

**EXECUTIVE SUMMARY**

The Fifth Meeting of the Veterans' Advisory Board on Dose Reconstruction (VBDR or the Board) was held at the Tuscany Suites and Casino in Las Vegas, Nevada on March 7-8, 2007. Members in attendance were Dr. James A. Zimble, VADM, USN (Ret.), Chairman; Mr. Harold L. Beck; Dr. Paul K. Blake, CAPT, MSC, USN (Ret.); Dr. Ronald R. Blanck, LTG, USA (Ret.); Dr. John D. Boice, CAPT, USPHS (Ret.); Dr. Patricia A. Fleming; Mr. Kenneth L. Groves, CDR, MSC, USN (Ret.); Dr. John F. Lathrop; Dr. David E. McCurdy; Mr. Thomas J. Pamperin, LTC, USAR (Ret.); Dr. Curt W. Reimann; Dr. Kristin N. Swenson, Lt Col, USAF (Ret.); Mr. George Edwin Taylor, COL, USA (Ret.); Mr. Paul G. Voillequé; and Dr. Gary H. Zeman, CDR, MSC, USN (Ret.). Attending via telephone was Dr. Elaine Vaughan. Others in attendance included staff of various federal agencies, Congressional staff, as well as members of the public.

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**THE VETERANS' ADVISORY BOARD ON DOSE RECONSTRUCTION  
DEPARTMENT OF DEFENSE AND DEPARTMENT OF VETERANS AFFAIRS**

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Summary Minutes of the Fifth Meeting  
Held March 7-8, 2007

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The Fifth Meeting of the Veterans' Advisory Board on Dose Reconstruction (VBDR or the Board) was held at the Tuscany Suites and Casino in Las Vegas, Nevada on March 7 and 8, 2007. The meeting was called by the Defense Threat Reduction Agency (DTRA) of the Department of Defense (DoD) and the Department of Veterans Affairs (VA). These summary minutes, as well as a verbatim transcript certified by a court reporter, are available on the internet on the VBDR web site located at <http://VBDR.org>. Those present included the following:

**VBDR Members:** Dr. James A. Zimble, Chair; Mr. Harold L. Beck, Dr. Paul K. Blake, Dr. Ronald Ray Blanck, Dr. John D. Boice, Dr. Patricia A. Fleming, Mr. Kenneth L. Groves, Dr. John F. Lathrop, Dr. David E. McCurdy, Dr. Curt R. Reimann, Mr. Thomas J. Pamperin,, Dr. Kristin N. Swenson, Mr. Paul G. Voillequé; Mr. George E. "Ed" Taylor, Dr. Gary H. Zeman and Dr. Elaine Vaughan via telephone.

**Designated Federal Officer:** Ms. Shari Durand, Deputy Director of the Business Directorate, DTRA.

**Federal Agency Attendees:** Ms. Cheri Abdelnour, DTRA; Col Charles A. Helms, USAF; Dr. Joanna Ingraham, DTRA; Mr. Blane Lewis, DTRA; Mr.

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Steve Mauricio, Reno VA Regional Office; Ms. Irene Smith, DTRA; Mr. Eric Wright, DTRA.

**Congressional Representatives:** Mr. Charvez Foger and Ms. Kathleen Rozner for U.S. Senator Harry Reid, Ms. Gerri Schroder for Congresswoman Shelley Berkley.

**National Council on Radiation Protection and Measurements Staff:** Dr. Isaf Al-Nabulsi, Ms. Melanie Todd, Ms. Carlotta Teague, and Dr. Thomas Tenforde.

**Members of the Public:** See Registration

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**Wednesday, March 7, 2007**

**Opening Remarks**

Dr. James A. Zimble, Chair of the Veterans' Advisory Board on Dose Reconstruction, called the meeting to order and welcomed the attendees. He announced the purpose of the meeting and referred participants to the Board's website for a full explanation of the Board's organization and function. He then introduced and welcomed Mr. Steve Mauricio from the Veterans Benefit Administration (VBA) in Reno, Nevada.

