** Oh, okay. The question is,
17 that's -- okay, that's showing the excess risk.
18 But if you did not have any exposure at all,
19 what is the rate of cancer incidence?

20 **DR. GILBERT:** Well, it'd be about what's --
21 it's what's shown without that one dot.

22 **DR. MCCURDY:** There's still going to be 42,
23 you're saying.

24 **DR. GILBERT:** Right, right.

25 **DR. MCCURDY:** It's not adding that much --

1 okay, you're saying the natural incidence --
2 **DR. GILBERT:** Well, that would just be --
3 **DR. MCCURDY:** -- would be 42.
4 **DR. GILBERT:** That's -- that -- the 40 -- I
5 don't know -- if I can get back -- how do I get
6 back to the slides?
7 (Pause)
8 **DR. MCCURDY:** I want to make sure the audience
9 understands that.
10 **DR. GILBERT:** I don't know how to do it.
11 Sorry. How can I -- how can I get -- there we
12 go. Okay.
13 **DR. MCCURDY:** It's ten rem. Yeah.
14 (Pause)
15 It may come. There it is.
16 **DR. GILBERT:** There we go, okay.
17 **DR. MCCURDY:** Okay.
18 **DR. GILBERT:** No, the 42 --
19 **DR. MCCURDY:** I want to make sure the audience
20 understands that, that's what I'm pointing out.
21 **DR. GILBERT:** The 42 cancers, if -- you know,
22 if you had no special exposure, you're just
23 going about your life -- just in general, about
24 42 percent of the population that's alive today
25 will eventually develop a cancer. Not

1 necessarily fatal, but --
2 **DR. MCCURDY:** Right, that doesn't mean they're
3 going to die, though. They may develop a
4 cancer.
5 **DR. GILBERT:** No, it doesn't mean -- probably
6 about half of them will result in death.
7 **DR. MCCURDY:** Okay.
8 **DR. GILBERT:** Sometime in their life, 42
9 percent of the population will develop a
10 cancer.
11 **DR. MCCURDY:** Okay, and --
12 **DR. GILBERT:** And if you get an extra tenth of
13 a gray, that would increase that to 43 percent.
14 **DR. MCCURDY:** Okay, very good. So when we
15 bring up discussions by the Board in terms of
16 exposures to the atomic veterans, this is a
17 good graph to have (unintelligible).
18 **DR. GILBERT:** Well, I expect that most of those
19 exposures are far less than a tenth of a gray,
20 too, so --
21 **DR. MCCURDY:** That's the point we have to make.
22 **DR. GILBERT:** -- that would be even smaller.
23 **DR. MCCURDY:** Secondly, the data that you had -
24 - you -- the question I have is under therapy.
25 A lot of us as we get older go through

1 different therapies and diagnostic -- for
2 example, I may go through a thallium stress
3 test and it gives me, you know, three to five
4 rem to my liver or to the -- to the GI or the -
5 - I guess the bladder. And the question being
6 is that due to the diagnostic or therapy, in
7 case they're doing therapy for prostate or for
8 breast cancer, what have you, we do follow up
9 in terms of -- do you have studies on that that
10 indicate what excess risk you get from those
11 therapies, also -- or diagnostic?
12 **DR. GILBERT:** Well, BEIR VII was designed to
13 estimate risks at exposures below a tenth of a
14 gray. If the thera-- if the doses you got from
15 the therapy were in that range, you could
16 certainly use BEIR VII estimates --
17 **DR. MCCURDY:** I doubt if that's the case since
18 they're trying --
19 **DR. GILBERT:** No --
20 **DR. MCCURDY:** -- to kill the cancer, they're
21 not --
22 **DR. GILBERT:** No, no, right, if you got -- if
23 you got radiotherapy, had a huge dose --
24 **DR. MCCURDY:** Right.
25 **DR. GILBERT:** -- BEIR -- the BEIR VII estimates

1 may not be appropriate 'cause we were really
2 trying to address risks at low doses. There
3 are --
4 **DR. MCCURDY:** Well, see, that -- this is also -
5 -
6 **DR. GILBERT:** -- you know, there may be --
7 there may be data on that. I mean, for
8 example, there have been a number of studies of
9 specifically people that have been treated with
10 radiotherapy, so you know, it might be possible
11 to gain some estimate of what the risk of
12 cancers of various organs, but --
13 **DR. MCCURDY:** Very good, I mean --
14 **DR. GILBERT:** -- shown directly it was BEIR
15 VII.
16 **DR. MCCURDY:** As we all get older and we get
17 these exposures, either due to diagnostic or
18 therapy, and they're over a tenth of a gray, we
19 have to realize that the risk of getting cancer
20 from this is also there. You're --
21 **DR. GILBERT:** Oh, definitely. Definitely.
22 **DR. MCCURDY:** -- trying to kill cancer, but you
23 may also develop cancer around the area, too.
24 **DR. GILBERT:** Right, right. In fact, actually
25 -- you might not want to apply the DDREF, but

1 you'd be in a much solider basis to estimate
2 cancers at the one or two gray, 'cause that's
3 really what's driving the A-bomb survivor
4 estimates. You probably could do -- might not
5 want to -- you'd probably have to -- you
6 wouldn't want to use BEIR VII estimates just
7 without even thinking about them, but you could
8 use them maybe without applying the DDREF, for
9 example, or you might want to get some advice
10 from someone that understood what went into
11 these estimates, but -- I mean it should be
12 possible to estimate some of those risks.
13 You'd just have to be a little cautious about
14 how you did it.
15 **DR. MCCURDY:** Okay. Very good. Thank you.
16 **VICE ADMIRAL ZIMBLE:** And Dr. Gilbert, before
17 we leave this slide, I just have to ask a few
18 more questions. I think this is one of the
19 most significant slides for this Board in terms
20 of estimating or establishing risk of exposure
21 to atomic tests, et cetera. Now this is --
22 we're talking about one-tenth of a gray, which
23 is ten rem. That's a significantly higher dose
24 -- and by the way, that's an acute exposure, is
25 that not right?

1 **DR. GILBERT:** It could be either, actually, but
2 --
3 **VICE ADMIRAL ZIMBLE:** Okay.
4 **DR. GILBERT:** -- but, yeah -- well, no, this
5 was -- yeah, this was intended really as an
6 acute exposure, but it wouldn't have to be.
7 **VICE ADMIRAL ZIMBLE:** So -- so gray -- from the
8 dose reconstructions that have been done so
9 far, and from the dosimetry that was obtained
10 at the time of the atomic testing, the average
11 doses received by -- by the participants was
12 far less than ten rem. It was far less than
13 five rem. I -- Harold, you have a -- an
14 average dose or -- or a dose that -- that
15 represents what about 90 percent of the
16 participants were exposed to?
17 **MR. BECK:** I believe the average is less than
18 one rem.
19 **VICE ADMIRAL ZIMBLE:** Less than one rem, so
20 that's --
21 **DR. GILBERT:** So it'd be one in -- instead of
22 100 -- 100 --
23 **VICE ADMIRAL ZIMBLE:** -- one-tenth of this, now
24 --
25 **DR. GILBERT:** -- it'd be one in 1,000 instead

1 of one in 100, yeah.
2 **VICE ADMIRAL ZIMBLE:** So -- so we would be
3 talking about one cancer per 1,000.
4 **DR. GILBERT:** Right.
5 **VICE ADMIRAL ZIMBLE:** Okay. I think that's
6 very important to -- to establish the -- the
7 magnitude of the -- of the issue. I -- I think
8 many people have great fears of radiation
9 exposure and I think we need to put that in
10 con-- in the appropriate context, so I thank
11 you for that.
12 **DR. GILBERT:** Well, actually I should give
13 credit. We had a communications expert on the
14 BEIR VII committee, Katherine Rowan, who was
15 responsible for that graphic.
16 **VICE ADMIRAL ZIMBLE:** Any other comments or
17 questions? Wait --
18 **MR. GROVES:** I have two -- two questions. One,
19 I want to follow up to a point that Dave made
20 about exposure in high doses in radiation
21 therapy in which there certainly is a risk for
22 that to be the cause of a cancer later in life.
23 However, normally is it not that the -- is it
24 not common lore that the latency period for
25 those kinds of cancers from an acute dose is in

1 the range of 20 to 30 to 40 years, as opposed
2 to one year or five years?
3 **DR. GILBERT:** I don't think so. I actually --
4 I've actually done some work on second cancers,
5 and I don't -- in fact we've -- if anything, it
6 -- I don't -- I don't know as we can really
7 say, but that -- we've certainly seen cancers
8 fairly quickly, not --
9 **MR. GROVES:** Okay.
10 **DR. GILBERT:** -- not 20 or 30 years.
11 **MR. GROVES:** And then my second question is,
12 the one red dot representing the one excess
13 cancer for this is not distinguishable from the
14 other cancers in that -- my question to you is,
15 there is nothing unique about that one cancer -
16 -
17 **DR. GILBERT:** No, you can't --
18 **MR. GROVES:** -- that would let you know that it
19 was the one --
20 **DR. GILBERT:** There's nothing about --
21 **MR. GROVES:** -- caused by the dose.
22 **DR. GILBERT:** -- the cancer itself that will
23 allow you to say well, this one was caused by
24 radiation, as opposed to something else.
25 **MR. GROVES:** Thank you very much.

1 **DR. ZEMAN:** This is Gary Zeman, I have a
2 question -- I have two questions, actually.
3 Dr. Zimble, you just said this was the most
4 important slide, and I'm not exactly sure which
5 one you meant. Are you speaking to the slide
6 with the red dot on it?
7 **VICE ADMIRAL ZIMBLE:** Correct.
8 **DR. ZEMAN:** Thank you. I -- I have a question
9 for Dr. Gilbert then. The question is this.
10 We just learned that average exposure of
11 veterans is less than one rem, and the risk of
12 cancer is I just heard less than one in 1,000
13 from that level of dose. And what I wanted to
14 ask is if you could relate that to risks from
15 other causes, such as smoking or other known
16 causes of cancer.
17 **DR. GILBERT:** Well, the sli-- I mean I'm not
18 sure I have those numbers at my fingertip. It
19 would certainly be much less than the risk from
20 smoking. The slide shows the risk from all
21 other causes, which is 42 cancers that we would
22 expect. I don't have the specific figures for
23 something like smoking.
24 **DR. LATHROP:** If I can ask then, just to help
25 us out here on the risk from all other causes -

1 - help me out here. Are those causes from
2 natural background radiation and non-
3 radioactive reasons why you get cancers and --
4 **DR. GILBERT:** Well, they would include --
5 **DR. LATHROP:** -- smoking and all that? Is that
6 what you mean?
7 **DR. GILBERT:** Well, they would include sort of
8 the average radiation exposure that's received
9 by the general population. But based on just
10 vital statistics for the U.S. population is how
11 we came up with the 42 cancers, just looking at
12 cancer incidence rates in the United States
13 population is how we derived the 42, and that
14 would include of course the cancers that were
15 due to sort of the average radiation exposure
16 that's -- are -- is received by any American.
17 **DR. LATHROP:** And also cancers due to smoking
18 and other --
19 **DR. GILBERT:** Right, right, smoking --
20 **DR. LATHROP:** -- the whole --
21 **DR. GILBERT:** -- the whole schmear.
22 **DR. LATHROP:** The whole range of reasons why we
23 get cancers.
24 **DR. GILBERT:** Right, many of which are
25 unidentified.

1 **DR. LATHROP:** That's right. Okay. Thank you.
2 **DR. SWENSON:** I would like to make a comment,
3 as a medical physicist, on your comment about
4 in radiation -- radiation therapy, getting more
5 cancers. With -- when we treat younger
6 patients, yes, they may have chances of getting
7 cancer later in life. As you mentioned, solid
8 tumors typically may occur later in life. But
9 in radiation therapy you aim your radiation at
10 the tumor, and there is very little scatter to
11 the rest of the body. Now the tissue that the
12 radiation is going through is being exposed,
13 but we use different fields, more than one, so
14 that we spread that dose out. And so I would
15 just like to clarify that for the public, that
16 the rest of the body does not get a huge dose.
17 Now when we look at dose to the population, we
18 given an estimate, we take into consideration
19 doses that we get from medical procedures, and
20 that's kind of averaged over the entire
21 population, and that's included in a typical
22 dose that people get just by existing from
23 cosmic radiation, medical procedures,
24 background radiation, et cetera.
25 **VICE ADMIRAL ZIMBLE:** Thank you. Harold?

1 **MR. BECK:** I'd just like to talk a little bit
2 about prostate cancer, and the reason for that
3 is that -- for this Board at least -- right now
4 the vast majority of the cases that are not
5 considered presumptive are skin cancer and
6 prostate cancer. You said -- you talked about
7 skin cancer, but I think that this Board would
8 be looking very closely at the dose
9 reconstructions for prostate cancer, and that
10 involves the uncertainty in the risk,
11 obviously, because the way these claims are
12 investigated, it has to do with developing a
13 PC, which of course depends on this uncertainty
14 and the excess relative risk. Now the IREP
15 table I guess -- I'm not sure how they actually
16 got that since I don't think BEIR V gave cancer
17 risk for prostate cancer. But you have given
18 them in BEIR VII and so could you say something
19 about whether the uncertainty had been reduced,
20 whether it could be further reduced before
21 studies and how that might affect the PC
22 estimates that might be used?
23 **DR. GILBERT:** I can't recall whether IREP --
24 what IREP does with prostate cancer right off
25 hand. In BEIR VII -- I mean one of the

1 problems is is that prostate cancer is very
2 rare in Japan, so we don't have very much data
3 to really develop a risk estimate from. We
4 made an attempt to do so. I think I might even
5 have it here. Well, as I say, it's a -- it's a
6 fairly small estimate with -- but it's not
7 statistically significant in the A-bomb
8 survivors, so it's not clear whether this is a
9 radiogenic cancer or not. We did provide an
10 estimate and confidence interval which includes
11 zero, also includes a very high estimate. Now
12 if you based your -- your award procedure on
13 just the PC, it would be -- there'd be a very
14 small chance that anybody would ever get
15 awarded for prostate cancer. As I understand
16 currently, the upper confidence limit, 99
17 percent confidence limit is often used, and
18 that -- if you did that, you probably would be
19 awarding these people. Now personally I have
20 some real problems with using the upper
21 confidence interval in that manner 'cause --
22 exactly for this reason, that the more
23 uncertain something is, the more likely you are
24 to get an award, but that's -- I -- that's just
25 an opinion I have. But you know, I don't -- I

1 mean I don't know what should be done. I --
2 personally I think the idea of using the 99
3 percent confidence interval warrants
4 rethinking. And if you're going to do
5 something with prostate -- as they say, the
6 more times you add new causes that are
7 uncertain, then you're going to end up giving
8 awards for cases that really -- it's kind of
9 unlikely, but whatever --
10 **MR. BECK:** The less you know, the more likely
11 that you might get awarded -- that -- that's
12 one of the things we've wrestled with before.
13 **DR. GILBERT:** Right, the less you know, the
14 more likely you're going to be awarded, right.
15 **VICE ADMIRAL ZIMBLE:** Before I recognize
16 another Board member, I noticed Dr. Kocher
17 walked up to the microphone, and since he's
18 responsible for a great amount of data that's
19 in the IREP, he may have a comment that's
20 relevant to your question. Dr. Kocher.
21 **DR. KOCHER:** (Off microphone) (Unintelligible)
22 **VICE ADMIRAL ZIMBLE:** Your mike is not on. Now
23 it is. It should be on now.
24 **DR. KOCHER:** Charles Land did all this, and of
25 course I cannot speak for him. But what I do

1 know is that prostate was not treated as a
2 separate organ. It was lumped in with other
3 organs, either of the urinary system or general
4 system, I don't remember which, but I can find
5 out. So it's -- it's not a single organ by
6 itself. And even though -- and because of
7 that, even though the uncertainty in the ERR is
8 large, it still takes -- depending on how old
9 you were when you were exposed and how old you
10 were when you got prostate cancer, it still
11 takes tens of rem typically, or more, to get --
12 even at the upper 99th -- a PC of 50 percent.
13 But the key is that it's not prostate by
14 itself.
15 **MR. BECK:** (Off microphone) I think IREP -- (on
16 microphone) I'm pretty sure they used the
17 urinary cancer for the Japanese.
18 **DR. GILBERT:** Yeah. Well, I was involved in
19 IREP, too, but I just don't recall how that was
20 handled.
21 **MR. BECK:** I think I was --
22 **DR. GILBERT:** Except prostate is bound to be a
23 big contributor to whatever cat-- to that
24 category, I would think, but...
25 **DR. SWENSON:** I have one to follow on, just on

1 that.

2 **VICE ADMIRAL ZIMBLE:** Okay.

3 **DR. SWENSON:** Do you have -- do you have
4 information on just the background incidence of
5 prostate cancer in the United States?

6 **DR. GILBERT:** Well, yes, we had to use it to
7 develop our estimate. It's way higher than
8 Japan, is one issue, and I'm not sure what --
9 no, we certainly do. We have the -- we have
10 the baseline risks for prostate cancer --

11 **DR. SWENSON:** Do you have any numbers you can
12 give today, do you know?

13 **DR. GILBERT:** Well, I -- no, I don't have the
14 numbers that-- actually the report does show
15 the number of cases we would expect in the
16 absence of any exposure, which includes
17 prostate cancer. I can look that up I guess in
18 a minute if you'd like.

19 **VICE ADMIRAL ZIMBLE:** Thank you. Dr. Reimann.

20 **DR. REIMANN:** Yeah, I just wanted to make a
21 point that the family name of the Board is dose
22 reconstruction, and so I'd like to tie that
23 back to -- with a question to Dr. Gilbert that
24 the -- the point has already been made via this
25 perspective that -- that the cancers from other

1 causes greatly exceed the cancers from
2 radiation exposure, which is a very helpful
3 perspective, and I think in the history of the
4 program it's been noted what the average level
5 or typical level. But the whole purpose of the
6 claims adjudication is based on the assumption
7 of different exposures and therefore the very
8 important process by which a veteran
9 communicates the specific experience to the
10 analyst and to the program allows for an
11 understanding of the differentness in the
12 background. So my -- it's not a speech I'm
13 giving; it's a question.
14 In terms of the work of this BEIR set of
15 studies, there had to be a lot of dose
16 reconstructions. For example, the people
17 exposed to the atomic bombs in Japan had to
18 have been exposed to a lot of different levels,
19 so even taking a given age group and so on,
20 their closeness to the -- to the detonations
21 and so on would represent very, very different
22 studies, and any difficulties in the quality of
23 the data that go into reports of this type
24 could have a profound effect on the larger
25 conclusion, even though I think the basic

1 conclusions would not be terribly affected by
2 that. So from our point of view, does the
3 experience here in the dose reconstruction
4 calculations and the quality of the data
5 required to do those for input to the study,
6 does this give us any real clues as to the --
7 the factors in assuring that the data that we
8 use is of a -- of a proper level to make the
9 right decisions and give the -- and adjudicate
10 the claims of the -- of the veterans in a
11 proper way? Are there lessons for us in the
12 dose reconstructions that we can take, based on
13 the fact that, for example, in an atomic --
14 actual atomic bombing, the -- the ranges of
15 exposure have to be much higher than -- at
16 least I would assume -- people taking part in
17 atomic testing are exposed to. Can you give
18 us some insights into the dose reconstruction
19 data quality, because it's so critical to the
20 basic credibility of the -- of the study you're
21 reporting?
22 **DR. GILBERT:** Well, I wouldn't be surprised,
23 but there might be other people in the room
24 that are more qualified to comment than I am --
25 Harold, I don't know -- but I will say that,

1 you know, very, very extensive efforts have
2 gone into estimating the dose estimates for the
3 atomic bomb survivors, the most recent one
4 being the DSO dosimetry.
5 Do you have anything further you might want to
6 add or --
7 **MR. BECK:** I served on the National Academy
8 committee that reviewed that -- that was
9 involved with the dose reconstruction for the
10 DSO2 which was used there, and it had an
11 extensive uncertainty analysis, which I'm sure
12 was part of Dale Preston's analysis.
13 **DR. GILBERT:** Well, actually we don't -- we
14 haven't yet taken the uncertainty in the DSO2
15 doses into account -- well, except sort of a --
16 a leftover from the uncertainty in the location
17 of survivors, which of course isn't going to
18 change.
19 **MR. BECK:** But it -- but it's there.
20 **DR. GILBERT:** Eventually it probably will be.
21 **MR. BECK:** It eventually will be used and the
22 uncertainty -- there was an extent of
23 uncertainty analysis of the DS-- of the dose
24 system that they're using, so it certainly was
25 taken into consideration.