Ms. Shari Durand, Designated Federal Officer for the Board, welcomed attendees, reminded them to register their attendance, and invited them to avail themselves of the handout materials.

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**Briefing on: Radiation Dose Assessments in the  
NTPR Program - How a Typical Dose Reconstruction is Performed  
in Accordance with NTPR Standard Operating Procedures**

**Mr. John Stiver**  
**Science Applications International Corporation (SAIC)**

Mr. Stiver outlined his presentation as an overview of the radiation dose assessment (RDA), hierarchy of guidance, procedural hierarchy, Nuclear Test Personnel Review (NTPR) case processing model, RDA processing models, generic and non-generic RDAs, and the road ahead.

The purpose of the presentation was to describe the detailed procedures an analyst uses to prepare NTPR RDA reports per the Standard Operating Procedures (SOPs) manual. The manual is in draft form and the goal is to complete it by summer 2007. The RDA reports are prepared for two groups: 1) Hiroshima and Nagasaki occupational forces or prisoners of war, and 2) atmospheric test participants from 1945 to 1962. The RDAs are prepared in response to VA requests and individuals or their representatives.

Mr. Stiver listed the hierarchy of guidance as the Code of Federal Regulations 32 CFR 218, 38 CFR 3.102, 38 CFR 3.311; the DTRA Policy and Guidance Manual; and the SOP Manual. Each was described and explained.

The procedural hierarchy was reported as the SOPs, the standard methods, operation and or shot-specific information in appendices A through C, and a compendium of references in appendices D through G. Once again Mr. Stiver described and explained each. Elaborating on SOPs, Mr. Stiver noted they are designed to ensure the analyst follow a standard process, use consistent methodologies that

yield reproducible results, and provide sufficient information for the VA to make sound compensation decisions.

Displaying a graphic illustrating the path of the NTPR case processing model, Mr. Stiver discussed some of the details of that model, including the Scenario of Participation and Radiation Exposure (SPARE) that describes what the veteran did, veteran's review and comments, assumptions, parameter estimates and the scientific basis that underlies the calculations, and RDA preparation and review. He emphasized that the RDA reports undergo rigorous quality assurance (QA) and quality control (QC) review prior to their release.

Mr. Stiver elaborated on the definition of an RDA report. It is a description of the radiation doses accrued by a participant from external and internal sources. He noted RDAs are required for claims not handled through DTRA's expedited processing methodologies. He then listed those methodologies and discussed them briefly.

Referring to the chart depicting the NTPR case processing model, Mr. Stiver noted that based on the case file and SPARE, the analyst determines if the case warrants a full non-generic RDA or if it should be a generic cohort-based RDA.

He discussed the non-generic RDA in depth, and reported on the particular SOP governing that method. Mr. Stiver then led the Board through the process of conducting RDAs beginning with the analyst's review of the SPARE and case file, confirmation of information, identification of exposure scenario and exposure pathways, and collection of any additional information where needed.

Following the hierarchy of methods as described above, whole-body external dose assessment and upper bound determination were discussed. Mr. Stiver then discussed internal dose assessment and details of calculation for the tissue or internal organ specified in the request for dose assessment. He then described how the benefit of the doubt is ensured and discussed the processes followed for skin dose and eye lens dose assessments.

The generic RDA was described by Mr. Stiver as a variant of the non-generic RDA that utilizes a cohort-based approach. It has more standardized assumptions, tools and templates designed for improved efficiency, yet still includes comprehensive documentation. Mr. Stiver noted that the templates and tools are available for Hiroshima and Nagasaki and the Pacific Proving Ground (PPG) test series, and are under development for applicable Nevada Test Site (NTS) participants, potentially including observers and maneuver troops. He emphasized that QA/QC and case processing is the same for the generic RDA as for the non-generic RDA.

Addressing the road ahead, Mr. Stiver indicated the following work efforts were planned: finalization of SOPs, standard methods and appendices, completion of templates for NTS operations, identification of additional categories for possible expedited processing or generic RDAs, and carrying out a rigorous uncertainty analysis using probabilistic methods, with the ultimate goal of supplanting the upper bound factors that came out of the DTRA interim guidance prepared in response to the National Academy of Sciences 2003 report.

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Dr. Zimble applauded Mr. Stiver's thoroughness and the complexity of his presentation. His inquiry into the length of time needed to complete a dose reconstruction was answered by Dr. Paul Blake, who indicated that, under ideal conditions, it would take about six months.

Various Board members discussed with Mr. Stiver the issues with the internal radiation dosimetry, the difference between "expedited" and "generic" analyses, the consistency among analysts, the film badge data versus RDA results, the effect of damaged badges on the dose assessment, the extensive detail in the SPARE, and the differences between SOP, standard methods and the white books.

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**Briefing on: The Interactive RadioEpidemiological  
Program (IREP) and Its Use in Adjudication**

**Dr. David Kocher,  
SENES Oak Ridge, Inc.**

Dr. Kocher began his presentation by explaining that IREP is a web-based interactive computer program that estimates the probability or chance that a diagnosed cancer in an individual was induced by a given dose of ionizing radiation. He noted that IREP considers all cancers except chronic lymphocytic leukemia (CLL).

IREP calculates the probability of causation (PC), or the likelihood that a particular tumor was caused by radiation. The probability of causation is the relative relationship between a cancer being radiation-induced at a given age versus the specific cancer developing from other causes.

Dr. Kocher noted that IREP does not calculate PC based on risk; it uses a quantity called excess relative risk (ERR), which is the ratio of the risk of a given cancer due to radiation to the baseline risk. He also mentioned that ERR is not a probability; it can be greater than one.

His basic message was that IREP is a state-of-the-art tool for estimating ERRs due to exposure to ionizing radiation, and it accounts for many uncertainties in estimating ERR for any exposure situation. This means that IREP calculates probability distributions of ERR and PC to represent their uncertainty.

Dr. Kocher also noted that IREP contains two basic assumptions about what the risks are due to exposure to ionizing radiation. For every cancer type except leukemia, IREP assumes that ERR is a linear function of dose. The exception is for leukemia, where a linear-quadratic relationship is assumed.

Dr. Kocher explained that when an estimate of PC is required in compensation programs, a claim is usually granted when the 99th percentile of PC is at least 0.5, expressed generally as 50 percent. A PC of 50 percent means that the risk due to radiation is equal to or greater than the baseline risk; it also means that ERR is one or greater.

A PC of at least 50 percent represents the requirement that it should be "at least as likely as not" that a person's cancer was caused by his or her radiation exposure. The use of the 99th percentile of this uncertain quantity PC, gives claimants the benefit of the doubt in the presence of uncertainty in estimating ERR and PC.

In his discussion of the sources of data for estimating ERRs, Dr. Kocher explained ERRs for most cancers are based on data from the Japanese atomic-bomb survivors. These survivors received acute doses from high-energy gamma rays, with small contributions from neutrons. However, ERRs for thyroid cancer are based on data in both the atomic-bomb survivors and several groups of children exposed to medical X-rays. Also, although not directly relevant to atomic veterans, ERRs for lung cancer due to exposure to alpha-particle radiation are based on data from U.S. uranium miners occupationally exposed to radon and radon progeny.

Dr. Kocher described the formulation of models to estimate ERRs, explaining that for most cancers in study populations scientists assumed that these models depend on gender, age at time of exposure, and attained age (for all cancers except leukemia) or time since exposure (for leukemia). Examples of statistical uncertainties in ERRs were presented and discussed.