1 **VICE ADMIRAL ZIMBLE:** Thank you, Harold. Dr.
2 Fleming?
3 **DR. FLEMING:** Actually Curt's question was
4 similar, if not more detailed than mine. But
5 maybe I would just ask Harold to very simply,
6 if you can, explain where we get -- this is for
7 our folks here and for myself, as well. Where
8 do we get this knowledge that the average
9 exposure to the atomic veteran is less than one
10 rem? What is it based on? Curt's comments
11 were helpful to remind us that it's an average,
12 but where is that -- where is that information
13 come from?
14 **MR. BECK:** This is actually a very rough
15 estimate based on all the dose reconstructions
16 that have been done in the past, some of which
17 the National Academy -- Tom Gesell will point
18 out -- found probably were -- the upper limits
19 were underestimated. But what the Academy
20 committee also found was that the median values
21 were fairly reasonable. So I think it's a
22 reasonably good estimate for the average, but I
23 think that, as Curt pointed out, what we're
24 talking about is a broad range where, although
25 most of the doses were well less than ten rem,

1 there were some people who got higher doses,
2 and that's what we're about here when we do the
3 dose reconstruction. Only a very few people,
4 as we've said, are going to get compensated,
5 but we want to make sure that the people who
6 did get these high doses, that we -- that
7 they're done correctly, the dose assessment is
8 done correctly, and if they got a high enough
9 dose to justify a claim, that they get it. So
10 even though they're -- we're looking at the
11 tail of this upper distribution, there are
12 people up there who should get compensated and
13 that's what we're about, to make sure their
14 dose reconstruction is done correctly and that
15 they do get compensated.
16 **VICE ADMIRAL ZIMBLE:** Correct. Thank you very
17 much. I have one -- just one other question.
18 At the last two meetings and -- many of the
19 testimonies of the veterans dealt with their
20 concerns about -- about conditions that were
21 not cancer. And I notice on one of your slides
22 you talk about the non-cancer mortality
23 associated with diseases of circulatory,
24 digestive, respiratory and hemopoietic systems.
25 Can -- can you give me some sort of a -- of a -

1 - a range as to -- as to how this compares to
2 the radiation -- the minimum dose radiation for
3 -- for the cancers? In other words, would this
4 be equivalent type dosages for these conditions
5 or would we be talking about even higher doses
6 necessary for --
7 **DR. GILBERT:** Well, if you're talking about the
8 excess relative risk, which is the most
9 pertinent thing to probability of causation, it
10 would be much smaller than for most cancers.
11 But at -- that -- that's doses in the one or
12 two gray range, and it's just -- it's entirely
13 uncertain as to whether there's any risk at
14 very, very low doses and how those should be
15 quantified.
16 **VICE ADMIRAL ZIMBLE:** Okay. Thank you very
17 much. Any further comments? Oh, yes, Paul,
18 I'm sorry. You've got that right here.
19 **DR. BLAKE:** I would like to comment back to Dr.
20 Fleming and on dose reconstruction in general
21 since I'm the one who coordinates that program
22 for the Department of Defense. There's
23 basically two flavors of dose reconstruction.
24 The dose reconstruction that's done for the --
25 the studies that are discussed here, we're

1 trying to get the most accurate results. The
2 dose reconstructions we do or for our veterans,
3 throughout the entire process we try to give
4 the benefit of the doubt to the veteran. And
5 so in fact our values, when reported back to an
6 individual veteran, are as -- every benefit of
7 the doubt we give to make that dose as large as
8 possible. And in fact then there's uncertainty
9 associated with that that raises it even more,
10 and that's what then goes into the calculation
11 to determine compensation.
12 With regards to Dr. Fleming's question, though,
13 on where are -- or not we would quote as the
14 more true doses, where we aren't trying to give
15 every single benefit of the doubt on every
16 possible scenario, those have been published by
17 our predecessor organization, the Defense
18 Nuclear Agency. They're in fact on our web
19 site where we did unit dose reconstructions
20 across the different operations, and they're in
21 a number of reports that are available to the
22 public where we -- where we discuss that.
23 But for individual dose reconstructions, in
24 many cases you'll see them sometimes higher
25 than one rem because we are trying to say --

1 this -- this is -- if we look at all possible
2 scenarios and there's doubt associated, we're
3 looking at data from many years ago, we try to
4 give the benefit of the doubt.
5 **VICE ADMIRAL ZIMBLE:** Thank you. I think
6 that's an excellent clarification.
7 Well, I notice on the agenda that at the
8 conclusion -- by the way, thank you very much,
9 Dr. Gilbert. We really appreciate your
10 presentation. But I have to say that any time
11 I get a healthy dose of statistics, I'm -- I'm
12 always ready for a break. And I notice that on
13 the agenda it's time for a break, so we will
14 adjourn now until 10:45.
15 (Whereupon, a recess was taken from 10:20 a.m.
16 to 10:55 a.m.)

A BRIEFING ON SUMMARY OF FINDINGS ON BETA DOSIMETRY AND UNCERTAINTY FROM THE ACADEMY'S REPORT ON DOSE RECONSTRUCTIONS FOR ATOMIC VETERANS
DR. THOMAS GESELL, PROFESSOR OF HEALTH PHYSICS, IDAHO STATE UNIVERSITY, DEPARTMENT OF PHYSICS, POCATELLO, ID

17 **VICE ADMIRAL ZIMBLE:** I hope you enjoyed your
18 break. We need to get back to work now. I'm
19 now pleased to introduce Dr. Tom Gesell, who is
20 a professor of health physics at Idaho State
21 University. And at Idaho State he also directs
22 the environmental monitoring program there. He
23 has a baccalaureate degree from San Diego

1 State, and a master's and Ph.D. degrees in
2 physics, with specialization in health physics,
3 from the University of Tennessee. He joined
4 Idaho State in 1991 and prior to that he was --
5 he directed the Department of Energy's
6 radiologic and environmental sciences
7 laboratory in the Idaho National Laboratory
8 site. And while there he -- he managed several
9 programs that were related to protection of the
10 health and the environment.
11 Before joining DOE in 1981 he was an associate
12 professor of health physics at the University
13 of Texas Health Science Center in Houston where
14 he taught in health physics and conducted
15 research on various aspects of dosimetry and
16 environmental radiation. He has numerous
17 papers in the literature, and he has published
18 a -- along with Merril Eisenbud, the Fourth
19 Edition of The Environmental Radioactivity from
20 Natural, Industrial and Military Sources. He's
21 a Fellow and past director of the Health
22 Physics Society, and he serves on the
23 Environmental Safety and Health panel for the
24 University of California office of the
25 President.

1 He has completed a six-year term at the EPA
2 Science Advisory Board on Radiation Advisory
3 Committee in 2002 and he's also served on
4 committees of the National Research Council and
5 Los Alamos National Laboratory. He is the
6 director and vice president of the National
7 Council on Radiation Protection and
8 Measurements, and we are delighted to have Dr.
9 Gesell with us today. Dr. Gesell.
10 **DR. GESELL:** Thank you. Thank you, Admiral
11 Zimble, and good morning. My -- my talk is --
12 is -- what do we do now?
13 My -- my talk is going to be two parts, one on
14 beta dosimetry and one on quality assurance and
15 procedures. And before I get started on the
16 beta dosimetry -- well, actually get started on
17 any of it -- I want to emphasize that what I'm
18 talking about is the observations and findings
19 and -- and so on that were done in connection
20 with the National Academy's review of the dose
21 reconstruction program, and they do not
22 represent the program as it exists today. I --
23 I am well aware that there've been significant
24 changes and improvements in the program as a
25 result of the Academy's report, but this is

1 just the -- sort of the starting point that set
2 off activity such as the creation of this Board
3 and changes in the program. So we're just
4 actually setting the stage.
5 So for the dosimetry part, first I'll talk
6 about how it was explained to us that beta
7 dosimetry was done, then I'll go through what
8 the Academy found in the process of reviewing
9 99 randomly-selected files. And then I will
10 also discuss the -- our observations on
11 procedures and quality assurance.
12 Before 1998 skin doses basically were not
13 routinely estimated in the NTRP program. They
14 then started doing it in 2000. They wrote a
15 formal report that documented what they had
16 been doing for the past two years and -- and
17 essentially lays out the program that was used
18 from 2000 until the time of the NAS report.
19 And they did this for several exposure pathways
20 -- standing on contaminated surface, being in
21 contaminated air, being in contaminated water
22 and for contaminated skin. This was laid out
23 in the report.
24 Now I'll briefly discuss each of these
25 pathways. External beta doses from

1 contaminated surfaces, primarily ground, ship
2 decks and so on, were calculated by applying a
3 beta-to-gamma ratio to an estimated upper-bound
4 gamma dose, which was measured either by film
5 badge or by reconstruction.
6 They used different ratios for fallout and
7 activation products, and the dose ratios
8 depended upon whether the test was in the
9 Pacific or Nevada, the time after detonation
10 and the height above ground. And then dose to
11 skin, which is the relevant quantity for -- for
12 doing probability of causation for skin cancer,
13 would be the sum of the beta and the gamma
14 doses.
15 And this is just an example of the beta-to-
16 gamma ratios for, in this case, the Pacific
17 tests that were used at that time. And it --
18 the beta-to-gamma ratio varies with time post-
19 detonation as the beta-to-gamma ratio of the
20 fallout varies. It also varies dramat-- fairly
21 dramatically with the height above ground, and
22 of course for higher -- the larger distances
23 above ground, the -- the beta-to-gamma ratio is
24 less because there's considerable beta
25 attenuation in the air.

1 For contaminated air, beta dosimetry -- first I
2 should point out that this is a relatively
3 minor component of the total dose, typically.
4 They developed dose coefficients that convert
5 air concentration into skin dose and -- based
6 on spectra, and then use spectra and exposure
7 time.
8 The composite dose coefficients provide these
9 equivalent dose rates from electrons per unit
10 concentration of radionuclides in air. They
11 depend on time after detonation and as for the
12 other pathway, the doses to skin or lens are
13 the sum of beta and gamma doses.
14 This is a graph that illustrates how the beta
15 dose coefficient changes as a function of time
16 after detonation, and it changes fairly
17 dramatically over -- a few orders of magnitude
18 in a matter of a few hours.
19 For contaminated water dosimetry, this would be
20 applicable to someone swimming or diving in a -
21 - in contaminated water, it was very similar to
22 that of air, but of course had to account for
23 the different density of -- densities of water
24 and air.
25 And finally the beta dose from skin

1 contamination -- gamma dose is not an indicator
2 of skin dose from contamination, so the film
3 badge data is not applicable. The dose
4 coefficients were then based on the
5 radionuclides deposited on or near skin
6 surface. And fortunately, to simplify things,
7 the dose coefficients are nearly constant for
8 average beta energies greater than a tenth of
9 an MeV. And in fact, a dose coefficient for
10 skin of about 9 rem per hour per microcurie per
11 square centimeter can be used. This accounts
12 for a potential presence of back-scatter. And
13 for contaminated gloves they used a dose-
14 reduction factor of 0.5.
15 There are also some computer codes that can be
16 used to deal with non-uniform contamination,
17 and one that's -- they mentioned in their
18 report was the VARSKIN code, which may be
19 familiar to some of you on the Board.
20 The determination of the contamination, which
21 leads to dose, was to be based on measurements
22 when these measurements were available. And
23 information was provided to guide estimates of
24 skin contamination based on the measurements,
25 which were of course expressed either in terms

1 of dose or exposure rate, typically, and so
2 they provided methods to convert these -- these
3 -- these measurements made at the time to skin
4 contamination.
5 Okay, so that basically ends the summary of how
6 beta dose was done between 1998 and the time of
7 the Academy report. The next section is our
8 conclusions that we reached from reviewing
9 these 99 dose reconstructions.
10 And the first bullet is just a reminder that --
11 what I said a few minutes ago, that the beta-
12 particle doses from standing on contaminated
13 ground are calculated by applying a beta-to-
14 gamma ratio to an upper-bound gamma dose. So
15 our observations then were that if -- if there
16 are uncertainties in the gamma dose, which is
17 the basis of the beta dose, then these
18 uncertainties would be propagated into the beta
19 dose. And there was a concern from those on
20 the committee who had reviewed the gamma doses
21 that these could be underestimated in some
22 cases. And so the underestimates of credible
23 upper-bound gamma doses and consequently
24 underestimates of the beta-particle doses.
25 Uncertainties were not estimated for the beta-

1 to-gamma ratios. However, if you think back on
2 the little chart, the beta-to-gamma dose ratios
3 depend on time since detonation and they depend
4 on distance from the source to the exposed
5 tissue.
6 **DR. LATHROP:** Excuse me, if I could just ask a
7 question. How were the 99 cases selected and -
8 -
9 **DR. GESELL:** Well, they --
10 **DR. LATHROP:** -- where did they come from?
11 **DR. GESELL:** They were selected in a stratified
12 random way. We would have liked to have done
13 purely random, but we wanted to ensure that we
14 got representative dose reconstructions from
15 the various dose levels.
16 Yes?
17 **COLONEL TAYLOR:** I have a personal interest in
18 this in that I was a close-in observer on a
19 very large blast, PRISCILLA, during PLUMBBOB,
20 which is rated two ways. Some ratings put it
21 at 39 KT and some put it at 49 KT, and I was a
22 close-in observer, was lying in the bottom of a
23 trench when it went off, got out of the trench
24 and walked across ground zero, lingered in the
25 area for close to an hour. The amount of

1 decontamination, as I remember, was a broom
2 brushed us off. We got on a truck and went
3 back. And as near as I can tell, that's the
4 last I've heard of that, so I have an extreme
5 interest in what you're telling this committee.
6 Thank you.
7 **DR. GESELL:** Thank you. So anyway,
8 uncertainties were not estimated in the beta-
9 to-gamma ratios. However, the beta-to-gamma
10 ratios depend on the time since detonation and
11 distance from the source to the exposed tissue,
12 so any errors -- any intrinsic errors in the
13 beta-to-gamma ratio or any errors in estimating
14 the time since detonation or height above
15 ground would obviously lead to uncertainties in
16 the beta-to-gamma ratio. And so these -- these
17 two concerns, one that the gamma doses may have
18 been underestimated in some cases, and the fact
19 that uncertainties were not explicitly
20 recognized in the beta-to-gamma ratios, led the
21 committee to conclude that the beta components
22 of skin doses are -- are questionable. We're
23 not saying they were low. We're not saying
24 they were high. They just were not as certain
25 as they were -- appeared to be represented.

1 Skin or clothing contamination was actually not
2 considered as a pathway in any of the cases
3 that we reviewed. However, some of the
4 participants took multiple showers for
5 decontamination. Presumably contam-- well,
6 dirt that was presumably contaminated was
7 brushed from troops with brooms -- which we
8 just heard from one of the Board members. And
9 a contemporaneous report indicated that
10 contamination was found frequently on the
11 clothing and bodies of persons on ships. Minor
12 radiation burns were seen on personnel who were
13 below decks on the USS *Phillip* when the vents
14 were opened during a period of fallout. And
15 contamination estimates were not made for
16 troops potentially contaminated while marching
17 or working.
18 However, there were -- there's -- there was, at
19 the time the reconstructions were done, an
20 article in *Health Physics* that discussed the
21 subject of -- of contamination from resuspended
22 material, so there was some information
23 available.
24 And so the committee's conclusion was this
25 neglect of skin contamination as important with

1 respect to skin cancer claims.
2 And the -- now we're going to move into the
3 uncertainty phase here. The NTPR did not cal--
4 perform uncertainty calculations for beta-
5 particle dosimetry. They concluded that
6 enormous resources would be needed to quantify
7 the uncertainties in model parameters and
8 propagate the uncertainty of each model
9 parameter to obtain overall uncertainty. So
10 the program basically relied on arguments that
11 their dose estimates were -- were high-sided,
12 and therefore gave benefit of the doubt to the
13 veterans.
14 The argument included a statement that in some
15 comparisons the beta-to-gamma ratio -- dose
16 ratios in use were in reasonably good agreement
17 with the previous calculations, reasonably good
18 agreement with available measurements and, at
19 worst, overestimated the measurements by a
20 factor of -- of two to three.
21 There were no -- there was no discussion of
22 factors that might cause underestimation of
23 beta doses, such as errors in estimating time
24 since detonation, underestimates of distance
25 from contaminated -- that should be

1 overestimates of distance from contaminated
2 surfaces, or underestimates of exposure time.
3 And furthermore, there was no discussion of
4 uncertainty of beta doses for the other three
5 categories other than standing on contaminated
6 surfaces, and these three were of course the
7 immersion in air, immersion in water and skin
8 contamination. So there was no -- no
9 discussion of uncertainty.
10 Okay. So that's the discussion on the findings
11 of the Academy report for beta dosimetry. And
12 once again I want to emphasize that this was
13 the situation that we found at the time of --
14 of reviewing that material and that there have
15 been many changes and improvements in the -- up
16 to today and more are planned for -- for
17 future.
18 Okay, I'd like to shift gears now to the
19 findings on the procedures and quality
20 assurance. According to DTRA, their SOPs at
21 the time that we did the review and 32 CFR 218
22 served as the written guidelines and procedures
23 for the conduct of dose reconstructions.
24 However, in our review we found that the SOPs
25 were basically a statement of approach and

1 general principles rather than a manual of
2 procedures that could be used to reconstruct
3 doses. The SOPs were incomplete and -- and
4 they were out of date. They contained no
5 references to supplement the text, and many
6 methods used to estimate doses or upper bounds
7 were -- were not discussed in these -- in these
8 procedures. And the details of the
9 reconstruction methods were neither discussed
10 nor referenced.
11 The SOPs provided to the committee contained a
12 provision for periodic review and updating.
13 However, the SOPs had not been modified since
14 '97. The review was being done in 2003.
15 Significant changes had occurred in the
16 program, and as an example, they began doing
17 beta dose in 1998, but the general procedure
18 did not reflect this. And this is important
19 because the claims filed for skin cancer began
20 rising dramatically in 1997.
21 Quality assurance is not discussed in any
22 detail in any of the Standard Operating
23 Procedures.
24 Okay, let's move on then to a discussion of --
25 of the QA. We requested on numerous occasions

1 to be provided with the quality assurance
2 manual or the quality assurance documentation,
3 and never were. And it was explained to us
4 that the quality assurance procedures were a
5 proprietary part of the contractor's proposal
6 and therefore were not -- not publicly
7 available.
8 And so all we had to -- were able to do,
9 instead of being able to review a QA program
10 and then to -- to see if it appeared to have
11 been implemented, we had to sort of look at the
12 99 case files and look for evidence of quality
13 assurance measures in those. And we found
14 little evidence of a uniform application of
15 basic QA measures, and what I'll do now is list
16 some of the things that I -- we, as a
17 committee, felt were -- were basic and not --
18 were -- but not observed in these -- in these
19 dose reconstruction files.
20 The dose calculations were not -- usually --
21 usually not signed, dated or initialed by the
22 analyst, so there was not a way to track back
23 the source of the calculations.
24 Many of the typed assessments included typed
25 initials of analysts and dates, but several did

1 not.
2 In files containing recalculations of dose, the
3 lack of dates made it difficult to determine
4 which was the most recent.
5 And we also found cases in which apparently
6 poor quality control resulted in errors in the
7 calculation or reporting of dose. And these
8 are just a few examples of that.
9 There was a reconstruction in which a reported
10 dose failed to account for a film badge
11 exposure in an earlier test series.
12 There was a situation where a participant was
13 assumed to be present during GREENHOUSE for
14 less time than indicated by his service record.
15 A dose memorandum referenced an incorrect unit
16 dose report.
17 A dose report assigned 0.4 rem, but the
18 referenced memorandum gave 0.8 rem.
19 A dose memorandum and a letter from NTPR to the
20 veteran gave the dose as one rem, but the
21 database had a value of 1.8 rem.
22 Okay. So moving on then, the -- the dose
23 assessments were supposed to be reviewed before
24 release to VA or to the veteran. That much was
25 in the -- the SOP. The dose assessments

1 transmitted to the VA or the veteran indicated
2 final approver -- approval by signature of the
3 DTRA program manager. So all the -- all the
4 reports did go out over the signature of DTRA.
5 However, the files generally contained no
6 documentation to show that reviews had occurred
7 prior to -- to whatever review was given by the
8 DTRA manager prior to transmittal, when or by
9 whom.
10 And another point was that the committee did
11 not see a written process by which NTPR program
12 reviewed its -- its documents. In other words,
13 these are like the unit reports or the
14 documents such as the Barss report, which
15 detailed the beta dosimetry program.
16 The published reports of the NTPR program did
17 not indicate that they had been subjected to
18 peer review, and some reports did contain some
19 erroneous technical statements, which suggested
20 to the committee that an effective peer review
21 had -- had not occurred. So all this really is
22 -- is -- we know we don't have -- or didn't
23 have any direct evidence that the reports
24 weren't reviewed. It just -- we didn't find
25 any indicators that they had been reviewed, and

1 so our -- our conclusion was that they had
2 probably not.
3 So the overall conclusion on this was that, in
4 the committee's view, the lack of a manual of
5 standard operating procedures, including QA,
6 led to some inconsistencies in the dose
7 reconstructions. And that's the -- the end of
8 my presentation.
9 **VICE ADMIRAL ZIMBLE:** Thank you very much for
10 that presentation. I've found that it was an -
11 - an excellent review and -- and point out two
12 of the major concerns. One, the level of
13 uncertainty in the skin doses -- it's a -- I
14 think it's something that we need to attend to.
15 And secondly, a very concise summary of the
16 Green Book of 2003, and the reason for now
17 having this huge backlog to redo all these dose
18 reconstructions. And I know we'll hear more
19 about that from Dr. Blake and what we can do to
20 accommodate that.
21 So I thank you. Any comments or questions?
22 Dr. Blake.
23 **BOARD MEMBERS QUESTIONS AND DISCUSSION OF THE RELEVANCY**
24 **OF THIS PRESENTATION**
25 **DR. BLAKE:** I do feel obligated, as the NTPR