Dr. Kocher explained that statistical uncertainties and modeled ERRs are obtained from best fits to data in study populations. He noted that uncertainties vary greatly depending upon cancer type, and observed that radiation is not a very potent cause of cancer.

Adjustments to modeled ERRs in study populations take into account a variety of factors, each of which was discussed in detail. They included random and systematic errors in dosimetry, latency period for specific cancers, transfer of ERRs in the Japanese atomic-bomb survivors to the U.S. population, dependence of ERR on dose and dose-rate effectiveness factor, and differences in biological effectiveness of different radiation types.

This was followed by Dr. Kocher's description of various assumptions in IREP and why they are considered claimant-favorable. Each was discussed in detail, and included: 1) the use of two models for lung cancer and selection of the higher 99th percentile of PC; 2) overestimation of ERR and PC for thyroid cancer in adults due to the fact that the ERRs included in IREP are higher than the observed ERRs in adult atomic-bomb survivors; and 3) application of the model for basal cell carcinoma to malignant melanoma usually gives a higher PC. Other assumptions used by the National Institute for Occupational Safety and Health (NIOSH) and the VA included, in cases of leukemia, that IREP is run for all leukemias (except CLL) as a combined group, and the higher PC is used in adjudicating the claim for the diagnosed type of leukemia.

A summary of the important sources of uncertainty that influence the calculations of PC and therefore decisions about compensation was presented. These included statistical uncertainties in estimating ERRs in study populations, and corrections to account for errors in dosimetry. Dr. Kocher also noted that the uncertainty in latency period is important mainly when time between exposure and diagnosis is less than the nominal latency period. The uncertainty in the risk transfer from the atomic-bomb survivors to the U.S. population is important when the baseline risks in the two populations differ greatly, such as in stomach, liver and prostate cancer.

Dr. Kocher closed his presentation by announcing that IREP is available to the public on the Internet at [www.niosh-irep.com/irep\\_niosh](http://www.niosh-irep.com/irep_niosh). He suggested how to learn more about the models and noted there were several "help" files available to provide more information.

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**Briefing on: Use of the IREP Program by  
the Department of Veterans Affairs**

**Dr. Neil Otchin,  
Program Chief for Clinical Matters,**

**Office of Public Health and Environmental Hazards  
Veterans Health Administration**

Unable to be present, Dr. Otchin made his presentation by telephone. He had provided in advance a number of slides to illustrate portions of his presentation, the first of which was to show where his office, the Office of Public Health and Environmental Hazards (OPHEH), fits within the Veterans Health Administration (VHA) of the VA. He emphasized that while his office is responsible for providing medical opinions to assist in adjudication of some radiation compensation claims, it does not make adjudication decisions. That responsibility falls under the Veterans Benefits Administration (VBA).

A flow diagram illustrating the path of a non-presumptive claim from the time the veteran files until it is adjudicated was presented. Dr. Otchin's office provides the VBA medical opinions for these cases.

In addition to atomic veterans, OPHEH provides medical opinions for other exposures such as occupational, medical and environmental. OPHEH is also involved in the Ionizing Radiation Registry, the depleted uranium screening and surveillance, and emergency preparedness.

Dr. Otchin outlined the role of the VA in the development and use of IREP. He then justified the use of IREP by the VA and its relationship with NIOSH. He noted that for claims involving multiple malignancies for example, VA considers each disease separately and the NIOSH-IREP Multiple Primary Cancers calculator has not been used for medical opinions. Dr. Otchin explained that the cancer models used by the VA are the NIOSH-IREP models; however, in some cases more than one cancer model may be used.

Using the upper bounds or "worst-case" doses reported by DTRA, Dr. Otchin illustrated a sample NIOSH-IREP computer run for a fictitious veteran born in 1926 who participated in CROSSROADS in 1946 and was diagnosed with prostate cancer in 1966. The outcome showed an IREP PC of 34.40 percent.

Dr. Otchin mentioned that the VA regulations mandate consideration of the following factors, some of which are part of the NIOSH-IREP software, in determining whether a veteran's disease results from exposure to ionizing radiation in service:

- Probable dose.
- Relative sensitivity of the tissue to radiation induction of the specific pathology.
- Gender and family history.
- Age at exposure.

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- Time between exposure and onset of the disease.
- Extent to which exposure to radiation or other carcinogens outside the service may have contributed to development of the disease.

He also mentioned that when multiple cancer models are used, the specific pathology of the veteran's neoplasm determines which PC values are relevant.

Dr. Otchin emphasized that not all conditions are included in IREP. For compensation cases claiming such disorders, Dr. Otchin explained that his office uses sources such as the National Research Council's Biological Effects of Ionizing Radiation reports, the Agency for Toxic Substances and Disease Registry's Toxicological Profile for Ionizing Radiation, major textbooks and key scientific papers to formulate medical opinions.

From June 14 through October 13 of 2006, Dr. Otchin indicated that his office had provided the Veterans Advisory Committee on Environmental Hazards medical opinions on 162 radiation cases, of which 111 involved atomic veterans. The NIOSH-IREP was applicable in 104 of those cases. Twenty cases received favorable medical opinions, all involving skin cancer. A summary of that report was also provided to Dr. John Lathrop, a VBDR member.

Noting that hundreds of "worst case," "expedited" and "generic doses" for skin and prostate cancer claims of atomic veterans have been reported by DTRA, Dr. Otchin reported NIOSH-IREP has been used to evaluate some of these cases. In addition, his office will continue using NIOSH-IREP software to evaluate individual cases when necessary.

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**Briefing on: Veterans' View Regarding VBDR,  
Dose Reconstruction and Claim Compensation Programs**

**Mr. R.J. Ritter,  
National Commander,  
National Association of Atomic Veterans, Inc.**

Using an extensive slideshow, Mr. Ritter provided a vivid illustration of the atmospheric testing of nuclear weapons by the United States. Beginning with TRINITY in the New Mexico desert in July of 1945, Mr. Ritter's presentation included the Hiroshima and Nagasaki explosions and tests in PPG. He led the Board through each Operation year by year, providing information on numbers of test shots, size of the bombs, numbers of personnel involved and maps of the affected areas.

Atmospheric testing ended with the four tests under the DOMINIC II series at NTS in July of 1962.

With his visual presentation as background, Mr. Ritter made the following observations and suggestions, speaking from the veterans' point of view.

- In 1993 Secretary of Defense William J. Perry released the atomic veterans from their oath of secrecy. Veterans can now openly claim their involvement in nuclear weapons testing that may have exposed them to ionizing radiation. However, thousands of veterans across the country are still not aware they can now reveal their participation in nuclear testing.
- Burden of proof of such participation is still the responsibility of the veteran, who is aging, often in ill health, not always computer-literate, and often lacks the resources to negotiate the administrative requirements of the claims system. Thus, veterans feel limited in their ability to receive proper assistance from VA Medical Center personnel.
- The National Association of Atomic Veterans has received complaints from atomic veterans who have reported for their Ionizing Radiation Registry exams, only to be given a cursory questioning or an incomplete examination.
- After decades of secrecy, frustration and denials, the atomic veterans feel betrayed and forgotten.
- If the VA has proof that a veteran participated in an atomic weapons test or post-test event, that veteran should be awarded appropriate benefits.
- The Secretary of Veterans Affairs should grant no-cost medical and drug benefits to atomic veterans without additional qualifiers, and dose reconstruction should be abolished.
- The atomic veterans are offended by the Department of Defense response to Congress regarding the atomic veterans medal.

The contents of several letters and e-mails from other atomic veterans detailing their experiences as part of nuclear test units was also presented by Mr. Ritter.