1 program manager, to discuss how we've improved
2 since that National Research Council study that
3 found a lot of things that we needed to improve
4 on. The biggest area is where we're moving on
5 procedures manuals and quality assurance.
6 We basically set up a four-level, tiered proc--
7 documented procedures. At the highest level is
8 a manual that's prepared by the government, by
9 my staff and signed out by myself, that gives
10 the policy and guidance for how we do work at
11 the Defense Threat Reduction Agency.
12 At the second level of how we do most of these
13 dose reconstructions there's a group of
14 government personnel -- myself and my deputies
15 -- and then there's a number of contract staff
16 that actually does the -- that helps do the
17 work. In that case, at the second level of our
18 procedures manuals, we're developing these
19 standard operating procedures. One is
20 dedicated just to the exact details of how we
21 do the dose reconstructions. The other one's
22 dedicated to how we do quality assurance.
23 Moving down to the third tier of how we
24 actually do policies and procedures now,
25 there's actually about four different

1 processes, and a number of the people in this
2 room actually are recipients of some of those
3 processes. What we've done is we've
4 standardized what we call templates. The first
5 one is how we communicate with the veteran back
6 and forth to get what actually happened during
7 their period of radiation exposure. We call
8 this the SPARE, the Scenario of Participation
9 and Radiation Exposure. And based on some of
10 the results from this National Research Council
11 study that Dr. Gesell brought up, we changed
12 our procedures and now we're going back and
13 forth with both letters and telephone calls.
14 Based on the input from some questionnaires and
15 phone calls, we developed this scenario. It
16 then goes back to the veteran and the veteran
17 will sign off on it, or make comments on we
18 didn't get it quite right. And this -- this
19 can be a process that takes a month or two.
20 Then we move into the next stage where we
21 actually calculate the radiation dose based on
22 getting all that information. And obviously
23 where the veteran was at any period of time is
24 important in doing that dose calculation, so
25 the next -- next part of this template's called

1 the Radiation Dose Assessment.
2 The other parts that are in here on these
3 templates are when we do these calculations the
4 mathematics get somewhat complicated. Some of
5 these calculations run to 30 to 40 pages in a
6 software called MathCad where we show the --
7 the different integrations and so forth like
8 this. A lot of this is taking into account how
9 items are decaying with time, or back-
10 calculating.
11 And finally we also have some templates at a
12 lower level where we actually write a lot of
13 computer code to help us standardize our
14 calculations. For instance, in doing the --
15 calculating film badge uncertainties with
16 regards to previous National Research Council
17 studies.
18 So can I tell you today that we're doing things
19 perfectly? No. Can I tell you we're improving
20 significantly? I believe we are, and it is an
21 ongoing process. And so I think that answers,
22 to some extent, where we've come since those
23 very valuable recommendations we got from the
24 National Research Council.
25 **VICE ADMIRAL ZIMBLE:** I think you might also

1 mention (unintelligible).
2 **DR. BLAKE:** Admiral Zimble also brings up the
3 point of the benefit of the doubt, and that's
4 what we try to put throughout this entire
5 program. When we, for instance, do that
6 initial product I talked to you about, the
7 SPARE, we're getting the veteran's discussions.
8 The dose can be significant depending on --
9 let's say you were out on Enewetak -- where you
10 were at what time can change your dose
11 significantly, based on where the fallout
12 occurred and so forth. If there's any question
13 in our minds, if there's not a film badge
14 result or some radiation exposure measurements
15 from what we called an ANPDR-27, was a Geiger-
16 Müller tube back then, what we'll do is we'll
17 look for the highest values we can find that
18 are reasonable and assign that to the veteran
19 to give the benefit of the doubt.
20 There's still questions in people's minds and
21 it is a challenging case trying to go back in a
22 case of 50 years and try remembering what
23 happened. I mean all of us -- our memories
24 fade, and that is the challenge in trying to do
25 this. So where we give an answer back to the

1 VA with a copy to the veteran, two values go --
2 come back. Basically what we think, giving the
3 benefit of the doubt, is probably the average
4 dose. But the other thing that comes back is
5 the uncertainty associated with that, and
6 that's what we call this upper bound, and that
7 upper bound is what the VA ultimately uses to
8 determine the probability of causation.
9 **VICE ADMIRAL ZIMBLE:** Okay. Thank you, Dr.
10 Blake. Colonel Taylor.
11 **COLONEL TAYLOR:** (Off microphone) Dr. Gesell,
12 thank you for coming and bringing that
13 information and --
14 **UNIDENTIFIED:** Turn on your microphone.
15 **COLONEL TAYLOR:** (Off microphone)
16 (Unintelligible) did, thank you.
17 (On microphone) Dr. Gesell, thank you for
18 coming and bringing that information. You
19 confirmed in my mind some of the things that
20 have been troubling me over the years. I'm a
21 little curious as to what some of the members
22 of this committee who are particularly involved
23 in quality assurance feel about what you have
24 said, and I'd be interested, not necessarily in
25 the open forum, but hearing a little bit of it.

1 I've also spent considerable time with Paul,
2 and I understand where they're going and how
3 we're trying to work at this because I daily
4 interface with veterans who come to me, knowing
5 that I'm a member of this Board and knowing
6 that I was personally exposed, and asking
7 questions. And I will take a moment to give
8 you one good example.
9 Last year about this time there was an article
10 published in the local papers that I was a
11 member of this Board and I'd been working in
12 veterans affairs for 25 years in northeast
13 Florida. And I got -- both he and I got a
14 number of calls, and one NCO was referred to me
15 and I asked him what did you do? He said I was
16 a sergeant in the 2nd Marine division. That
17 didn't turn me on. I says what did you do as a
18 sergeant in the 2nd Marine division? He said I
19 went into Hiroshima shortly after the blast.
20 Now he's got my interest. So I says why? He
21 says I went as security for a group of civilian
22 scientists who went in to measure dose and
23 assess damage. Okay. Did you carry any
24 special equipment? Nope, went in our field
25 uniforms. Carry any special badges, any film

1 badges, dosimeters or things like that? Nope.
2 How long were you there? Five days. When you
3 came out did you get a physical examination?
4 Nope. Did you get any instructions? The
5 medics told me I'd probably catch cancer in a
6 couple of years, and if I did, turn to the VA.
7 Did you? Yes. Did you turn to the VA? Yes.
8 What happened? Nothing.
9 Now you see where I'm coming from as a member
10 of the Board that's communicating with the
11 veterans and the dichotomy that's presented.
12 So I want you to understand I'm not trying to
13 criticize what we're doing because I couldn't
14 applaud this collection of talent and what
15 we're challenged with any more that's happening
16 and to bring people like Dr. Gesell in here to
17 discuss it from what he does. I will show you
18 a picture that R.J. really gave me of atomic
19 bomb blast Priscilla that I was under as a
20 close-in observer, somewhere right under the
21 center of it, pretty close, less than a mile
22 from ground zero and then walked to ground
23 zero. So my own feeling, my own impressions of
24 what he's saying and what happened, from the
25 broom decontamination up, is fascinating.

1 Then I turn to Paul and say okay, what's
2 happened to all the film badge records? What's
3 happened to the thing? I would have been
4 delighted to have been one of the 99 members.
5 I don't think they knew of it at the time
6 because when I initially put in and put in for
7 a change in my status and added that I'd been
8 under an atomic blast got picked up only a few
9 years ago, the first report was there wasn't
10 any 44th tank battalion in the 82nd; you
11 couldn't have even been out there -- with the
12 implication that I didn't participate. So we
13 had to get through some rather rough humps to
14 verify the fact that I was a legitimate veteran
15 of an atomic blast. When we got through that,
16 then it became a little easier.
17 So I'm not trying to be critical or anything
18 else. I'm trying to say hey, what you guys are
19 talking about and listening and looking at is
20 worth taking into consideration to see what we
21 can do to correct 'cause those guys out there
22 that are making public comment deserve every
23 bit of that consideration they can get. And I
24 think we all know that.
25 Now I'm off of my -- off of my standpoint.

1 Thank you very much.
2 **VICE ADMIRAL ZIMBLE:** Okay. Colonel, I would
3 reassure you that you will hear tomorrow from
4 the subcommittee reports just -- answers to the
5 questions that you're posing. So that's --
6 **COLONEL TAYLOR:** Being as --
7 **VICE ADMIRAL ZIMBLE:** -- coming tomorrow.
8 **COLONEL TAYLOR:** Being as a member of one of
9 those committees, I understand that very well
10 and being very associated with what we're
11 doing, I think we are very, very much on the
12 right track. And I appreciate people like the
13 Dr. Gesell coming in and telling us what
14 happened that gives us a frame of reference of
15 where we're going and what we're having to do.
16 'Cause I know Paul lives with that every day.
17 It's not easy.
18 **VICE ADMIRAL ZIMBLE:** And evening.
19 **COLONEL TAYLOR:** That's true. Thank you.
20 **VICE ADMIRAL ZIMBLE:** Okay, any other comments
21 or questions? Yes. All right, Dr. Reimann.
22 **DR. REIMANN:** I want to thank Tom Gesell, too,
23 for not only his presentation but spending a
24 couple of hours with our quality subcommittee
25 yesterday because I think the continuity and

1 the understanding of what wasn't going right in
2 the past is critical to creating what we are
3 all trying to do, and I appreciate Mr. Taylor's
4 comments, as well. The only thing I would add
5 is that I think we're all supposed to be
6 critical. I think we're being -- trying to be
7 constructive in that -- in that criticism. And
8 the continuity provided by Dr. Gesell I think
9 is very important.
10 Just from a partly -- part of a perspective,
11 certainly we're going to elaborate on this
12 tomorrow, but the SPARE is an extremely
13 important step -- can't emphasize that enough
14 as a change from the past -- because it does
15 create a personal conversation between the
16 veterans and the government organizations that
17 are trying to -- to do these difficult
18 calculations and decide -- make very difficult
19 calls in cases where the scientists themselves
20 have great difficulties making sure of the --
21 of the credibility of the measurements and so
22 on. And we appreciate Dr. Blake's comments
23 here about the four-tiered approach they're
24 taking to quality. We see that as a -- as a
25 very constructive step and we hope that we

1 would all not only have some confidence in
2 that, but also roll up our sleeves and see if
3 we can accelerate that a little bit.
4 So these are very important areas and as a --
5 as a result of the effort that led to the
6 report, the subcommittee is working on just
7 that problem, Kristin and John and Dave McCurdy
8 and so on and myself are -- are working on it.
9 It's got a way to go, and there's no question
10 about that and I think you'll hear some of the
11 specifics on -- on that tomorrow. But even
12 keying off a comment of Dr. Gesell's regarding
13 the upper bounds and benefit of the doubt and
14 so on, I think it's very important not to see
15 these as motives, not applying the benefit of
16 the doubt. The scientists themselves can tie
17 themselves in knots exactly trying to figure
18 out how you establish that upper bound. So it
19 isn't just a case of deciding whether or not to
20 give the benefit of the doubt, it's when you
21 give the benefit of the doubt how do you do
22 that with scientific validity and care. And so
23 I would -- I would just urge people when they
24 hear that argument about upper bounds and
25 benefit of the doubt, that they understand that

1 in terms of the technical difficulties in doing
2 it, not in terms of the motives of people doing
3 it, because the analysts that I listen to and
4 others here have listened to, have been
5 attempting to apply the benefit of the doubt
6 with the best information. But as the
7 scientific information continues to improve,
8 the technical requirements and the programs to
9 do that well also have to follow suit. So I
10 think that if we're going to have a good,
11 constructive approach to doing what we all want
12 to see happen, I think it's important that --
13 that we be careful on things like mistaking
14 problems associated with doing a technical task
15 -- confusing that with motives of not wanting
16 to do a good job. So I just wanted to sort of
17 pose that notion as a very, very important one
18 in understanding how we all make this end up
19 working better. And I think the continuity of
20 -- applied here by Dr. Gesell and the very good
21 effort that went into that study is very, very
22 important to all of us.
23 **VICE ADMIRAL ZIMBLE:** Thank you very much for
24 that comment. That's very helpful. Anyone
25 else? Yes.

1 **DR. LATHROP:** Thank you. I just wanted to
2 point out -- people in the audience may not be
3 aware of some of the relationships between the
4 organizations here. We sit here on this
5 Advisory Board and one of the things we do, as
6 Dr. Reimann was just mentioning, he chairs the
7 committee on quality assurance and quality
8 management, and I always think those are --
9 those words have too many syllables, but what
10 they really mean are our subcommittee is
11 specifically looking at ways you can put in
12 particular sort of procedures -- put them into
13 place so that the calculations are done in an
14 appropriate and documented and consistent way.
15 Now you notice right to my left is Dr. Blake,
16 who's done a -- frankly, just an astounding job
17 on the NTPR work. But although he's right on
18 my left and he's part of the committee, the
19 Board, we actually have a -- an arm's distance
20 relationship. I think Dr. Blake will be quick
21 to agree that when our sub-- subcommittee says
22 we need to see more demonstrable and systematic
23 and trackable and documentable QA -- and our
24 recommendations are saying that and you will
25 hear those tomorrow -- we're very much at arm's

1 length and taking the position of being an
2 independent, frankly demanding, review board to
3 see that all these QA procedures are being
4 improved and locked into place in terms of the
5 contracts, the contractual relationships. So I
6 want to assure you that's the role that we take
7 as part of this Board, and we're pursuing that
8 to the best of our abilities, and you'll hear a
9 lot of details about that tomorrow.
10 **VICE ADMIRAL ZIMBLE:** Okay. Thank you.
11 **COLONEL TAYLOR:** May I add a word to that? One
12 of the things that occurred to me when I first
13 got on this Board is when I looked at it and we
14 started to work, most of these men and women
15 are either of a medical background or a
16 radiation background or a measurement and
17 quality assurance background. And they were
18 picked for that for this reason. I from a
19 veteran's experience and so forth. But the one
20 characteristic that came to me almost
21 immediately from the composition of this Board,
22 that these men are -- men and women are very
23 precise and very accurate in the way they
24 approach and express what they do. And I'm
25 very proud to be a part of that. I think all

1 of that is very much to the benefit of the
2 veterans. Thank you, sir.
3 **VICE ADMIRAL ZIMBLE:** Thank you, Colonel. If
4 there are no further comments -- oh, is your --
5 **UNIDENTIFIED:** (Off microphone) No.
6 **VICE ADMIRAL ZIMBLE:** Okay. Dr. Gesell, I
7 thank you very, very much for -- that
8 presentation was extremely helpful to the
9 deliberations of this Board.
10 **DR. GESELL:** Well, thank you for the
11 opportunity.
12 **VICE ADMIRAL ZIMBLE:** We now, according to the
13 agenda, are to adjourn for lunch. I would urge
14 everyone to be back here as -- close to 1:00
15 o'clock, at which time we will listen to some
16 public testimony. Thank you.
17 (Whereupon, a recess was taken from 11:20 a.m.
18 to 1:00 p.m.)
19 **PUBLIC COMMENT SESSION**
20 **VICE ADMIRAL ZIMBLE:** Before we start the
21 public comment session, I would just like to
22 make a couple of remarks that deal with this --
23 with this session. First of all, I want to
24 reiterate the -- what are the responsibilities
25 of this Advisory Board. Now it was Public Law

1 108-183 that actually created this Veteran's
2 Board for Dose Reconstruction, and it was done
3 for a very specific purpose, to provide
4 guidance and oversight of two processes. One,
5 dose reconstruction, and -- and we have the
6 experts on the Board that are certainly capable
7 of providing that oversight and guidance. And
8 also to look at the process of -- of filing and
9 processing the claims compensation programs for
10 the veterans that are related to conditions
11 dealing with ionizing radiation.
12 And then a second objective, in addition to
13 looking at those two processes, is to assist
14 DTRA -- specifically NTPR -- and the Veterans
15 Administration in -- and making recommendations
16 as to their -- their communication with the
17 veteran, establishing dialogue with the veteran
18 and keeping the atomic veterans informed
19 regarding the progress of their claims.
20 Now, we -- let's talk about what we're not --
21 have no responsibility to do. One is to look
22 at individual dose reconstruction cases, so
23 we're -- we're not the people that you should
24 come to to -- for an appeal because you have a
25 problem with reconstruction. We want to know

1 about it, but the appropriate place to review
2 an individual dose reconstruction is NTPR, and
3 usually the best conduit to get to NTPR is
4 through the Veterans Administration.
5 We also are not an appeals board. There is an
6 appeals board established within the Veterans
7 Administration. Now we don't serve that
8 function.
9 We're not in a position to help any veteran
10 with a claim. Again, if there's problems with
11 the claims, we want to know about it because
12 it's only through knowledge of the problem that
13 we can help make recommendations to fix the
14 system. But -- but the idea that we will be
15 individually responsible for -- for helping a
16 claimant with a claim is -- is not within our -
17 - our charter, not within our purview, and
18 there are far more competent people that can
19 help a claimant with a claim. Again, we want
20 to know about it. That's important that we
21 understand the problems, but we're not in a
22 position to help as -- as your advocate to fix
23 it.
24 And then of course, we aren't a legislative
25 body, so we can't change or revise any of the

1 provisions that are currently within the law.
2 You're going to have to look to a congressman
3 or a senator or both in order to make any --
4 any modifications to -- to existing
5 legislation. We can't -- we can't do anything
6 about that. That's a -- that's a much higher
7 pay grade.
8 And then how can you follow what we're -- make
9 sure that you're following what you're doing.
10 You know, to travel to Los Angeles and to Tampa
11 and then to Austin and wherever we wind up next
12 time -- which will, by the way, be in Norfolk,
13 Virginia -- I think one way to follow our
14 activities is look at our web site. The web
15 site is VBDR.org and that's -- if you're -- if
16 you're computer literate, that's the easiest
17 way to find out where we are and what we're
18 doing. All the minutes will be published
19 there, reports are published there, et cetera.
20 The other way of course is to call our toll-
21 free line and I've got the toll-free line up
22 there for you to -- to see, and you'll talk to
23 some people at the office that can answer any
24 of your questions about our activities with the
25 Board.

1 I think that was a -- that's really all I had.
2 I just wanted you to be aware of what we --
3 what we're chartered to do, what we're not
4 chartered to do, and -- and exactly what roles
5 we want to -- we want to fulfill.
6 Now I have a list of one, two, three, four,
7 five, six, seven -- eight people who would like
8 to testify this morning -- or this afternoon.
9 And we're delighted to listen to your
10 testimony. Listening to what you -- your
11 concerns are is the best way for us to have a
12 sense of where we need to go to make
13 recommendations to enhance the system and make
14 it -- make it work better.
15 I would ask that you li-- try to limit your
16 remarks to about five minutes -- one, two,
17 three, four, five, six, seven, eight -- that
18 would be two hours -- no, it won't, it'll be 40
19 minutes. I get carried away. That would be
20 about 40 minutes, and we have allocated --
21 we've allocated an hour and a half, so -- so
22 we're not going to -- we're not going to -- to
23 snatch you away from the microphone if you want
24 to talk longer than five, but try to limit your
25 -- your -- your remarks to -- to not being

1 repetitive.
2 And -- and with that, I would like to call our
3 first -- our first contestant, Mr. Contreras.
4 Good afternoon, sir.
5 **MR. CONTRERAS:** Good afternoon, sir. Mr.
6 Chairman, Board members, my name is Carlos R.
7 Contreras. I'm the president of a new
8 organization, Atomic Veterans of America,
9 Incorporated. We became incorporated in
10 December, 2005; got approved on January 9th in
11 the state of Arizona. I had some concerns, but
12 I took care of them with Mr. Pamperin and we
13 got that squared away, so until tomorrow, thank
14 you very much.
15 **VICE ADMIRAL ZIMBLE:** Thank you very much.
16 You've now given more time to some of the other
17 -- some of the other individuals -- other
18 veterans. I -- I'm glad that Mr. Pamperin was
19 able to assist you, and that basically is what
20 we really like to do.
21 **MR. CONTRERAS:** Thank you very much. He's very
22 efficient. Thank you, sir.
23 **VICE ADMIRAL ZIMBLE:** Good. Thank you. All
24 right, Mr. --
25 **COLONEL TAYLOR:** (Off microphone) Can I ask him

1 a question? You and I --
2 **VICE ADMIRAL ZIMBLE:** Use your mike.
3 **COLONEL TAYLOR:** -- had a conversation --
4 **UNIDENTIFIED:** (Off microphone) Turn your
5 microphone on.
6 **COLONEL TAYLOR:** -- when you (on microphone)
7 were in -- you and I had a conversation and
8 you're in Oregon, I believe, aren't you?
9 **MR. CONTRERAS:** In Oregon? No, I'm from
10 Arizona.
11 **COLONEL TAYLOR:** Okay, my apologies. No, I was
12 trying to talk to a man that formed an
13 organization in Oregon and he's published a
14 newsletter. Okay. Thank you. Right church,
15 wrong pew.
16 **VICE ADMIRAL ZIMBLE:** All right. Mr. Faulkner.
17 **MR. FAULKNER:** Mr. Chairman, Board members, my
18 name is Joe Faulkner, Colonel, U.S. Air Force.
19 I was surprised that we didn't have the kidney
20 function in the cancer deal here. The pilot
21 that flew with me passed away 16 years ago. We
22 were on Project GREENHOUSE, heavy exposure, and
23 he passed away with cancer and heart problems.
24 We had been briefed with some of -- prior to
25 leaving Eglin Field where we prepared for this,

1 we'd been briefed on some of the things that we
2 might encounter on our trip over to the --
3 Enewetak and -- by Admiral Rickover's -- he had
4 a doctor or two there, flight surgeon or two.
5 And they -- they gave us a few things to look
6 out for, but we were young and full of stuff
7 and vinegar and we paid no attention to that,
8 we went on. So today I'm encountering kidney
9 problems, leukemia, Type II diabetes, and of
10 course my good friends in the VA are saying
11 well, it's been 55 years almost since all --
12 since you did all of this. I think they think
13 the statute of limitations have run out on me
14 or something. So I'm just wondering if -- I
15 think this is a great deal, the Board and so
16 forth, on this recalculation, because I had no
17 dosimeter. No one on my crew had a dosimeter,
18 the photographic people or anybody. And I
19 don't know what happened to them.
20 But I was on a rescue mission -- we had one
21 little congressman that was allowed to come
22 over, and he had to see what happened right
23 after the -- the burst, and he had -- they had
24 engine failure with the helicopter and they
25 auto-rotated right on ground zero. I landed my

1 airplane, went back with another helicopter,
2 thinking I might have to ferry them out of
3 there. But I also took the fuel pump -- that
4 was the problem, the fuel pump was out --
5 changed it -- but I was on the ground for 28
6 minutes in the -- right beside the other
7 airplane, and I got them both off the ground in
8 28 minutes. I spent four hours and something
9 in a salt water shower. Somebody must have
10 thought there was something wrong with the
11 system.
12 But now that -- and I'll be 87 right shortly.
13 Things are beginning to happen to me and I'm
14 beginning to wonder if anybody's listening. I
15 get many queries back from the VA wanting me to
16 prove that I was there and all this kind of
17 stuff. I've done all of this, and I'm still
18 waiting for -- to hear something from them.
19 Thank you, sir.
20 **VICE ADMIRAL ZIMBLE:** Thank you very much, Mr.
21 Faulkner. May I -- I have a few questions for
22 you, if you'd go back to the microphone.
23 How long after the detonation were you on
24 ground zero for 28 minutes?
25 **MR. FAULKNER:** I had gone -- started back home,

1 which was 32 kilometers across the atoll back
2 to the other landing strip, and I immediately
3 left my altitude of 10,000 and it was breaking
4 day and I came down, made four or five passes
5 for the photographers to get the view of what
6 we had done down there, and I'd started back
7 home when I heard the mayday and I landed
8 immediately, picked up the fuel pump, a few
9 hand tools and went back over with a -- with
10 another pilot, the one that I was telling you
11 just passed away 16 years ago.
12 **VICE ADMIRAL ZIMBLE:** You'd estimate that to be
13 what, about four hour, six hours?
14 **MR. FAULKNER:** Oh, no, this was within I'd say
15 an hour and a half.
16 **VICE ADMIRAL ZIMBLE:** Okay. All right. And --
17 and you have filed a -- a claim --
18 **MR. FAULKNER:** Yes, sir.
19 **VICE ADMIRAL ZIMBLE:** -- for the leukemia?
20 **MR. FAULKNER:** Yes, sir, but I -- I haven't
21 heard back from them on that one 'cause I was
22 just diagnosed the end of December with the
23 leukemia.
24 **VICE ADMIRAL ZIMBLE:** Okay, so it's been
25 basically about five months since --

1 **MR. FAULKNER:** Right.
2 **VICE ADMIRAL ZIMBLE:** -- since you've filed the
3 claim or --
4 **MR. FAULKNER:** Yes, sir.
5 **VICE ADMIRAL ZIMBLE:** -- less than five months.
6 **MR. FAULKNER:** And I realize they've probably
7 got claims stacked to the ceiling down there.
8 **VICE ADMIRAL ZIMBLE:** They're stacked. I'm not
9 sure to the ceiling, but they're stacked.
10 Okay. Thank you very much.
11 **MR. FAULKNER:** Yes --
12 **VICE ADMIRAL ZIMBLE:** Excuse me -- any--
13 anybody on the Board have any comments or
14 questions? Mr. Groves.
15 **MR. GROVES:** Joe, I had talked to you a minute
16 ago, as well, and you had said that you also
17 had been diagnosed with some skin cancers, as
18 well?
19 **MR. FAULKNER:** I've had I think close to 30
20 skin cancers.
21 **MR. GROVES:** Okay. Well, just at some point
22 you want to be sure that that also is one of
23 the issues --
24 **MR. FAULKNER:** Yes, sir. I'm glad to find out
25 that we're going to consider that now.

1 **MR. GROVES:** Okay. Thanks.
2 **VICE ADMIRAL ZIMBLE:** Thank you very much. Mr.
3 Caffarello. Okay, you're up.
4 **MR. CAFFARELLO:** Yes, my name is Caffarello.
5 My problem is DTRA. From the beginning they
6 have been using Naval records to indicate how
7 much exposure I had. In the beginning I told
8 them immediately, your records are no good
9 because you're using Naval records. I was the
10 guy that was reading and recording all the
11 radiation levels all during SANDSTONE during
12 the entire operation, and I know after YOLK it
13 was impossible to read the recordings with a
14 full-sized piece of filter paper. It had to be
15 cut down to a postage size -- stamp size until
16 I could get a reading.
17 Still I'm having trouble with the DTRA getting
18 a reconstruction. They have now should be
19 three months that they've been starting to get
20 a reconstruction on my dose, and I still
21 haven't got an answer. Before I left for this
22 meeting here yesterday, I called the VA to find
23 out if they got any word. Nothing yet.
24 What I'm concerned with is that reconstruction
25 dose is what's going to benefit me because

1 they'll know then how much disability I can get
2 and what for. That's my point. I need a
3 reconstruction.
4 **VICE ADMIRAL ZIMBLE:** Okay. You -- do you have
5 a medical condition that you're filing a claim
6 for?
7 **MR. CAFFARELLO:** Yes. Now the catch is, I've
8 had five radiogenic diseases, but the first
9 three on that list of page 11, I believe it is,
10 the first five I've got three of them. In the
11 first ten I've got another one, so it's four
12 out of five. The one that's not there is
13 radiodermatitis, and I attribute that strictly
14 to the fact that I was handling these highly
15 radiated filter papers all during the
16 operation.
17 **VICE ADMIRAL ZIMBLE:** Okay. Tom, do you have
18 any comment?
19 **MR. PAMPERIN:** Yeah, can we talk afterwards, if
20 -- if you don't want to talk in public? Are
21 you talking -- when you talk about you've got
22 three of them on the first list, are you
23 talking about presumptive disabilities?
24 **MR. CAFFARELLO:** No, I'm talking about the list
25 of -- what do you call it -- diseases that are

1 caused by cancer, by radiation, in the most --
2 there's a Veterans of Radiation book, page A-
3 11, I believe it is.
4 **MR. PAMPERIN:** Okay. I'd like to talk to you
5 afterwards. We also have a representative here
6 from the Waco Regional Office who's a rating
7 specialist and -- could you identify yourself,
8 please -- and
9 **UNIDENTIFIED:** (Off microphone) I'm
10 (Unintelligible) Waco Regional Office
11 (unintelligible). I'll be happy to speak with
12 you afterwards.
13 **MR. CAFFARELLO:** Okay. By the way, there are -
14 - I left envelopes on each of your desks there.
15 The first -- second or third page, I took two
16 polygraph tests to make sure that everyone
17 knows I'm telling the truth and that these
18 things did happen exactly as I said in my first
19 claim in 10/11 -- 10 April 1996, and that was
20 the purpose of the polygraphs, to make sure
21 that you understood that this is what happened.
22 **VICE ADMIRAL ZIMBLE:** Thank you very much.
23 Thank you very much, Mr. Caffarello.
24 **MR. CAFFARELLO:** Okay.
25 **VICE ADMIRAL ZIMBLE:** Mr. Patterson? Mr.

1 Patterson, come on down.
2 (No responses)
3 Not here. Is -- is Ms. Darlene Graham here?
4 (No responses)
5 Okay. Mr. Bernard Tschoerner.
6 **MR. TSCHOERNER:** Thank you, Mr. Chairman and
7 Board. What I want to just mention is that the
8 Defense Nuclear Agency was telling me that I
9 wasn't around a contaminated aircraft, that's -
10 - it happened in TUMBLER-SNAPPER, Shot FOX, at
11 Walker Air Force Base, Roswell, New Mexico.
12 Well, I been, you know, writing letters and --
13 and you know, it's the same thing, we just
14 ain't -- ain't got no records. So finally
15 there was another gentlemen on this same
16 airplane, and he -- he was dealing with them
17 and they -- they gave him a dose figure, and I
18 been writing to them and they never did -- but
19 I found out -- I got his name and then I sent
20 that to my senator, the same letter that --
21 that he was getting. So then they -- they
22 sent me a letter and said -- you know, but they
23 still claim that that aircraft wasn't -- it
24 wasn't contaminated. I wasn't in the -- in the
25 test, but this airplane came to -- to Walker.

1 It wasn't decontaminated. And so I finally --
2 they don't have that information, but I've got
3 records now from the base -- the base's been
4 closed a long time -- stating that that
5 airplane was contaminated at Walker. So it
6 just -- you know, I -- I don't fool with
7 anything, and then later on -- this is another
8 subject. In '65 or something like that, I went
9 through the altitude chamber at Randolph and I
10 had a ear problem in that chamber. And they
11 took all the people out and transferred them in
12 the -- in the next chamber and they worked with
13 me, and so when we got down, this technician
14 came over there -- or a doctor, I don't know
15 who he was -- he -- before he gave me this in
16 my nostrils, he said this'll be in your
17 permanent medical records. Well, okay. So I -
18 - I got this dose down my nose and he told me
19 you're grounded. You can't fly no more until
20 your flight surgeon, which was at Ellington,
21 will -- will turn you loose. So about three or
22 four days later I was scheduled to fly but the
23 flight surgeon wanted to see me. I went and
24 seen this flight surgeon and he said you still
25 can't fly -- that -- that day. So then later

1 on I was okay, you know, I could -- I could
2 start flying. But anyway, the whole thing is,
3 no records. Not even from Randolph, not even
4 from Ellington, no records. I sent for my
5 records I believe it was three times. Nothing
6 in there. So that -- that's my...
7 **VICE ADMIRAL ZIMBLE:** Okay, thank you. Let me
8 -- I need to ask you one question. Now you --
9 you were not at an atmospheric test.
10 **MR. TSCHOERNER:** No, I was not in the test.
11 **VICE ADMIRAL ZIMBLE:** Okay. You were back at -
12 - at base.
13 **MR. TSCHOERNER:** I was -- I was a maintenance
14 man and --
15 **VICE ADMIRAL ZIMBLE:** And you're taking care of
16 a contaminated plane --
17 **MR. TSCHOERNER:** That's --
18 **VICE ADMIRAL ZIMBLE:** -- or a plane that was
19 presumed to be contaminated.
20 **MR. TSCHOERNER:** Yeah, that's right.
21 **VICE ADMIRAL ZIMBLE:** That -- that does --
22 **DR. BLAKE:** It would fall under.
23 **VICE ADMIRAL ZIMBLE:** This could fall under,
24 okay. Dr. Blake said that that could still
25 fall under the category of atomic vet for --

1 for the -- for the purpose of this Board.
2 My next question is are you -- do you have a
3 claim?
4 **MR. TSCHOERNER:** No.
5 **VICE ADMIRAL ZIMBLE:** No.
6 **MR. TSCHOERNER:** No.
7 **VICE ADMIRAL ZIMBLE:** Do you have a con-- do
8 you have a medical condition that you think
9 might be related to an exposure to ionizing
10 radiation from that episode --
11 **MR. TSCHOERNER:** Well --
12 **VICE ADMIRAL ZIMBLE:** -- with contamination of
13 the plane?
14 **MR. TSCHOERNER:** -- I -- I cannot say that
15 'cause I -- you know, but I do have a ear
16 problem, I got dizziness, and when I went to
17 the -- to the VA in Temple, I told the doctor
18 there that I'd like to see the ear doctor. So
19 they sent me to the ear doctor and first he had
20 a student doctor look me over, gave me some
21 jokes there and -- and then he came around and
22 -- the main doctor -- and he said well, we
23 don't have no records, you know, anything --
24 problem, you know, that I had in the -- in the
25 past. So he said that's as far as we go.

1 **VICE ADMIRAL ZIMBLE:** Okay.
2 **MR. TSCHOERNER:** And they didn't even give me a
3 hearing test. I mean -- I mean, you know, so -
4 -
5 **VICE ADMIRAL ZIMBLE:** Let me ask a question of
6 one of the other Board members. Mr. Pamperin,
7 if in fact there's a question of his being
8 exposed to contamination, would he be eligible
9 for an IRR examination?
10 **MR. PAMPERIN:** Yes, he would, and in addition
11 to that, if you -- if you've never filed a
12 claim with us and your service medical records
13 demonstrate that you received some treatment
14 for an ear problem as a result of one of those
15 chambers, it would seem to me that we've got a
16 pretty clear path here where we could file a
17 claim and -- and get that evaluated for you.
18 **MR. TSCHOERNER:** Well, you know, when the
19 doctor said here -- here -- we stop here, see,
20 so I go back and I talk to the nurse in the
21 hospital and I said I wasn't satisfied. So I
22 went home. That afternoon I got a call. They
23 said we got a appointment for you to go to San
24 Antone (sic) VA. So I go to San Antone and
25 after they found out that I was in this

1 altitude chamber -- see, they gave me radium
2 therapy through that nose. I -- I didn't know
3 that until I was at Ellington. They didn't
4 tell me that at Randolph. So anyway, when they
5 found out over there at San Antone that I was
6 in that altitude chamber, I could tell right
7 then that -- it just -- what they was
8 interested in, I had cancer on my ear, that was
9 good, I appreciate that. But they were
10 interested in that ear. When that man -- he
11 took a X-ray of my ear and when I asked him did
12 he check the inner parts, he said no, that --
13 that's a specialized test, they didn't do that.
14 So I mean I just -- I'm just telling you what I
15 went through and who do I talk to, I don't
16 know.
17 **MR. PAMPERIN:** Well, again, it sounds like --
18 **MR. TSCHOERNER:** I know you have to file it --
19 **MR. PAMPERIN:** -- (unintelligible) the
20 jurisdiction of the Waco Regional Office it
21 sounds like if you went to the Temple Medical
22 Center, so we can -- we can take a claim from
23 you today for purposes of -- of getting the
24 disability evaluation rolling. And she'll --
25 she'll assist you with that.

1 **MR. TSCHOERNER:** Well --
2 **VICE ADMIRAL ZIMBLE:** Okay.
3 **MR. TSCHOERNER:** -- okay. Okay.
4 **VICE ADMIRAL ZIMBLE:** All right, we're going to
5 take care of you. Now I have to tell you that
6 that's not the role of the Board, but I do --
7 **MR. TSCHOERNER:** Well --
8 **VICE ADMIRAL ZIMBLE:** That's okay, I appreciate
9 your testimony. It just so happens the right
10 people are in this room to give you a hand, so
11 we'll take care of you.
12 **MR. TSCHOERNER:** Yeah. Look, I'm sorry, I know
13 -- but I thought, you know, I'd tell somebody.
14 **VICE ADMIRAL ZIMBLE:** I -- no, I'm glad --
15 **MR. TSCHOERNER:** That's all, see?
16 **VICE ADMIRAL ZIMBLE:** -- you told us. I'm glad
17 you told us, and I'm glad that you're here
18 because there's people here that can help you.
19 Okay, Mr. Terry.
20 **MR. TERRY:** My name is Joe Terry. I am a
21 retired Navy chief radarman, and I've got my
22 memory right here (indicating). That's the
23 main thing.
24 I was in three atomic tests at Enewetak and
25 Bikini, and I was in one south of San Diego, I

1 think it was SWORDFISH they call it. It was a
2 torpedo, underwater deal.
3 Since then I've retired and I have -- I went to
4 the VA in 1995 and they said nothing, you don't
5 -- you don't deserve anything. And then again
6 in 2000, I believe, and again they said you
7 don't deserve anything. So I just got through
8 with another one and they gave me ten percent
9 for hearing. I didn't even know I had bad
10 hearing. I have had cancer, my prostate, and
11 they removed it. And they -- the VA doesn't
12 even want to listen to me about that. They say
13 it's not worth anything. They know the after-
14 effects of it. The after-effects are ED -- I
15 hope you all know what that is -- and my bowel
16 and bladder control, which is very little. If
17 I don't make it to the bathroom within ten
18 minutes, I've had it. I wear a diaper whenever
19 I can't make it. And I have hypertension which
20 I'm taking medication for, and I have had
21 humiliation and early retirement because of the
22 humiliation and so forth because I was working
23 as a control supervisor and if I couldn't make
24 it to the bathroom it was very humiliating, so
25 I retired early.

1 I have skin cancers -- oh, a bunch of them.
2 Fact is, so many that my doctor has recommended
3 I take care of them myself, get Freezone* from
4 the local medicine place and you take care of
5 the cancers yourself. I have three right now
6 that I'm afraid to take care of. I have one on
7 my temple, one on my left earlobe and one on my
8 lip. I'll have to go to her to get it taken
9 care of. The VA doesn't want to hear about
10 that, either.
11 Compensation, I've already come up with. They
12 say that they will compensate me ten percent,
13 but they took it out of my retirement. And I
14 asked what compensation that was, and nobody
15 seems to know what compensation I'm getting out
16 of that.
17 I'm taking seven different medications,
18 prescriptive medications, for bladder cont--
19 for diabetes, hypertension, cholesterol and my
20 heart, and the VA doesn't want to hear about
21 that.
22 I have another one that they don't want to hear
23 about, and they don't even know what it is.
24 It's internal body myetosis (sic). I've never
25 heard of it and I'm sure a lot of you haven't,

1 but they say that there's no cure for it
2 because they don't know what it is. The only
3 thing they know is it's a muscle deterioration,
4 and I'm taking five or -- five non-prescriptive
5 medications for this, and they still don't know
6 what it is, and it's -- it's eating away at my
7 muscles. I can -- I can't walk very far, less
8 than a quarter of a mile. And when I climb a
9 set of stairs like these out here in front, I'm
10 just about through for about an hour. And
11 that's the one that VA doesn't even know
12 anything about. I've told them about it, but
13 they don't believe it.
14 So I'm in pretty well desire of something that
15 the VA will do about.
16 **VICE ADMIRAL ZIMBLE:** Where are you from?
17 **MR. TERRY:** I'm from Santa Fe, Texas.
18 **VICE ADMIRAL ZIMBLE:** Okay, right -- right here
19 in Texas. I -- I would let you know we have
20 the representatives from the Waco VA here
21 (unintelligible) getting him -- it'd be worth
22 talking about with them. Your skin cancers we
23 are definitely looking at. We'll be making
24 some recommendations about that tomorrow from
25 the -- from the subcommittee, so that may be

1 relevant.
2 Some of your other conditions that you
3 mentioned are not really related to ionizing
4 radiation.
5 **MR. TERRY:** Even the cancer?
6 **VICE ADMIRAL ZIMBLE:** Well, no, now prostate
7 cancer is -- is related, but it takes a very,
8 very high dose. Have you had dose
9 reconstruction done? Have you --
10 **MR. TERRY:** Yeah, I asked the -- the government
11 in 1995 and they came back -- there's another
12 situation that don't make sense. I went
13 through -- I was on a -- a radar picket
14 destroyer in Enewetak and Bikini --
15 **VICE ADMIRAL ZIMBLE:** Right.
16 **MR. TERRY:** -- and every blast that we had,
17 after the blast -- about three or four hours
18 after -- we had to follow the fallout. We
19 followed it sometimes for three and four days,
20 underneath it. Every time it rained, the
21 damage control people said the ship was hotter
22 than a pistol and we had to do wash-down, every
23 time. So they washed down, but I don't know
24 what they got of it or anything else.
25 The other one was on the USS *Hopewell*, on the

1 other explosion. About two hours after the
2 explosion, we went in to gather debris from the
3 explosion. And again we were hotter than a
4 pistol. There was a sea-going tug that had
5 pulled the target into the area, and as a
6 radarman I knew right where he was all the
7 time, and he was about the same distance from
8 us as he was the blast, and the same distance
9 from the blast as we were, and he got .3
10 Roentgens and we got zero. And I don't
11 understand any of this at all, why we got no --
12 no Roentgens at all from Enewetak and Bikini
13 and we were right under it.
14 **DR. BLAKE:** Mr. Terry, I'm Paul Blake, the NTPR
15 program manager from the Nuclear Test Personnel
16 Review program at the Defense Threat Reduction
17 Agency. I'm the one responsible to recalculate
18 your doses that happened there. We may have
19 done one for you now, I'm not sure. I'm happy
20 to follow up on that and we can produce one for
21 you, too. My deputy is right behind you, Major
22 Kyle Reybitz. He's in civilian clothes, and if
23 you'd like to pass his -- pass your name to
24 him, we'll try to get an answer for you as
25 quickly as we can.

1 **MR. TERRY:** Okay, thank you. My radiation
2 badge, at the times we were wearing one -- we
3 took showers in them, we swam in them and
4 everything else, so I don't know -- they were
5 just a little strip of something in some pa--
6 in some cardboard, that's all they were.
7 **DR. BLAKE:** That -- that was probably a film
8 badge, but what we'll also do is try to compute
9 your internal dose and some of the other dose
10 that might not have been seen by the film
11 badge. So that's -- that's the reason we're
12 going to need to talk to you and get -- and
13 track down some information.
14 **MR. TERRY:** Thank -- thank you, sir.
15 **MR. PAMPERIN:** Mr. Terry, are you enrolled in
16 VA healthcare?
17 **MR. TERRY:** Yes, I am.
18 **MR. PAMPERIN:** You are.
19 **MR. TERRY:** But I don't use it.
20 **MR. PAMPERIN:** You don't use it?
21 **MR. TERRY:** I had a -- I had a -- an
22 examination, so to speak. The doctor wanted to
23 know a bunch of questions, he asked me a bunch
24 of questions and had a blood test done and
25 something else. I never heard from that. And

1 when I took this, he -- he recommended 20
2 percent for the cancer and 20 percent for the
3 skin, but he didn't sign anything and the DAV
4 said that it wasn't any good unless he signed
5 it.
6 **MR. PAMPERIN:** Okay. And we had talked
7 earlier, and again just to remind you, as a 20-
8 year military retiree --
9 **MR. TERRY:** Yes, sir.
10 **MR. PAMPERIN:** -- if you were given service
11 connection for your hearing loss as a result of
12 a nuclear test, you should apply to the Combat-
13 Related Special Compensation Board for your
14 service and get that retired pay restored to
15 you.
16 **MR. TERRY:** Yes, sir, if somebody'll just tell
17 me what to do, I'll do it.
18 **VICE ADMIRAL ZIMBLE:** Thank you very much. Is
19 Mr. Claude Patterson here?
20 (No responses)
21 Ms. Darlene Graham?
22 (No responses)
23 In that case, perhaps they might be available
24 tomorrow to testify, but that concludes the --
25 the public comment session. We can move on

1 fairly quickly -- yes, sir?
2 **MR. WYANT:** My name is Clyde Wyant --
3 **VICE ADMIRAL ZIMBLE:** Oh, yeah, Mr. Wyant, we
4 know you very well. You --
5 **MR. WYANT:** Yeah, I know you do.
6 **VICE ADMIRAL ZIMBLE:** You've testified before
7 this committee three times, and we --
8 **MR. WYANT:** I've got a couple of questions that
9 I want to ask.
10 **VICE ADMIRAL ZIMBLE:** Okay. I -- I just --
11 before you ask the questions --
12 **MR. WYANT:** Yes, sir.
13 **VICE ADMIRAL ZIMBLE:** -- I want you to know
14 that every word that you've ever said before
15 this Board is -- is written down verbatim and -
16 -
17 **MR. WYANT:** Yes.
18 **VICE ADMIRAL ZIMBLE:** -- and we have it all in
19 our records --
20 **MR. WYANT:** Yes.
21 **VICE ADMIRAL ZIMBLE:** -- and in our archives.
22 **MR. WYANT:** Yes.
23 **VICE ADMIRAL ZIMBLE:** So I'd be happy to
24 address anything new that you -- that you have
25 or you want to present.

1 **MR. WYANT:** Okay.
2 **VICE ADMIRAL ZIMBLE:** Okay? Now you had some
3 questions. You want to go to the microphone?
4 **MR. WYANT:** I don't think I really need it.
5 **VICE ADMIRAL ZIMBLE:** I don't think so, either.
6 Go ahead.
7 **MR. WYANT:** Anyway --
8 **UNIDENTIFIED:** Well, they want to record it.
9 Unless it's --
10 **MR. WYANT:** Oh, they want to record it? Okay.
11 I'll be glad to speak (unintelligible).
12 I appreciate what you people have done. I've
13 been with you since the day one and -- and this
14 is my -- when I was in Tampa and then I was in
15 Los Angeles in the fall and now I'm here, and I
16 come last night and they told me it was
17 canceled, but I found out from -- the hotel
18 manager got ahold of me and she says Clyde,
19 they're meeting upstairs. And so she brought me
20 upstairs this morning and everybody wanted to
21 know where the heck I was. And there's a
22 colonel around here that found me down there
23 talking to the manager of the hotel, and he
24 wanted to know where I was, he was sure glad to
25 see me.

1 Anyway, what I'm talking about, I -- I solely -
2 - from the beginning I have wanted to see this
3 happening because NAAV basically started this,
4 primarily. But I think the veterans in the
5 atomic, both in my classification and out in
6 the Pacific, are morally mistreated. And this
7 dose radiation (sic) is a farce, and it still
8 is.
9 And to prove to you, in Tampa, out of 1,250
10 they asked how many passed. They said they all
11 did except one. And you ask what, dose
12 radiation. Now dose radiation has nothing to
13 do with it. I'm a sole survivor of those that
14 worked at Los Alamos making the atomic bomb. I
15 was there on June 25 when we tested it. And 30
16 days later we dropped it in Japan, ending World
17 War II. That's all I'm going to say about
18 that.
19 I'm only wondering why I'm the only one. Why
20 do I have to prove that I got radiation when I
21 have a letter from Dr. Oppenheimer, who's the
22 head of the project, who picked me out of
23 Washington, D.C. two years before that. And I
24 have a letter thanking -- I still got it with
25 me -- thanking me for my service, in August

1 after I left. And I still haven't got any --
2 the President said in 2001 at Arlington, after
3 giving the speech and praising the Purple
4 Heart, he said I just -- and these are his
5 words -- I just found out three months ago that
6 there are a group of veterans who are being
7 morally mistreated and neglected and abused,
8 and that's the veteran with atomic radiation,
9 and we do not know what to do. That's his
10 words. And he said afterwards they should be
11 getting the same treatment as the Purple Heart.
12 Yes, they were shot and wounded, but they're
13 all well -- as much as possible -- but the
14 atomic veteran with radiation, we do not know
15 what to do, have no idea what to do. I'm going
16 to recommend to the Congress that they get a
17 Purple Heart and they get some compensation.
18 That's the last I ever heard of it. But that's
19 a little (unintelligible). But what I'm here
20 today for is why am I having to go through all
21 this rigmarole of proving that I'm radiation
22 and this and that when you have the proof, I
23 have the proof. I'm the sole survivor. Why
24 can I not get my Purple Heart, which I was
25 promised in 2001, and why can't I get some

1 compensation for radiation?
2 Everything that's wrong with me -- and I been
3 going to the VA -- oh.
4 **UNIDENTIFIED:** You're covering the antenna.
5 **MR. WYANT:** I been going to the VA ever since
6 '46 when I got out of the service. I finally
7 got ten percent. I've had ten percent for over
8 20 years when I had my first back operation.
9 That's 40 years ago. My third one was 30 years
10 ago. My last one was ten years ago. They're
11 all coming apart. I have 19 X-rays and two
12 MRIs that they've had for over two years, the
13 Portland VA, proving that I need these
14 surgeries redone. But the problem is there's
15 not one surgeon that will touch me, because
16 when they found out that I was radiation, they
17 denied --
18 **VICE ADMIRAL ZIMBLE:** Okay, Mr. Wyland (sic) --
19 **MR. WYANT:** -- my service and --
20 **VICE ADMIRAL ZIMBLE:** -- that testimony --
21 **MR. WYANT:** And that's what I mean, why can't -
22 - and you can't tell me who. Darlene Hooley* -
23 -
24 **VICE ADMIRAL ZIMBLE:** Okay --
25 **MR. WYANT:** -- is my representative. She's in

1 Washington right now trying to get me. She's
2 on nine of your committees.
3 **VICE ADMIRAL ZIMBLE:** Okay.
4 **MR. WYANT:** But why can't I get it. Now you
5 just told a man here a while ago a group -- or
6 somebody to contact. Who can I contact to help
7 me?
8 **VICE ADMIRAL ZIMBLE:** Well, I -- first of all,
9 everybody gets exposed to radiation. It
10 depends upon the dose.
11 **MR. WYANT:** I'm 100 percent.
12 **VICE ADMIRAL ZIMBLE:** Yeah, right. So the
13 question is, what -- what level dose did you
14 receive and -- and that has (unintelligible) --
15 **MR. WYANT:** Well, I worked in the chemical
16 laboratory making the damned thing, what do you
17 think?
18 **VICE ADMIRAL ZIMBLE:** Well --
19 **MR. WYANT:** There was nobody telling me it was
20 radiation -- nobody.
21 **VICE ADMIRAL ZIMBLE:** Okay --
22 **MR. WYANT:** Remember, this is 1943, '44 and
23 '45. A hell of a lot of you weren't even
24 around. And I'm here, I'm 85 years old and
25 blind, and I need help.

1 **VICE ADMIRAL ZIMBLE:** Okay, Mr. Wyland (sic) --
2 **MR. WYANT:** And I expect this group to help me,
3 and I'm willing to help them to find these
4 veterans who are out there. I wanted to go
5 last year and travel the United States
6 contacting these different states and use me as
7 a PR to get some publicity and find these
8 veterans. When I go around to the different
9 veterans' programs or the veterans' meetings
10 around the country and I find out who I am and
11 I say are you atomic veteran, he said well, I
12 was out in the Pacific and this and that, and I
13 says why don't you belong? We have less than
14 12 or 15 percent of the possible eligible
15 veterans. I pick them up all the time just in
16 Oregon, and they know nothing about it.
17 Neither did I know anything about it until
18 2000.
19 **VICE ADMIRAL ZIMBLE:** Mr. Wyland, (sic), thanks
20 --
21 **MR. WYANT:** Yes.
22 **VICE ADMIRAL ZIMBLE:** -- thank you.
23 **MR. WYANT:** Thank you very much.
24 **VICE ADMIRAL ZIMBLE:** Thank you.
25 **MR. WYANT:** I'm going to be back again.

1 **VICE ADMIRAL ZIMBLE:** I would -- I would ask
2 that you talk to the local Veterans
3 Administration people who just happen to be
4 here and see if they -- if there is anything
5 that they can do to --
6 **MR. WYANT:** Oh, you mean the federal VA?
7 **VICE ADMIRAL ZIMBLE:** No, I mean --
8 **MR. WYANT:** It doesn't do any good to talk to
9 the Portland VA because they don't know
10 nothing.
11 **VICE ADMIRAL ZIMBLE:** No, we're talking about
12 the Waco VA, they're right here for you.
13 **MR. WYANT:** Well, I hope maybe they got
14 something that they don't have there because
15 they haven't got -- I was in Walter Reed
16 Hospital in -- in June, and they would love to
17 have me to help me, but they're so swamped with
18 the war that they don't, so I was in Los
19 Angeles in January. I contacted the hospital
20 down there because they got two surgeons down
21 there that can do radiation, neurosurgeon, and
22 they would love to have me down there to do it,
23 but in the meantime I'm trying to get these
24 that took nine years to get and took --
25 finally, after going to the (unintelligible)

1 school and being transferred back to VA, I got
2 them in four weeks and I've had them now a
3 month.
4 **VICE ADMIRAL ZIMBLE:** Okay. Mr. Wyland (sic),
5 there's no question that there are things that
6 we -- that I know the Veterans Administration
7 can do to assist you, but none of those are
8 really related to this Board. The Board --
9 **MR. WYANT:** Well, yes, I know, but this -- this
10 is what this Board is all about.
11 **VICE ADMIRAL ZIMBLE:** No, no.
12 **MR. WYANT:** Why don't you contact the veterans
13 that are involved in this instead of going to
14 these people who know nothing about radiation?
15 They think they do, but they don't. What
16 they're talking about has no bearing upon me or
17 any of my associates that's involved in --
18 they're trying to create something, and what is
19 the problem is -- and you know it -- it was
20 created in 1970 when they created this dose
21 radiation, which half of you probably wasn't
22 even around, and the rest of -- they didn't
23 even know what the hell they were talking about
24 then.
25 **VICE ADMIRAL ZIMBLE:** Mr. Wyland (sic) --

1 **MR. WYANT:** And they still don't know.
2 **VICE ADMIRAL ZIMBLE:** Okay. Thank you very
3 much, Mr. Wyland (sic).
4 Okay, shall we take a ten-minute break and then
5 we'll -- we'll continue with some of the mem--
6 the points on the agenda.
7 (Whereupon, a recess was taken from 1:48 p.m.
8 to 2:05 p.m.)

A BRIEFING ON NUCLEAR TEST PERSONNEL REVIEW (NTPR) DOSE RECONSTRUCTION PROGRAM
DR. PAUL BLAKE

9 **VICE ADMIRAL ZIMBLE:** Okay, we've gained about
10 an hour, and so we can proceed with the agenda.
11 We can -- we can have a little bit of a rest
12 this afternoon. Oh, we have -- let's see, I'm
13 missing a few Board members yet.
14 (Pause)
15 Okay, let's take advantage of this extra time
16 and ask Dr. Blake lots of questions as he goes
17 through his presentation on the update on the
18 Nuclear Test Program.
19 **DR. BLAKE:** Thank you, Admiral. I'm Paul
20 Blake, the NTPR program manager from the
21 Defense Threat Reduction Agency. You see our
22 logo on my presentation. The Defense Threat
23 Reduction Agency is a combat support agency of
24 the Department of Defense. We're approximately

1 2,000 people. And though our mission mostly
2 deals with weapons of mass destruction, we have
3 a historical mission, and that is with our
4 veterans here, that I'd like to talk about
5 today.
6 Briefly, what I'm going to cover is an update
7 on our program, where we are. And then there
8 are two items that I was asked to speak on from
9 our last VBDR meeting in Los Angeles. One is
10 to update you on our joint report to Congress
11 that was issued by the Department of Defense
12 and the Department of Veterans Affairs back in
13 June of 2004, where are we with that, at least
14 with regards to the Department of Defense
15 issues. And secondly, I was also asked to
16 speak on the skin cancer issues that make up
17 over 50 percent of our cases that we're dealing
18 with. And then I'll briefly summarize with
19 what I see as the road ahead.
20 In May of 2003 the National Research Council,
21 which is part of the National Academy of
22 Sciences in this country, released a review of
23 the dose reconstruction program of the Defense
24 Threat Reduction Agency, and you see it
25 pictured up there. It's that green book, so we

1 often refer to it as the Green Book. This had
2 a major impact on the NTPR program, and we
3 heard some of the comments from that study
4 actually this morning from Dr. Gesell. What
5 I'm going to now discuss for just a minute or
6 two is what the -- that impact had on our
7 agency.
8 The NRC study recommendations resulted in a
9 revision to our procedures. No dose
10 reconstructions were performed for
11 approximately six months, from May through
12 October of 2003, while we redid our procedures.
13 In addition, during that last quarter of 2003
14 the Department of Veterans Affairs returned
15 over 1,200 dose reconstruction cases to DTRA to
16 be redone. This has created a tremendous
17 backlog that we're still being challenged to
18 clear out.
19 What followed from that National Research
20 Council study was Congress noted what occurred
21 there and in fact passed a law that included --
22 it was Public Law 108-183, Section 601, that
23 required the VA and DoD to conduct a review of
24 the Department of Defense's dose reconstruction
25 program. It also required us to establish an

1 advisory board. So consequently, in June of
2 2004 a joint report was released to Congress,
3 and that was followed in November of 2004 by
4 the stand-up and chartering of this Veterans
5 Advisory Board on Dose Reconstruction.
6 If I had to summarize where our program is in
7 one slide, this would be where it is. You can
8 see -- if you look down at the X axis there,
9 all of a sudden the backlogs went up
10 considerably. There's two curves there that
11 are -- that go along the top. One is blue and
12 one is pink, and the blue is total cases that
13 are coming from a number of sources to DTRA to
14 do for verification and dose reconstruction.
15 And the pink curve is the workload based on
16 pure dose reconstruction.
17 When these cases came in we had been spending
18 approximately about $5 million per year to do
19 this type of work at DTRA, and all these cases
20 came back and a lot more workload comes in, you
21 have to readjust your budget. And there were
22 letters that went back and forth between DoD
23 and VA, and we committed to spending an
24 additional $6 million approximately to bring
25 this backlog down. And in fact, as you look on

1 that graph you see a yellow curve where we
2 originally predicted that we'd have the backlog
3 down by September of 2006 of this year.
4 Well, it's proved much more difficult to bring
5 that backlog down. The cases have become much
6 more challenging. We've had to put in, as
7 you've heard, quality assurance aspects,
8 revisions of procedures. And in fact, our
9 revised curve is now that dotted pink one that
10 goes out and we -- we don't look -- we don't
11 look right now, unless we have some additional
12 help from the Board, of getting that backlog
13 down to about September of 2008. And that
14 truly is challenging. Some of our veterans
15 have been waiting years for these dose
16 reconstructions. New ones come in. We truly
17 should have all these cases done within a year,
18 and it's dragging out.
19 It's also an expensive process, and the
20 veterans, one way or another, deserve to hear
21 an answer. Last time I came to this Board, the
22 Board endorsed some recommendations we made,
23 and in fact we brought the backlog down by
24 about 117 cases. And since then we've brought
25 in some new contractors to assist us and we're

1 putting in some external quality review. That
2 slowed us down for about a month or so on -- as
3 the cases are being externally reviewed.
4 Shortly they'll be going over to the VA and a
5 lot more cases will -- our backlog will start
6 zooming down again. But we've also added an
7 additional $4 million to the process to try to
8 make this happen.
9 If we break down where the backlog is, I have a
10 pie chart here, a number of the cases get
11 turned over very quickly. They come in and
12 they go out. And those are the ones that don't
13 require a dose reconstruction. We support
14 basically two other federal agencies with
15 regards to radiation cases. One's the
16 Department of Justice, that simply asks us to
17 provide information on where that veteran was
18 located. They do not need a dose
19 reconstruction, so those requests come in, get
20 handled and are usually responded to within a
21 month or two. We also get requests directly
22 from veterans. They don't come from the
23 Veterans Affairs or Department of Justice.
24 Once again, if they don't require a dose we can
25 turn those over very quickly. And there's also

1 cases that come from the VA that are what we
2 call some of the 21 presumptive cancers that,
3 once again, we can turn those around very
4 quickly.
5 The challenge is in the rest of the pie chart.
6 The blue and that purple are these non-
7 presumptive cases that require a dose
8 reconstruction. These dose reconstructions
9 have become very expensive and time-consuming
10 to do. Right now an individual dose
11 reconstruction is costing us between $9,000 and
12 $15,000, depending upon the difficulty in
13 performing that. And as you can see, the cases
14 in red are the cases that came back to us that
15 are being reworked, as compared to the blue
16 cases or the brand new ones coming in,
17 continuing to come in at a rate of about 35 per
18 month.
19 If we break it -- take another look but from a
20 pie chart of what type of diseases are we
21 dealing with as we do dose reconstruction, the
22 take-home lesson I would say from this chart is
23 you see the majority -- when you take not only
24 skin only, but the other places where skin
25 cancer comes in -- over 50 percent of our dose

1 reconstructions deal with skin.
2 And later on in my presentation I'm going to
3 give a -- discuss a point paper that was in the
4 presen-- handed out to you. And in fact if I
5 could show you this folder that you picked up,
6 hopefully, when you walked in, within that
7 folder is a copy of our presentations, but
8 you're seeing the actual PowerPoint
9 presentation. There's also a paper in here,
10 too, that discusses skin cancer and I'll be
11 discussing that later in the presentation if
12 you'd like to look at the actual details.
13 I promised to report back to you on this report
14 to Congress. The report to Congress, as you
15 see a copy of it on the presentation there, was
16 signed out by both the Under Secretary for
17 Benefits at the Department of Veterans Affairs
18 and the Assistant to the Secretary of Defense
19 for Nuclear, Chemical and Biological Defense
20 Programs at the Department of Defense back in
21 June of 2004. Within this -- within this
22 report to Congress were 23 findings and a
23 number of action plans. And within those
24 action plans at that time we said we hoped to
25 have them completed within two years.

1 Well, we've completed some of them. Others are
2 still ongoing, and I'd like to give you the
3 status.
4 Of the 23 findings, the ones I've highlighted
5 specifically for DTRA to work -- that DTRA is
6 focused on are findings 5 through 14. Finding
7 5 was inadequate and inconsistent application
8 of benefit of the doubt in exposure scenarios.
9 While the way we -- we responded to that was we
10 developed this concept we've talked about, this
11 Scenario of Participation and Radiation
12 Exposure, SPARE.
13 We also stated in our plan at that time that we
14 were going to introduce probability
15 distributions in dose reconstructions.
16 However, probability distributions in dose
17 reconstructions does not fall under the SPARE
18 concept. It falls more properly under the RDA,
19 so from this viewpoint DTRA considers this
20 action closed.
21 Finding number 6 was several pathways were
22 frequently neglected in exposure scenarios,
23 three of them specifically. Contamination
24 resuspended by a shock wave; the shock wave
25 occurred, for instance, most often at the

1 Nevada Test Site where we'd already detonated
2 weapons and consequently radioactive material
3 was left over there. You detonate another
4 nuclear weapon, the air blast from it re-- that
5 shock wave resuspends some of the previous
6 radioactive material and so it -- it makes it
7 add additional radiation dose to the veteran
8 that we need to take into account. It's a
9 fairly complicated calculation, and that was
10 one pathway that was -- that the National
11 Research Council felt we should do a better job
12 on doing those calculations.
13 They also came back and mentioned -- it was
14 talked about earlier today -- specifically
15 dermal exposure from skin contamination. And
16 finally, exposure from ingestion of
17 contaminated materials. DTRA has revised its
18 procedures to ensure that these pathways are
19 now considered.
20 In addition to doing that, though, we need --
21 from a scientific viewpoint -- to do studies to
22 show that we are -- among our peers in the
23 scientific community, we're properly accounting
24 for how we determine that dose and the
25 associated uncertainty. Doing well-performed

1 scientific studies that are peer-reviewed takes
2 time. There's a lot of going back and forth --
3 once the initial scientist writes it -- with
4 his peers just within the government, and then
5 also having a peer-review process.
6 The way we're looking at doing this peer-review
7 process is two steps. One that there's been
8 ongoing back-and-forth between our scientific
9 staff and the government scientists. And then
10 we're going to ask in some cases one of our
11 subcommittees here, SC-1 on the dose
12 reconstruction, to take some review. But these
13 people also work full time, too, and the amount
14 of studies we're looking at would overwhelm
15 them. And so the other approach that we're
16 looking at doing is contracting through a non-
17 profit Congressionally-chartered group, the
18 National Council on Radiation Protection and
19 Measurements. They would put together a group
20 of scientists to perform an external peer
21 review on these government publications. And
22 consequently that would be published on a web
23 site to show everyone here's what our peers
24 think about the science we're doing within the
25 government. And I think that's -- will respond

1 properly to the lack of peer review that was
2 documented in the National Research Council
3 study.
4 I'd mentioned of those three pathways there --
5 there are studies here that reflect each one of
6 them. For instance, the lack of studies on
7 pathways not taking into account dermal
8 contamination, radioactive fallout coming
9 directly on the skin, there's a study here that
10 discusses that. There's a number of studies
11 here that discuss that resuspension from that
12 blast wave we talked about. And there's also a
13 study here -- it's titled "Revision of FIIDOS,"
14 which deals with both fallout inhalation and
15 ingestion that takes into account the other
16 pathway.
17 Finding number 7 is external gamma dose upper
18 bounds are often underestimated substantially.
19 We took immediate action on this and we issued
20 interim guidance. We basically said let's
21 calculate the mean dose, our best average dose
22 we can think of, and what we're going to do is
23 we're going to multiply that times three to
24 come up with the upper bound. When you -- this
25 -- this was a good approach. What we need to

1 do as a follow-up, though, is to verify that
2 that's actually appropriate. We believe it is,
3 but we need to explain to our peers, our
4 scientific peers, that this is a verifiable and
5 appropriate procedure. And with these
6 particular gamma doses, this is challenging.
7 This is -- as I put down here, this is a
8 difficult but important issue to address. And
9 what I hope to do at the next VBDR meeting is
10 tell you where we are at -- on doing that.
11 Finding number 8, estimates of internal dose
12 are intended to be high-sided, but may not
13 always be so. Well, what we did immediately
14 after that -- the research studies -- the
15 National Research Council report came out and
16 the report to Congress was we issued an interim
17 ten times adjustment factor. Once again,
18 calculating the mean dose and multiplying it by
19 a factor of ten. We feel in many cases this is
20 probably -- may over-estimate, but once again,
21 we need to be able to explain to our scientific
22 peers that we are properly addressing this, and
23 we're in the process of also doing that.
24 Finding number 9, the upper bound on neutron
25 dose component was always underestimated.

1 Well, to put that in context, neutron doses for
2 most of our veterans were a very small
3 component of the total dose. The only veterans
4 that really saw any measurable neutron dose
5 were people that flew in planes that sampled
6 the clouds for radioactive material,
7 radiochemical analysis we refer to it as, or
8 some of the veterans that were very close up
9 front -- like Colonel Taylor who's sitting
10 right here may have been one of the people to
11 receive neutron dose because he was so close
12 when that detonation went off. He volunteered
13 to be an observer, close-up, of the total
14 veterans population, and in fact the neutron
15 dose in most cases is fairly small, too. What
16 we've done is we have produced a draft report
17 we believe answers this question fairly
18 effectively. And once it's published I believe
19 we can close this with -- with agreement of our
20 peers that we've actually addressed, through
21 what we've done here on this six-times
22 adjustment factor, is addressing the upper
23 bounds appropriately for neutron dose.
24 Finding number 10 was the VA adds upper bound
25 estimates of the external dose to reported

1 high-sided inhalation dose and/or the beta skin
2 dose. This one, to some extent, has been
3 answered by how the VA has changed its
4 procedures. The VA used to use two methods for
5 calculating probability of causation. They've
6 gone to one method. What we've talked about
7 earlier today is this Interactive
8 RadioEpidemiology Program. It's actually
9 located -- software is located on the net;
10 anyone can log in at any time and actually run
11 -- run the software and, based on your input
12 that you put in there, you could determine a
13 probability of causation whether your cancer
14 was caused by the radiation exposure. It's a
15 little difficult to do in some cases because
16 they ask what type of probability distributions
17 that are associated with this type of radiation
18 exposure, and so in theory where anyone can do
19 it, in practice it's easier for a health
20 physicist or a person who does this to actually
21 perform that calculation. But it is available
22 on the web.
23 By going to this sole method of calculating it,
24 it's negated this challenge. And what we still
25 need to do, though, I believe, is report back

1 at future VBDR meetings how we've actually
2 tested our dose models against realistic
3 datasets. And I look forward to giving that --
4 an update to you in future meetings.
5 Number 11 is the finding the correlations are
6 often not properly accounted for by combining
7 various doses to arrive at a total organ dose.
8 When we look at uncertainty we can look at two
9 items in time, and the question is are they
10 related to each other. Are they truly
11 independent, we calculate the uncertainty one
12 way. If they're not independent, are they
13 correlated, we calculate it another way. And
14 so this is often a challenge in uncertainty
15 analysis. And what we -- we have done to date
16 is the NTPR team has initiated an investigation
17 of correlations between different exposure
18 pathways. One, between prompt neutron and
19 gamma doses; two, between residual gamma and
20 beta doses; and three, between internal doses
21 from different radionuclides.
22 And status, we also plan on investigating
23 correlations from the same exposure pathways.
24 Where a lot of this will be documented is in
25 those technical reports that I showed you

1 previously that are still coming out. And if -
2 - and that schedule that we're having -- we're
3 being challenged to meet, we hope to get most
4 of these out with a -- the -- by the end of
5 this calendar year.
6 Finding number 12 was DTRA's specific
7 methodology for reconstruction doses is often
8 poorly documented or not documented at all.
9 And we did hear some of those comments earlier
10 today from Dr. Gesell. I believe -- and I
11 mentioned earlier -- that we've made
12 significant progress on this. We do have a way
13 to -- way to go, but I talked about that four-
14 tiered approach that we implemented. We
15 implemented a policy and guidance manual back
16 in September of 2005. We're working on the
17 second tier, our standard operating procedures
18 for both dose reconstruction and quality
19 assurance. We produced over 60 -- or perhaps
20 it's up to 80 -- different templates now for
21 various weapons tests on both the SPAREs, the
22 RDAs, the MathCad templates to try to
23 standardize and make consistent how we do our
24 work at the third tier. And on the fourth
25 tier, with our software programs, we've been

1 revising the user manuals and so forth and I'll
2 be releasing those to the subcommittees to take
3 a look at.
4 So this is ongoing, but I think we've really
5 done a significant first start on where we're
6 going on getting our methodology documented
7 properly.
8 Finding number 13, DTRA must develop, implement
9 and maintain an auditable documentation system.
10 Well, we have put in revision control on our
11 different templates, our SOPs, our policy and
12 guidance manual. Some of this is ongoing and,
13 once again, will probably be addressed by SC-3
14 tomorrow afternoon.
15 Finding number 14, DTRA needs to develop a
16 comprehensive quality management system that
17 encompasses all aspects of the dose
18 reconstruction program. One of the things that
19 we recently released to SC-3 was at least our
20 draft of where we're going with our quality
21 assurance manual, and I expect we'll be getting
22 some feedback on that.
23 I'd like to move on to what I consider one of
24 the most important issues to discuss today, and
25 that is the skin cancer point paper that I

1 mentioned was in either your packets here up in
2 front or here. And through my presentation I'd
3 like to go over the highlights of that
4 presentation that was asked for at the last
5 meeting.
6 DTRA -- this paper is entitled "An Analysis of
7 Service Connection for Radiation-Induced Skin
8 Cancer in Veteran Compensation Claims." The
9 paper introduces a background and discussion --
10 and discussion material, and concludes with
11 three recommendations for the VBDR's
12 consideration.
13 From the background viewpoint, DTRA currently
14 has a background -- a backlog of over 789 skin
15 radiation dose assessments, and projected
16 incoming skin radiation dose assessments is 160
17 per year.
18 The uncertainty associated with DTRA's skin
19 RDAs is potentially significant. As we heard,
20 beta dosimetry is perhaps our biggest challenge
21 in how well we do it. And what we then do,
22 based on this, is we compare our upper bounds
23 to a screening dose that's generated through
24 the IREP tables. These screening doses, for
25 some veteran scenarios such as -- there are

1 three types of skin cancers, and in two of the
2 cases, basal cell carcinoma and malignant
3 melanomas, the screening doses are smaller than
4 20 to 30 percent of DTRA's RDA upper-bound
5 doses. It's 20 percent if we look at the
6 overall population. It goes to about 30
7 percent if we pull out the Hiroshima/Nagasaki
8 cases.
9 Why do I differentiate between the Hiroshima
10 and Nagasaki detonations as compared to all the
11 other atmospheric tests? What happened at
12 Hiroshima and Nagasaki is fairly unique, for
13 the most part, compared to other tests in that
14 both of those weapons were detonated above 500
15 meters above the ground. And when you detonate
16 a weapon that high above the ground at -- at
17 that kilotonnage level, what happens is you get
18 a -- a nuclear cloud that goes up, the
19 traditional cloud, but almost none of the
20 material from earth goes up in that cloud. And
21 consequently, radioactive fallout is truly
22 minimized. Obviously there was a tremendous
23 detonation. Many, many people were killed at
24 Hiroshima and Nagasaki. The city was knocked
25 over with fires. But radioactive fallout,

1 there were no acute effects noted in the
2 Japanese population, the survivors, of any
3 radioactive fallout. So it was truly
4 minimized.
5 That's not true for many of the atmospheric
6 tests where fallout was significant. And
7 Colonel Taylor, for instance, was mentioning
8 how he had a broom where he was sweeping off of
9 -- fallout off of him. Well, that did -- that
10 type of fallout did not occur at Hiroshima or
11 Nagasaki. And so when we look at these cases,
12 it's easier to make a case that skin cancers at
13 these other tests could have occurred from
14 radiation. It's very, very difficult to say
15 that the skin cancer -- skin cancers from
16 veterans who were at Hiroshima and Nagasaki
17 actually came from radiation since the primary
18 path to create skin cancer is by radioactive
19 fallout landing on you. And if there was no
20 significant radioactive fallout, it's very
21 hard, from a scientific viewpoint, to show that
22 that skin cancer could have come from
23 radiation.
24 **BOARD MEMBERS QUESTIONS AND DISCUSSION**
25 **DR. LATHROP:** Paul --

1 **DR. BLAKE:** Yes?
2 **DR. LATHROP:** -- just in the interest of
3 clarity and communication, could you just tell
4 us a little more about what you mean by -- by
5 the sentence "The screening doses are smaller
6 than DTRA's RDA upper bound doses." So that's
7 the threshold for entitlement?
8 **DR. BLAKE:** Yeah --
9 **DR. LATHROP:** Just to -- just to spell that out
10 for people.
11 **DR. BLAKE:** It's -- it's very close to
12 entitlement. It's not exactly there, because -
13 -
14 **DR. LATHROP:** (Off microphone) That's
15 (unintelligible).
16 **DR. BLAKE:** -- the DTRA -- the process that's
17 done -- if you remember, the VA is basically
18 three groups, but there's two groups we're
19 concerned with here. One is VHA that's the
20 medical program and the other one is the
21 Veterans Benefits group that Mr. Pamperin is
22 associated with. There's a physician that does
23 calculations based on probability of causation
24 who sits over in VHA that renders a medical
25 opinion. And he uses software that generates

1 what we've done the equivalent of here for
2 screening doses. And so we can take a look --
3 he has published his data, how many medical
4 opinions he's rendered that are basically
5 positive, and he differentiates -- when he
6 publishes this data at a (unintelligible) board
7 -- whether it's other veterans coming in
8 besides -- that -- that would not be covered
9 under this board, for instance. Let's say you
10 were a sailor in a nuclear-powered submarine.
11 He -- he won't tell you who that was, but he'll
12 -- he'll state that -- what the dose was and
13 whether it was considered greater than 50
14 percent probability that that radiation induced
15 the cancer. And so we have feedback statistics
16 that -- based on those medical opinions -- that
17 go into making the final compensation decision
18 on whether -- what we look at is our screening
19 doses, would they be similar. And what we find
20 is a very good correlation between what we
21 calculated as screening doses and what this
22 physician then renders as a positive medical
23 opinion.
24 Yes, Colonel Taylor?
25 **COLONEL TAYLOR:** Paul -- Paul, there's one

1 other thing that might be added. I was asked
2 recently, and I've been asked several times, if
3 I put in a claim for cancer-related matters
4 because of my experience, and the answer's no.
5 And the reason is very simple. I have not had
6 a medical opinion or a personal feeling that
7 out of that experience I got enough cancer
8 (sic) to warrant my placing a claim to the VA.
9 It may sound unusual considering what I did,
10 but I've never had that reaction out of it.
11 You get exposed to sometimes and sometimes it
12 takes and sometime it doesn't. You could have
13 worked on the Panama Canal and not caught
14 yellow fever, for example. But they're
15 analogies, but the end result is here I am and
16 I don't see any reason to claim it. If it
17 comes up, I will, but it hasn't to date. And I
18 just thought that dimension might be worth
19 knowledge of consideration by both the Board
20 and by veterans who might be claiming
21 compensation. In my case, I don't feel I'm
22 entitled to compensation. It's that simple.
23 Thank you.
24 **DR. BLAKE:** As I mentioned before, DTRA
25 currently expends approximately -- well, we

1 expend approximately 98 person-hours in doing
2 one of these dose reconstructions, which works
3 out to be -- when you look at all the costs,
4 they range from about $9,000 to $15,000 per
5 dose reconstruction to complete these cases.
6 The Hiroshima/Nagasaki dose reconstructions are
7 actually less expensive because they're much
8 more straightforward.
9 And so my conclusion is, DTRA's costs to
10 perform non-Hiroshima/Nagasaki skin radiation
11 dose assessments are very likely to exceed the
12 costs of benefits provided to any affected
13 veterans.
14 So the first recommendation is to eliminate the
15 requirement to perform all non-Hiroshima and
16 Nagasaki basal cell carcinoma and malignant
17 melanoma RDAs by establishing an internal VA
18 policy to grant service connection without --
19 without regard to skin dose.
20 **DR. LATHROP:** Paul --
21 **DR. BLAKE:** Yes?
22 **DR. LATHROP:** -- so now when you say without
23 regard to skin dose, what you're really -- are
24 you -- help me out here. Are you saying that
25 because if we did do the dose reconstruction,

1 the probabilities are maybe 70 or 80 percent
2 that it would be of a dose that the DVA might
3 have entitlement and so it's -- it's worth the
4 probabilistic going forward -- it's not really
5 -- not without regard to dose, it's doing it
6 without calculating a dose. Is that right? Is
7 that a different way to put it?
8 **DR. BLAKE:** Yes, we -- we would be taken out of
9 that part of the process. We would not be
10 performing the radiation dose assessments.
11 **DR. LATHROP:** Right, just make it presumptive.
12 But it -- it's not really. It's basically
13 saying that according to the data we have, if
14 we did do a dose reconstruction there would be
15 a 70 percent chance, or something, that you'd
16 get -- get the entitlement. So because of the
17 way the math works and the uncertainty -- it's
18 not without regard to dose and it's not
19 presumptive -- it's this is a very reasonable
20 way to approach the problem. You get the best
21 use of -- of public funds for compensating the
22 veteran. How's that?
23 **DR. BLAKE:** The --
24 **MR. BECK:** Hold on a minute, Paul. I just -- I
25 want to make sure for the record --

1 **VICE ADMIRAL ZIMBLE:** Mr. Beck.
2 **MR. BECK:** -- we don't use any actual numbers.
3 I think the better way to say it is there'd be
4 a significant chance that the dose would be
5 high enough, but we don't -- we don't know yet
6 -- we don't have enough information, because of
7 the large uncertainty -- and that's another
8 issue we'll talk about later, but I think
9 rather than say a 70 percent chance or some
10 number, a significant probability the dose
11 would be high enough for him to be compensated
12 anyway.
13 **DR. LATHROP:** All right. I'm a decision
14 analyst, so I'll reword that a third time and
15 basically say enough of a chance of
16 compensation --
17 **MR. BECK:** Good, good -- great.
18 **DR. LATHROP:** -- that the best use of public
19 funds is to go ahead and make the -- make --
20 and give the dose that DVA would
21 (unintelligible), so it's enough of a chance.
22 **DR. BLAKE:** The second recommendation is broken
23 out from the first one because of these
24 screening doses. The screening dose for basal
25 cell carcinoma and malignant melanoma, when we

1 look at how these are calculated over at the VA
2 for what age range and the consideration of
3 acute exposure, they come in on the order of
4 approximately I believe 8 rem. The -- in case
5 of the second recommendation where we're
6 talking about squamous cell carcinomas, that is
7 much less radiation-sensitive. And when we
8 relook at our screening doses there, it's on
9 the order of 300 rem. And so from a scientific
10 viewpoint from a probability of causation,
11 we've broken that into a second recommendation
12 which would -- to also -- at least to consider
13 eliminating this requirement to perform all
14 non-Hiroshima/Nagasaki squamous cell carcinoma
15 RDAs by once again establishing internal VA
16 policy to grant service connection without
17 regard to skin dose.
18 And the --
19 **DR. LATHROP:** Again, if I can understand, it
20 sounds like with the -- the 300, it sounds like
21 very much a different situation than with BCC
22 and malignant melanoma. It sounds like you're
23 very not apt to go over that threshold then.
24 **DR. BLAKE:** We've only seen three cases total
25 that exceeded that, of what we've done --

1 **DR. LATHROP:** So explain to me --
2 **DR. BLAKE:** -- since 2000 --
3 **DR. LATHROP:** -- the rationale for the
4 recommendation then if it seems so unlikely
5 that they'd become entitled. I'm just --
6 **DR. BLAKE:** Sure, certainly, and that's a good
7 question. The benefit is first to the veteran.
8 Obviously, they get compensated based on this.
9 The second benefit is there's -- there's a long
10 delay here and this is -- when you look at the
11 costs -- okay? -- there's a significant cost to
12 Department of Defense and, to some extent, the
13 Department of Veterans Affairs. When you put
14 both of those costs together to compare how
15 much would it pay -- how much would it be that
16 we'd put out for the veterans, even if we give
17 them the benefit of -- given this tremendous
18 benefit of the doubt, which is really
19 tremendous, from the viewpoint of just the
20 Department of Defense and Department of
21 Veterans Affairs, we still are saving money --
22 I expect. I -- I won't speak definitively for
23 Mr. Pamperin, but that's -- at least in the
24 case of basal cell carcinomas, so -- where it
25 would be a stronger issue. But perhaps Mr.

1 Pamperin would like to discuss that. But the
2 second one is based on those issues, but you
3 cannot base it on the screening doses because
4 it's so much higher for squamous cell.
5 **DR. LATHROP:** I see. So the rationale for the
6 first one is based on the -- enough of a
7 likelihood of becoming -- of having a result
8 that would result in entitlement. The
9 rationale for the second one has to do with
10 comparing the costs of dose reconstruction to
11 the cost of compensation. Is that saying too
12 much?
13 **DR. BLAKE:** I think that's a fair -- a fairly
14 fair statement, Dr. Lathrop. I think --
15 **MR. BECK:** It's maybe not saying enough. I
16 think that the rationale for the first one is
17 also the fact that there is enough of a chance.
18 There is also a great benefit to both the
19 agencies, the veteran and the government
20 because of the costs, so the first one, there's
21 a lot of reasons. The second one, just the
22 reasons you mentioned.
23 **DR. LATHROP:** Right, right. That's good.
24 **UNIDENTIFIED:** (Off microphone) Maybe.
25 **DR. LATHROP:** (Off microphone) Maybe. But

1 that's the judgment (unintelligible). That's
2 the judgment. Balancing the judgment.
3 **MR. PAMPERIN:** I would just -- I would just add
4 that the -- the second one, squamous cell --
5 it's not clear to me that there is a savings
6 there. That -- that could be very substantial
7 in terms of not only benefits for -- for the
8 veteran, but benefits for survivors as well.
9 **VICE ADMIRAL ZIMBLE:** Paul, just one more
10 moment. Mr. Blake -- Mr. Beck, did you have a
11 --
12 **MR. BECK:** I think that's a good reason why
13 there's two separate recommendations --
14 **VICE ADMIRAL ZIMBLE:** Okay.
15 **MR. BECK:** -- and not lumping them together.
16 **VICE ADMIRAL ZIMBLE:** Good. Good. Okay.
17 **DR. FLEMING:** I just would like to add that
18 there's a long tradition in ethics. As most of
19 you probably know, John Stewart
20 (unintelligible) utilitarianism which says that
21 one can be morally right in their action if the
22 benefits outweigh the costs.
23 **DR. BLAKE:** The final recommendation does not
24 depend upon the Department of Veterans Affairs.
25 It can be moved on immediately with a

1 recommendation from this Board. What is
2 currently challenging the Defense Threat
3 Reduction Agency from doing this is our current
4 Code of Federal Regulations that says we have
5 to do the dose reconstructions out in complete
6 detail. And if the Board came through with
7 recommending this recommendation, it could
8 actually expedite -- just like we did last time
9 with those expedited prostate cases, we could
10 move ahead faster. It would not be as
11 substantial as the first two recommendations,
12 but it would still be significant. And so
13 recommendation three is to implement various
14 efficiency measures that enable DTRA to perform
15 expedited processing, provide worst-case or
16 maximum skin doses to the VA and discontinue
17 central dose estimates for skin RDAs.
18 There's a variety of methods that -- where we
19 could improve some of our through-puts and we -
20 - I've discussed some of this with SC-1 and
21 some of that'll be I believe in a report
22 tomorrow, too.
23 **DR. SWENSON:** I have a question. Paul, with
24 regards to the law when it says you have to do
25 an individual dose -- I mean does it say

1 individual dose estimate? And looking at this,
2 you'd still be providing a dose estimate for an
3 individual. Do you think this still fits the
4 intent of the law?
5 **DR. BLAKE:** I'll take a step -- if I could step
6 one back, it's not actually a Public Law. The
7 -- Congress passes the laws and then federal
8 agencies implement them through Code of Federal
9 Regulations. So what -- where we're talking
10 about this verbiage is actually in 32 CFR 218
11 that was put forth by my predecessor. And that
12 could be changed by a federal agency, too,
13 though it's a lengthy process and I look
14 forward to proposing and getting your input in
15 about eight or nine months on changing the Code
16 of Federal Regulations to make things a little
17 more -- what I would say -- efficient. But
18 since that takes a while to do, what it seemed
19 to me that Congress's intent was through this
20 public law in establishing the advisory board
21 was for this Congressionally-appointed Advisory
22 Board to give me advice -- and I should not say
23 me, excuse me -- for my agency to receive
24 advice on how to run this program more
25 efficiently. And that occurred last time and

1 we were able to reduce the backlog. Once
2 again, based on your advice, I can move ahead a
3 little more efficiently because it gives me a
4 little leeway on what's actually published in
5 1985 by my federal agency. I believe that that
6 does need revision, but it takes some time to
7 get it through the Office of Management and
8 Budget and other things to do, and you'll be
9 hearing some feedback --
10 **VICE ADMIRAL ZIMBLE:** Okay, Paul if --
11 **DR. BLAKE:** -- on that from me in future
12 meetings.
13 **VICE ADMIRAL ZIMBLE:** -- I understand
14 correctly, there's no statutory language that
15 needs to be changed in order to --
16 **DR. BLAKE:** No.
17 **VICE ADMIRAL ZIMBLE:** -- do an expedited
18 processing and -- and to estimate the
19 individual dose. However, you need to have a
20 blessing on any change through the Code of
21 Federal Regulations, and what -- what authority
22 -- what entity has the authority to bless and
23 approve a change in the Code of Federal
24 Regulations?
25 **DR. BLAKE:** The Department of Defense would --

1 would publish in the *Federal Register* here's
2 what we propose. We would do a cost analysis
3 of comparing that to the benefits, OMB would
4 take a look at it and if there -- and after a
5 public comment period, with all the public
6 comments in, if nothing -- if -- if it was all
7 still looked upon as a positive approach, the
8 Code of Federal Regulations would be changed.
9 **VICE ADMIRAL ZIMBLE:** So it doesn't have to go
10 beyond the Executive Branch of government?
11 **DR. BLAKE:** No, it does not, sir.
12 **VICE ADMIRAL ZIMBLE:** Okay. So it's still
13 within the Executive Branch of government
14 through OMB, per se, that can make the ultimate
15 approval on the change in the Code of Federal
16 Regulations. Is that correct?
17 **DR. BLAKE:** They're usually weighing in just
18 simply to say whether we've done it correctly
19 or not. The Department of Defense is really
20 the one that would, in this case, be the -- the
21 lead to make it happen, but --
22 **VICE ADMIRAL ZIMBLE:** Yeah, but if OMB says
23 don't do it, Department of Defense ain't going
24 to do it. Right?
25 **DR. BLAKE:** Yes, sir.

1 **VICE ADMIRAL ZIMBLE:** Okay. Thank you.
2 Colonel.
3 **COLONEL TAYLOR:** In line with that, I
4 understand exactly where the Admiral's coming
5 from, but the way I understand it, the
6 recommendation for the change in Federal
7 Regulation --
8 **VICE ADMIRAL ZIMBLE:** Oh, that -- we can
9 probably (unintelligible) --
10 **COLONEL TAYLOR:** -- will probably come from
11 here as a member of the Board.
12 **VICE ADMIRAL ZIMBLE:** Yes, correct.
13 **COLONEL TAYLOR:** Even though he is a member of
14 a different agency, in that capacity he's a
15 member of this Board.
16 **VICE ADMIRAL ZIMBLE:** Well, no, no. If -- if
17 this is -- if the Board makes the
18 recommendation --
19 **COLONEL TAYLOR:** Which is -- yeah.
20 **VICE ADMIRAL ZIMBLE:** -- it doesn't come from
21 the individual, it will come from the Board.
22 **COLONEL TAYLOR:** That's right, regardless what
23 individual emanated it.
24 **VICE ADMIRAL ZIMBLE:** Correct.
25 **DR. LATHROP:** I'm sure Dr. Blake would recuse

1 himself.

2 **DR. BLAKE:** Absolutely.

3 **COLONEL TAYLOR:** That's all right.

4 **DR. BLAKE:** Absolutely.

5 **DR. LATHROP:** Obviously.

6 **COLONEL TAYLOR:** If he does it wrong we'll have
7 to shoot him. Ain't no problem with that.

8 **DR. LATHROP:** We'll just ignore him. We do
9 that all the time.

10 **MR. PAMPERIN:** Dr. Blake, in order to change a
11 regulation you have to have a rational basis,
12 and the -- the rational basis for this -- is it
13 entirely economy or is it an alternative where
14 you take the maximum particular dose available
15 for a particular activity, such as a ship or a
16 battalion or whatever, to...

17 **DR. BLAKE:** The rationale for the CFR change
18 would be to bring us in an agreement with how
19 the other federal agencies do it right now.
20 The -- and other federal agencies are, for
21 instance, the National Institutes of
22 Occupational Safety and Health. Right now in
23 our regulations we have to spend as much time
24 doing a calculation for a person who may never
25 receive compensation, and we're talking, you

1 know, tenths of a millirem. We may be spending
2 lots and lots of dollars calculating something
3 that'll have no consequence. And what we'd
4 like to go to is a similar approach to these
5 other groups of going -- where it would have no
6 benefit for the veteran, let's not spend lots
7 and lots of hours doing it; let's just move on
8 and work on the issues that would actually
9 benefit the -- the veteran.
10 **MR. BECK:** I guess -- do -- do you really feel
11 that if this Board recommended a screening
12 approach or an expedited method of say giving a
13 lessened dose for certain parts of the --
14 certain numbers of these claimants that that
15 would require you first have the Code changed,
16 or could you just go ahead? 'Cause you're
17 doing similar things to that already. I mean
18 you give lessened doses for Hiroshima and
19 Nagasaki. You use these interim upper-bound
20 factors to assure that you're at least the 95
21 percentile level, which pretty much is doing
22 that already. You're not, you know, giving the
23 best possible median dose and the best possible
24 estimate of uncertainty already, so I don't see
25 where you really need to change the Code of

1 Federal Regulations other than to bring it up
2 to date because it seems to me you're already
3 doing these kind of things.
4 **DR. BLAKE:** And that's why -- excuse me. And
5 that's why I haven't proposed to do it
6 immediately since it's a lengthy process, but I
7 would like to get to it in about a year time
8 frames, but I am looking for immediate feedback
9 from this Board right now.
10 **MR. BECK:** So if we gave you a recommendation
11 to do something like recommendation three, you
12 wouldn't have to wait for the Code of Federal
13 Regulations to change. You could implement it
14 --
15 **DR. BLAKE:** I can -- I can implement it --
16 **MR. BECK:** -- (unintelligible).
17 **DR. BLAKE:** -- immediately.
18 **VICE ADMIRAL ZIMBLE:** Thank you very -- that's
19 very helpful.
20 **DR. BLAKE:** Thank you.
21 **DR. FLEMING:** Could you clarify what the
22 expression "to grant service connection" means,
23 and whether that also means eligible for
24 compensation or not?
25 **MR. PAMPERIN:** First of all, there are two

1 terms of art in -- in the agency. One is
2 "eligibility" and the other is "entitlement".
3 All veterans are eligible for service-connected
4 disability benefits because they're veterans,
5 as opposed to somebody who is a not -- not a
6 veteran, who would not be eligible for
7 disability benefits. To be entitled means to
8 have been found to have had an in-service
9 event, a current medical condition, and a nexus
10 -- a medical nexus between the two. Once you
11 have service-connected disability, the rating
12 schedule allows for evaluations in ten percent
13 decrements. Each individual disability has its
14 own particular set of evaluation criteria, but
15 all disabilities are capable of being service-
16 connected at the zero percent level. Not all
17 disabilities are capable of being service-
18 connected at the 100 percent level. For
19 example, migraine headaches can only be -- the
20 top evaluation for those is 50 percent, whereas
21 active cancer is 100 percent. You have to step
22 back from that a little bit with basal cell
23 carcinoma because when you look at the reality
24 of that where, you know, you develop a cancer
25 cell, you freeze it off, cut it off, whatever,

1 it's gone. Typically basal cell carcinoma
2 would be rated zero percent. When we've done
3 our analysis of it, given the fact that you
4 would every once in a while get 100 percent for
5 a month or so, we basically rationalize that as
6 though that would be the equivalent of getting
7 about a ten percent disability if you -- we
8 were to grant service connection for basal
9 cell. But -- but generally any service-
10 connect-- any condition that can be service-
11 connected can be evaluated at zero percent.
12 **VICE ADMIRAL ZIMBLE:** Tom, if I could just add
13 one more facet to that, is it not true that
14 even a zero percent compensation, disability,
15 still provides -- if it's service-connected,
16 there's still a benefit to the veteran by being
17 placed in a higher priority for access to the
18 federal -- to the veterans' health system.
19 **MR. PAMPERIN:** Yes, getting service-connected
20 at the zero percent level does carry a couple
21 of significant benefits with it. The first of
22 those is that you're eligible for enrollment in
23 veterans' health in what is called category
24 six, which means that, without regard to what
25 your income is, you can enroll. As you may

1 know, about three years ago, because of the
2 demand on the system, Secretary Principi found
3 it necessary to close enrollment for new
4 enrollees in what's called category eight,
5 which are basically non-service-connected
6 veterans not in receipt of our needs-based
7 program, who have incomes in excess of about
8 $38,000. But again, if you're zero percent,
9 you are category six so you don't have to
10 report income. You do have to make co-pays on
11 treatment for non-service-connected conditions.
12 But still that's a very, very good health
13 insurance policy.
14 Additionally, when you're granted service
15 connection at 100 percent, without regard to
16 your age, you are entitled to buy life
17 insurance from us each time you have a new
18 service-connected disability, based -- at
19 below-market rates, based upon the assumption
20 that your service-connected condition has
21 impaired your ability to get competitive
22 insurance rates.
23 **DR. FLEMING:** Can I -- I just have one follow-
24 up, quickly. How then does, if at all, being
25 service-connected or having a service-connected

1 disease differ from that disease being
2 considered presumptive?
3 **MR. PAMPERIN:** They're -- presumption is merely
4 one of the four possible avenues for getting
5 service connection. You -- you get service
6 connection either directly; i.e., you were shot
7 in service, that's documented in the record.
8 You had some sort of an accident injury, you
9 came down with a disease at -- while you were
10 on active duty. That's called direct service
11 connection.
12 There is also secondary service connection.
13 Secondary service connection is where you add
14 additional disabilities as service-connected
15 because your service-connected disability
16 causes them. For example, if you were service-
17 connected for diabetes and you develop
18 peripheral neuropathies or macular degeneration
19 or cardiovascular disease, as those conditions
20 develop, they would be service-connected.
21 Thirdly, you can be service-connected by
22 aggravation. You have a disability that pre-
23 existed service, but due to your service that
24 particular condition progressed beyond its
25 normal anticipated experience. What's more

1 important about that is that there is a -- what
2 is called a presumption of soundness when you
3 enter the military that if a condition is not
4 documented on your entrance physical, and it
5 doesn't manifest itself shortly thereafter, you
6 are presumed to have been sound. Even if at a
7 later date it comes up that you did receive
8 some treatment earlier on, if you have -- if
9 you had service of two, three years and you're
10 still manifesting or have a different symptom,
11 even though it might not be terribly disabling,
12 of that condition, we would service-connect the
13 condition as having been aggravated.
14 The final way to establish service connection
15 is through presumption. And presumption is a
16 concept that has been created by statute to
17 ensure that veterans are not harmed when the
18 medical science is unclear or when military
19 records are inadequate to ensure that a proper
20 decision is made. A classic example of this is
21 herbicide Agent Orange in Vietnam. Because of
22 the inability of the Department of Defense to
23 accurately track where military personnel were
24 in Vietnam at any given time, and even to some
25 extent where they actually sprayed, the

1 Congress chose to enact a presumption that says
2 that if you were in Vietnam, the American
3 people are not going to put a veteran at
4 disadvantage making them prove that. We will
5 presume that you were exposed. So again, a
6 presumption is -- is a -- is a mechanism to
7 relieve a veteran of the obligation of proving
8 one or more of the three elements of service
9 connection.
10 **VICE ADMIRAL ZIMBLE:** Colonel.
11 **COLONEL TAYLOR:** That was a very fine
12 description, one of the best I've ever heard,
13 of the --
14 **UNIDENTIFIED:** Mike -- mike.
15 **COLONEL TAYLOR:** -- various -- that was one of
16 the best descriptions I've ever heard of
17 service connection and the various categories.
18 Go back to zero disability and I'll give you a
19 very fine example. Zero disability on hearing
20 pays you nothing, and I've had it for 25 years.
21 But it provides me with hearing aids and
22 batteries and maintenance and service by an
23 audiologist in the VA without question. So
24 zero service connection, in its own rights,
25 have benefits. Thank you.

1 **VICE ADMIRAL ZIMBLE:** Dr. Blake, have you a
2 concluding remark -- if we'll let you?
3 **DR. BLAKE:** To conclude, looking forward --
4 looking ahead, the backlog of dose
5 reconstructions at DTRA continues to be
6 extremely troubling. This backlog is not fair
7 to our veterans, and it's proving very
8 expensive and time-consuming to reduce. It is
9 our hope at DTRA that the VBDR and VA will
10 consider endorsing DTRA's point paper's
11 recommendations, which should result in a more
12 rapid backlog reduction. Thank you, Admiral.
13 **VICE ADMIRAL ZIMBLE:** Thank you -- thank you
14 very much, Dr. Blake. We appreciate the
15 suggestion for recommendations from the Board.
16 Tomorrow the Board will be receiving reports
17 from each of the four subcommittees, and at
18 that point in time I think you'll find that
19 your recommendations will be addressed, and
20 then the Board will be able -- following
21 receipt of the four reports, the Board will --
22 will adjudicate -- assess and adjudicate those
23 recommendations.
24 **DR. BLAKE:** Thank you.
25 **MR. GROVES:** Paul, if I can ask you a question

1 before you sit down, do you have any
2 quantitative numbers as to how recommendation
3 one, two and/or three will reduce the backlog?
4 Is there -- you know...
5 **DR. BLAKE:** I believe in the point paper we've
6 given specific numbers --
7 **MR. GROVES:** Ah, okay.
8 **DR. BLAKE:** -- on cases, and if you pull that
9 up -- you know, so there's both numbers and
10 there's some cost data in there, too, that I --
11 **MR. GROVES:** Okay. Thank you, Paul.

A BRIEFING ON VA RADIATION CLAIMS COMPENSATION PROGRAM FOR VETERANS

12 **MR. THOMAS PAMPERIN**

13 **VICE ADMIRAL ZIMBLE:** Okay. Next on the agenda
14 is Mr. Pamperin to discuss the adjudicative
15 process -- and I could say that -- the
16 adjudicative process in radiation risk activity
17 claims.
18 **MR. PAMPERIN:** Thank you. Good afternoon,
19 everyone. Again I'd just -- hello, what'd I
20 do?
21 (Pause)
22 Okay, I would like to go over a number of
23 things today, particularly where we are in the
24 readjudication process. I would like to --

1 although I don't have a slide on it, I have
2 been asked to make a couple of comments about
3 the interface between VA disability
4 compensation for radiation activities and the
5 award of benefits under the Radiation Employees
6 Compensation Act and how those two play
7 together.
8 Again, the governing regulations that we're
9 talking about are 38 CFR 3.309 and 3.311 -- 309
10 is the regulation that provides for the 21
11 presumptive disabilities. At the present time
12 -- the last time we amended that regulation was
13 about four years ago when the Radiation
14 Employees Compensation Act added four
15 presumptive disabilities to their categories.
16 Secretary Principi, at that time recognizing
17 that uniformed service persons were involved at
18 Hanford and Paducah and a number of the other
19 activities, felt that it would be unfair for
20 civilians to have a greater advantage in terms
21 of compensation for radiation disabilities than
22 uniformed personnel. So he proposed and we
23 changed the regulation to add the four compens-
24 - cancers, the most important of which are
25 colon and lung, to our presumptive conditions.

1 At the present time, that action of moving them
2 to 3.309 has created a very, very bizarre
3 situation in that we can immediately begin
4 paying compensation. However, we have to go
5 back to Dr. Blake and ask for a reconstructed
6 dose estimate in order to see if we can pay an
7 earlier effective date. We have a number of
8 ideas, the panel has a number of ideas about
9 that that we will be addressing tomorrow about
10 how that can be handled.
11 3.311 is the regulation that covers all other
12 cancers, the most common ones being prostate
13 cancer and skin cancer, and also macular
14 degeneration. These do require at the present
15 time reconstructed dose estimates.
16 **DR. LATHROP:** Tom --
17 **MR. PAMPERIN:** Yes?
18 **DR. LATHROP:** -- can you just help us out? How
19 does that relate to what we were talking about
20 20 minutes ago, the recommendations that were
21 posed to the panel by Paul?
22 **MR. PAMPERIN:** About skin cancer?
23 **DR. LATHROP:** Yeah. So we're saying 3.311 says
24 gee, you've got skin cancer, you got a dose
25 reconstruction and then Dr. Blake presented a

1 recommendation, so one would -- one would
2 negate the other one? Is that the idea?
3 **MR. PAMPERIN:** The proposal that the Board is
4 considering would of course have to be
5 presented to VA -- would be presented to VA and
6 -- and since we're in predecisional mode there,
7 I would not be willing to speculate on our --
8 on our position. I -- I would merely say that
9 we have done cost analyses on the different
10 recommendations -- recommendation one which is
11 melanoma and basal cell, and recommendation two
12 which is squamous cell. You know, the -- the
13 decision to accept one or both of those really
14 rests with our Secretary, based upon a
15 recommendation of the CMP service and the Under
16 Secretary for Benefits. I'm a little concerned
17 about the squamous cell. The -- the cost
18 estimates that we have looked at for basal cell
19 and melanoma, quite frankly, are less over a
20 ten-year period than what DTRA is paying --
21 spending in a year. So you know, we'll see
22 what VA's leadership wants to decide about
23 doing in that situation.
24 But again, when you have a 309, it's pretty
25 straightforward. Okay, the three kinds of

1 claims we have are presumptives, 309s, the
2 reconstructed dose and the occupational.
3 I just hate -- what am I doing?
4 **UNIDENTIFIED:** It's my fault, I'm sorry.
5 **MR. PAMPERIN:** You just have to be ten percent
6 smarter than the box, and I'm seldom that.
7 (Pause)
8 Okay. Under a 309 we determine participation,
9 schedule an exam and evaluate. I talked to a
10 couple of people here in the audience who
11 already had 309 disabilities that we should be
12 able to assist.
13 311, again, requires participation and the
14 development of information, both by VA and by
15 Defense Threat Reduction Agency. Once that's
16 been developed by the regional office, the
17 regional office contacts my staff to get
18 clearance to send it to the Defense Threat
19 Reduction Agency. Quite frankly, I think
20 everybody has to understand that these are
21 relatively rare claims. We get between 400 and
22 600 of them a year, and we have 57 regional
23 offices doing them. Sometimes people forget to
24 call us and the cases get sent to the Defense
25 Threat Reduction Agency, only to be returned

1 because they're not ready. Once it goes to the
2 Defense Threat, again, they contact the veteran
3 to develop the SPARE, do their calculations and
4 refer a response back to us. We then refer it
5 to the occupational health office of the
6 Veterans Health Administration for a medical
7 opinion using the IREP model, and then we rate
8 and notify.
9 Will tell you that with respect to prostate
10 cancer, I am only aware of one claim that has
11 been granted in the last couple, three years,
12 ever since the reconstructed dose, because of
13 the size of the dose. Skin cancer, while not -
14 - not a lot of them, is -- is far more likely
15 to be service-connected.
16 Geez -- you can tell I'm a real techie here.
17 Okay. Again, as I said, some of presumptive
18 disabilities also have to be developed for a
19 reconstructed dose. This is something that,
20 quite frankly, causes some of us concern
21 because it's an anomaly. It's -- it's
22 something that where in reality, based upon the
23 regulations, atomic veterans are being treated
24 differently than other veterans. Normally when
25 a presumptive disabil-- when a disability is

1 recognized as presumptive, if the veteran had
2 previously claimed that condition, we can go
3 back to one year prior to the presumption in
4 order to pay compensation. And we can do that
5 automatically. Only with regard to radiation
6 claims do we have to get a reconstructed dose.
7 So that is an issue that I think needs a lot of
8 thought as to whether or not that's equitable
9 for -- for people who are similarly situated.
10 **MR. BECK:** Tom --
11 **MR. PAMPERIN:** Yes?
12 **MR. BECK:** -- could I ask a question? If you
13 have to go back and get a reconstructed dose,
14 and it's something like colon cancer where the
15 dose that would be required for a successful
16 claim is very high, then it's very likely that
17 the dose that comes back from DTRA will be much
18 less than the dose that would have qualified
19 them for a successful claim now. Right?
20 **MR. PAMPERIN:** And they would not be given a
21 retroactive award. Okay.
22 **VICE ADMIRAL ZIMBLE:** This really is a unique
23 anomaly because the presumption already exists
24 that they -- they -- they should be
25 compensated, yet the dose reconstruction firmly

1 establishes they should not be compensated. So
2 -- and that anomaly does not exist in any of
3 the other presumptive diseases because there's
4 no way to recalculate the other diseases.
5 There's no dose reconstruction for Agent
6 Orange, but there is a dose reconstruction
7 process for a non-presumptive condition. So I
8 think this is something we definitely need to
9 address.
10 **MR. GROVES:** Tom, can I ask a --
11 **MR. PAMPERIN:** Yes.
12 **MR. GROVES:** -- question associated with that?
13 We -- we heard that the Code of Federal
14 Regulations under which Paul operates has the
15 leeway for them, based on a recommendation from
16 the Board, to immediately take that
17 recommendation to heart and use it. If -- if
18 the Board was to make a recommendation to
19 address this anomaly, is it something that the
20 VA could essentially do immediately, or are we
21 talking about having to go back to Congress?
22 **MR. PAMPERIN:** I'm -- I would like to defer on
23 that and get a legal opinion from -- from our
24 general counsel. It seems to me that there may
25 be a possibility here that we could do this,

1 but I -- automatically. I'm not sure, though.
2 I -- I am not a lawyer and I can't speak to
3 those legal issues. Even if I was a lawyer, in
4 my current position I'm not authorized. Only
5 our general counsel is -- is permitted to make
6 that -- how is that for a bureaucratic wiggle?
7 **MR. GROVES:** Very bureaucratic.
8 **VICE ADMIRAL ZIMBLE:** He sounds like a lawyer.
9 **MR. PAMPERIN:** But I -- but unlike -- you know,
10 I think there -- there possibly may be some --
11 some room there right now, but -- for example,
12 dealing with skin cancer per se, I don't see
13 the ability of the agency to do that
14 unilaterally since it is in regulation that it
15 is a 3.311 that will require a regulatory
16 change with a rational basis. And based upon
17 our discussions yesterday, I heard lots of
18 rational bases that I think could -- would
19 enable us to write something.
20 Of course the problem there -- and -- and it's
21 one that I think everyone has to understand --
22 is that when you -- when you propose a
23 regulation, one of the functions of the Office
24 of Management and Budget, over and above
25 managing the budget, is to do an analysis of

1 the rational inter-relationship with other
2 regulations. And any regulat-- if we were to
3 pursue this from a regulatory perspective, this
4 clearly speaks directly to the Radiation
5 Employees Compensation Act and how that would
6 play out with them. Because unlike us, in
7 those particular cases there is a lump sum if
8 you come down with a disability. So the costs
9 there are substantially higher than what VA is
10 -- is talking about.
11 Again, there is -- there are possible ways
12 around that, as well, that we would -- if -- if
13 our leadership agrees that this should happen,
14 you know, we can explore how to accomplish
15 that.
16 Again, with occupational exposure we develop
17 for film badge information, schedule an exam.
18 We -- this time we ask for a dose estimate from
19 each -- from the individual service involved.
20 We don't go to DTRA, we go the Navy or Air
21 Force or the Army. We again follow the same
22 course, getting a medical opinion, determine
23 service connection and notify the veteran.
24 We have had a number of cases like this
25 recently as a result of some records that we

1 received from the Army doing an analysis of
2 radiation technologists in World War II and the
3 level of radiation exposure that they were
4 involved in.
5 Status update on the readjudication, again, we
6 initiated our review in 2003. At that time the
7 estimate would be that there would be
8 approximately 50 additional veterans given
9 service connection. We referred 1,251 cases to
10 DTRA. My numbers are a little bit different
11 than Dr. Blake's because I'm relying on my
12 field stations to fill out a spreadsheet which,
13 you know, they obviously didn't do quite as
14 well as Paul did. But thus far we have granted
15 service connection to 136 veterans. Of those,
16 124 of them fall into the category of the four
17 cancers that had previously been considered
18 3.311 -- colon cancer and lung cancer and
19 things like that -- who that, when -- we had
20 previously denied those claims, and when we
21 picked up the claim to see if we needed to send
22 it for a reconstructed dose, we were able to
23 grant service connection right then and there
24 for the disability. In addition to that, we
25 have granted 12 cases under 3.311. All of the

1 3.311 grants have been for skin cancer. Based
2 upon the current trends, it looks like by the
3 time all the reviews are over we probably will
4 get to the 50 additional veteran mark.
5 I -- and currently, as you -- as you saw, I
6 believe the number's actually over 1,500, but
7 there are about 1,400 claims pending with the
8 Defense Threat Reduction Agency. These are the
9 absolute oldest cases in the inventory with VA.
10 The ones obviously from the initial
11 readjudication in 2003 are now three years old,
12 with people waiting for answers. Typically
13 these cases are in the 700-day range. That's
14 at the Defense Threat Reduction Agency. When
15 you realize that prior to getting there, there
16 is from three to nine months' worth of
17 development that had occurred just to get them
18 to Defense Threat Reduction Agency. These
19 cases are typically three years old.
20 Okay, we did a comparison of a file of
21 approximately 13,000 records, the same files
22 that we used to identify the cases for
23 readjudication. We ran those against our pay
24 files to see what we knew about the veterans
25 who were identified as having had some

1 interaction with DTRA. When we compared the
2 records that DTRA sent us, we were able to
3 identify just shy of 12,000 veterans. Of
4 those, 4,600 were still alive, and 2,000 of
5 them were in receipt of compensation. This is
6 a -- it's differ-- you can't really draw a
7 comparison there since this is a very, very
8 self-selected group of folks, but you know,
9 just as an observation, a -- the fact that of
10 those that we identified who were still alive,
11 the fact that 44.8 percent of them are
12 receiving compensation compares with a -- an
13 average for the entire veteran population of
14 about 11 percent of all veterans are receiving
15 compensation.
16 Additionally, 1,677 surviving spouses are in
17 receipt of DIC, or 25 percent of all veterans
18 in receipt of compensation. If you want to
19 compare that to veterans generally, we have 2.6
20 million veterans receiving compensation and we
21 have about 350,000 survivors receiving DIC, or
22 about one widow or widower for every nine
23 veterans, whereas this is one for two.
24 We cannot directly link compensation to
25 exposure, again because we're dealing with a

1 very old payment system, but we can make some
2 informed guesses as associated with this.
3 We are -- we know that of the veterans who are
4 getting compensation, 828 of them are service-
5 connected for non-prostate cancers, 17 percent
6 of living vets and 39.7 percent of veterans in
7 receipt of compensation.
8 Atomic veterans receive compensation at a
9 significantly higher rate than the veteran
10 population generally. What I mean by that is
11 not necessarily the combined evaluation or the
12 dollar amount, but the frequency within the
13 population is significantly higher than
14 veterans generally. Additionally, we found
15 when we stratified atomic veterans by period of
16 service, there -- there is a significant
17 portion of the atomic veterans who are also
18 Vietnam-era veterans. Therefore we -- we did
19 not run this data against what's called the in-
20 country Vietnam file, but it seems that a --
21 that the Vietnam veteran herbicide exposure
22 potential partially explains the high incidence
23 rate of -- of claim activity among these
24 people.
25 Skin cancer makes up, with prostate cancer, the

1 vast majority of requests for dose
2 reconstruction. This Board asked for a cost
3 estimate for making service connection for skin
4 cancer presumptive. That -- that estimate is
5 being reviewed -- it's almost completely
6 reviewed now. It's been signed off on by most
7 people. The first estimate we did was strictly
8 for basal cell carcinoma. Based upon the
9 recommendations that DTRA is making, we are
10 making additional cost estimates to add
11 squamous cell and see what that would cost.
12 In terms of outreach, an article is in its
13 final version --
14 **DR. LATHROP:** I'm sorry, can I -- I just -- did
15 you say squamous cell? Is that the only skin
16 cancer you're running the cost for?
17 **MR. PAMPERIN:** Well, we're -- we've done them
18 for basal cell. We're going to do another one
19 for melanoma and -- you know, adding melanoma
20 to that, and then one adding squamous cell to
21 that. I don't really anticipate that adding
22 melanoma's going to mean much, quite frankly,
23 but the squamous cell would be potentially very
24 significant.
25 We are -- we have received requests to do

1 outreach to atomic veterans. We -- we are
2 doing the final edits on a -- an article to go
3 in the next atomic veteran flyer that goes out
4 to everybody on the -- on the registration
5 list, reminding them about their waiver of
6 security clearances and things of that nature.
7 At the present time, additional direct mail to
8 atomic veterans we don't see as very practical
9 because, first of all, we don't really have a
10 list of who all these people are. They pretty
11 much need to be identified. We -- we talk to
12 service organizations. We've been on Veterans
13 Health Administration hotlines reminding people
14 of who atomic veterans are. And in addition to
15 that, the -- as you might anticipate, VA, in
16 the last four months -- and it looks like for
17 quite some time to come -- has been engaged in
18 some very, very large-scale outreaches. We --
19 about three months ago, as a result of a court
20 case -- found it necessary to send out 456,000
21 letters to veterans who had current pending
22 claims, and about six weeks ago we sent out
23 325,000 letters to veterans who live in New
24 Jersey, Connecticut, Ohio, Indiana, Michigan
25 and Illinois because those -- veterans residing

1 in those particular states are the lowest
2 compensated veterans in the country when you
3 compare them to the national average. So we've
4 done outreach to them. And now we're preparing
5 to do another outreach to non-service-connected
6 veterans who may meet the income limits for our
7 needs-based program. So there is a massive
8 amount of outreach currently going on. And
9 given the fact that we can't really focus the -
10 - the outreach to atomic veterans because we
11 don't know who the estimated 211,000 still
12 living vets are, the -- the best that we can do
13 is speak to service organizations and create
14 flyers, and then contact the people who are on
15 the registry in hopes that they know other
16 people who are and can spread the word that
17 way.
18 And that's my presentation.
19 **BOARD MEMBERS QUESTIONS AND DISCUSSION**
20 **VICE ADMIRAL ZIMBLE:** Thank you very much, Tom.
21 Is there any comments or questions?
22 (No responses)
23 Okay. Oh, you have one -- I'm sorry. Dr.
24 McCurdy.
25 **DR. MCCURDY:** On the next to the last slide you

1 had that the -- we've requested a cost estimate
2 for making skin cancer presumptive. And the
3 question I have is, if you make it presumptive
4 and there may be an increased cost to you as
5 compared to actually doing the dose
6 calculations -- in other words, number of cases
7 which made presumptive would be 100 percent
8 versus you may only have 70 percent which are
9 compensated due to the dose reconstruction.
10 Now -- so you have a shifting of resources.
11 And everyone say well, it's saving money, it's
12 got a cost issue here. But the question I have
13 is we have two different agencies. One agency
14 doesn't like to give up money and one doesn't
15 like to incur more cost because -- and then
16 they have one budget that's handling -- you
17 know, that they're given to each year, so how
18 do you reconcile that type of situation?
19 **MR. PAMPERIN:** Well, actually it's -- it's even
20 a little bit more complicated than that because
21 the -- the money that -- if -- if skin cancer
22 were made presumptive, the cost savings for the
23 most part would be to the Department of
24 Defense, and they would be in the category of
25 what is called GOE or general operating expense

1 funds. Those are funds that are appropriated
2 every year to each agency in order to have it
3 conduct its business.
4 The cost that would be incurred by VA would be
5 under what is called mandatory funds, or
6 entitlement funds. So it's a different bucket
7 of money that -- that the Congress has -- has
8 less control over. They -- they manage the
9 appropriation of the entire entitlement fund,
10 which includes VA disability and non-service-
11 connected pension, but it also includes civil
12 service retirement. It includes Social
13 Security. It includes Medicaid, all of those
14 kinds of entitlement programs -- food stamps,
15 things like that. So it is kind of like apples
16 and oranges in terms of an -- an off-setting
17 cost. But they are nonetheless both costs that
18 are incurred by the federal government.
19 Additionally, when -- when you recognize that
20 this is a cohort of claims that has been
21 pending for three years, what that -- or more,
22 what that means for VA is that by this time
23 these cases are being reported to Washington on
24 individual bases every month because they're so
25 old. The amount of management intervention to

1 see is there anything that can be done, can we
2 move this along, is -- is not only significant,
3 but it is being diverted away from other, newer
4 claims that may have, for example, had
5 incomplete development done and as a
6 consequence we might not look at it for another
7 month to say oh, we need to do one more thing.
8 So from our perspective, if there is -- if
9 there are things that can be done that have
10 equity to them, and that serve the larger
11 veteran population, as well, then that seems
12 like a reasonable thing to consider.
13 Additionally, as -- as we heard this morning,
14 the level of uncertainty associated with skin
15 cancer introduces, I think, a significant
16 rational basis for looking at that and saying,
17 you know, are -- are we imposing too much of a
18 burden on the veteran.
19 Now having said all of that, you know,
20 understand that -- that this is a -- this is a
21 decision that will be made by our agency as to
22 whether or not we want to pursue it and -- and
23 it is not a decision that I have the authority
24 to make. I have the -- the ability to
25 recommend and influence, but it is something

1 that not only will the agency have to look at,
2 but OMB will look at and we'll see where that
3 goes. But I -- from what I heard yesterday,
4 quite frankly, I've seen regulations change
5 with fewer justifications than what I heard
6 yesterday.
7 **VICE ADMIRAL ZIMBLE:** Okay. If I could just
8 add my two cents' worth, granted that there are
9 some cost issues, I think -- I think in this
10 particular case they're pretty much a wash.
11 But -- but the bottom line is that we as a
12 Board don't have to be concerned about -- about
13 worrying about the budgets of either of the
14 agencies. We have to be concerned about
15 benefit to the veteran. And -- and if -- if we
16 see short-- shortening the process; getting rid
17 of the backlog; being able to respond to a
18 veteran faster; being able to offer a service
19 connection for a condition which has a high
20 level of uncertainty, the level of which we
21 have yet to determine; but the bottom line is,
22 this looks like a win-win situation for both
23 the veteran and for the agencies and getting
24 rid of a significant backlog. And there are
25 some significant overhead costs that are not

1 associated with compensation but are associated
2 with overhead.
3 So we'll be discussing this at far more depth
4 tomorrow when the -- each of the subcommittees
5 have submitted their recommendations and will
6 have a list of recommendations to present to
7 the Board for adjudication, and we'll do them
8 one at a time. So tomorrow is the day when
9 we'll make that final decision. I just think
10 that we -- we can rise above governmental
11 costs, agency costs and -- and equity between
12 agencies.
13 This is a difficult situation because there are
14 not too many processes in the government which
15 straddle two executive departments -- not just
16 agencies -- the Department of Veterans Affairs
17 and the Department of Defense, each one
18 reporting to different Congressional committees
19 -- the Committee for Veterans Affairs versus
20 the Committee for Armed Ser-- Armed Forces. So
21 I mean this is a -- this is a tough process.
22 But we don't have to worry about that. Our
23 charter says come up with recommendations that
24 will -- that will make the process better.
25 **DR. LATHROP:** Well, then the economist in me

1 wants to ask, from all this actually fairly
2 confusing set of statements over the last hour,
3 would it be the case or not or cannot be said
4 that if we save money, does that money stay in
5 a pot available to veterans? Does it just
6 blend into the great overwhelming cloud of the
7 federal government, bless its soul?
8 **VICE ADMIRAL ZIMBLE:** I don't know. I'm hoping
9 it'll reduce taxes is what I'm really praying
10 for.
11 **DR. SWENSON:** I think we can do what's best for
12 the veteran without considering these costs.
13 You have left out the Department of Labor,
14 where you think you might have saved money, but
15 if you make it presumptive, we will have made a
16 big change for the worst for the taxpayer
17 because it's likely that the DOL will then make
18 it -- potentially make it presumptive. So
19 where we think we might have saved money, we
20 wouldn't have saved anything --
21 **VICE ADMIRAL ZIMBLE:** Right.
22 **DR. SWENSON:** -- but I do believe we can
23 support the veteran in making it a lower level
24 decision, getting it expedited, without --
25 **VICE ADMIRAL ZIMBLE:** We're -- we're looking --

1 **DR. SWENSON:** -- changing the law.
2 **VICE ADMIRAL ZIMBLE:** We're -- we're really
3 looking to not use the term "presumptive" to
4 try to avoid that -- the problem that will be
5 faced by Departments of Justice and Labor, but
6 rather use the term "service connected," which
7 is -- which is --
8 **COLONEL TAYLOR:** Much more --
9 **VICE ADMIRAL ZIMBLE:** -- specific for veterans.
10 And so that's -- that's the term that I think
11 that we need to apply in this case.
12 **COLONEL TAYLOR:** Sir, the last statement. I
13 sat through this hour so when I was reminded
14 several times of the old military terminology,
15 keep your eye on the objective and remember
16 your mission, and that's exactly where we are.
17 Thank you.
18 **VICE ADMIRAL ZIMBLE:** Thank you, Colonel.
19 **DR. FLEMING:** I just wanted to follow --
20 **VICE ADMIRAL ZIMBLE:** Dr. Fleming.
21 **DR. FLEMING:** -- along with your remark. They
22 would also affect the populations that are
23 covered by RECA -- the downwinders, the uranium
24 miners and millers, and the onsite
25 participants, of which there is a common class

1 here, but the downwinders in particular. I
2 think the same sort of thing could happen, if -
3 - if skin cancer's made presumptive, I believe
4 that the DOJ could be flooded then with claims
5 based on an argument that it should be added to
6 the presumptive list from the downwinders. We
7 could probably get some estimate of that if we
8 maybe talked to DOJ to see how many skin
9 cancers have been submitted erroneously for
10 compensation to DOJ.
11 **VICE ADMIRAL ZIMBLE:** Thank you.
12 **DR. MCCURDY:** The only --
13 **VICE ADMIRAL ZIMBLE:** Any further comments?
14 **DR. MCCURDY:** The only reason I raise the
15 issue, I just want to know what roadblocks may
16 be ahead --
17 **VICE ADMIRAL ZIMBLE:** There may be --
18 **DR. MCCURDY:** -- and you mentioned a few of
19 them and --
20 **VICE ADMIRAL ZIMBLE:** There may be roadblocks,
21 right.
22 **DR. MCCURDY:** Right, so I just -- for -- for --
23 **VICE ADMIRAL ZIMBLE:** Okay, but --
24 **DR. MCCURDY:** -- (unintelligible).
25 **VICE ADMIRAL ZIMBLE:** -- but I don't think we

1 need to worry about the (unintelligible). I
2 think it's a -- you know, to use an old Navy
3 expression -- I've heard the Army's -- but damn
4 the torpedoes, full speed ahead. All right?
5 Now do -- do I hear a motion to adjourn?
6 **COLONEL TAYLOR:** So moved.
7 **VICE ADMIRAL ZIMBLE:** Second?
8 **DR. SWENSON:** Second.
9 **VICE ADMIRAL ZIMBLE:** Hearing no objection, we
10 are adjourned for today. Tomorrow, 9:00
11 o'clock.
12 (Whereupon, the business for the day was
13 concluded at 3:42 p.m.)
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15
16
17

1 C E R T I F I C A T E OF COURT REPORTER

STATE OF GEORGIA

COUNTY OF FULTON

I, Steven Ray Green, Certified Merit Court Reporter, do hereby certify that I reported the above and foregoing on the day of June 8, 2006; and it is a true and accurate transcript of the testimony captioned herein.

I further certify that I am neither kin nor counsel to any of the parties herein, nor have any interest in the cause named herein.

WITNESS my hand and official seal this the 30th day of June, 2006.

STEVEN RAY GREEN, CCR

CERTIFIED MERIT COURT REPORTER

CERTIFICATE NUMBER: A-2102