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**Public Comment Session**

**Dr. James A. Zimble**  
**Chair, Veterans' Advisory Board on Dose Reconstruction**

Prior to opening the meeting for public comments, Dr. Zimble reminded attendees that the Board had two objectives. The first is oversight of dose reconstruction and the filing and processing of veterans' claims dealing with ionizing radiation. The second is to assist DTRA, specifically NTPR, and the VA in communicating with the veteran and keeping the veteran informed.

Dr. Zimble then emphasized there are issues for which the Board is not responsible such as individual dose reconstruction cases. The Board is not an appeals board; although it needs to know when the system is not working, it has no legislative power.

For those interested in what the Board is doing, Dr. Zimble suggested that a visit to the web site at [www.vbdr.org](http://www.vbdr.org) is the easiest way to keep up with Board activity.

Dr. Zimble also said that the Board attempts to speed up the process for the veterans and to keep the two agencies well informed of the veterans' issues. He also said that the Board may help a veteran get to the right agency, but that it is not an appeals board. Further, the Board can't help with claims, and the Board does not make policy. The Board has made fairly substantive communications to the two agencies through recommendations.

The meeting was then opened to the public for comments. Comments were received from Mr. Jim Staite, Mr. Nick Verlinich, Mr. Carlos R. Contreras, Mr. Charles Clark, Mr. Clyde Wyant, and Mr. Pete Eitel. They talked about their exposures and medical conditions. They questioned the science and uncertainties of dose reconstruction, and suggested the elimination of dose reconstruction.

These subjects were discussed with the veterans as they were raised, and often subjects overlapped from one speaker to another. Some of the Board responses were as follows:

- Dr. Lathrop made the point that the Board is not a proponent of dose reconstruction, but was exploring the best and most fair way to provide compensation for the veteran. Discussion between Mr. Staite and Dr. Lathrop revealed a high level of frustration among atomic veterans with the VA and DTRA in attempting to settle claims.

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- Dr. Swenson and Mr. Eitel discussed his case, and Mr. Pamperin explained why the claims office was consolidated and located in Jackson, Mississippi.

Ms. Gerri Schroder, representing Congresswoman Shelley Berkley, thanked all participants, and shared that she had a couple of cases which were stuck in the system. She wanted to know how to advise Congresswoman Berkley on legislation that would expedite the veterans' claims through the system. Dr. Blake offered assurance that the Board has made significant progress in coordinating and streamlining the system. Ms. Schroder suggested to those who wish to get rid of dose reconstruction that they write their congressional representatives and bring the issue to their attention.

Further comments were received from veterans Mr. Zelmar Dessent, Mr. Jim Malone, and Ms. Sherry Lloyd, wife of a veteran. Their comments addressed the following topics:

- A question of status when the veteran was not part of a test, but worked on contaminated test vehicles.
- Tracking of claims when the organization was classified and not identified to the veteran.
- The feeling that the VA is an adversary, rather than an ally, in the claims process.
- Serious miscommunication between the veteran and the VA.
- Information as to how and where to file a claim.

Various Board members offered comments and information to these speakers, a verbatim transcription of which may be found on the Board's web site at <http://VBDR.org>.

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**Update on Nuclear Test Personnel Review  
Dose Reconstruction Program**

**Dr. Paul Blake,  
NTPR Program Manager,  
Defense Threat Reduction Agency**

Dr. Blake began by stating that the Board's recommendations have a major effect on his program. He then discussed two initiatives aimed

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at speeding the processing of veterans' claims: 1) an expedited cataract dose, and 2) the review of non-radiogenic diseases.

In reporting on the NTPR, he explained the principal caseload, the average time to complete the different types of cases, the age of current cases, the non-presumptive case backlog and the numbers of non-presumptive cases processed and the average incoming cases per month, all for the period January 1, 2006 through November 2006.

Dr. Blake indicated that the backlog is being reduced by five to ten cases per week, and there will eventually be no cases older than two years, unless there should be an unforeseen flow of cases in the near future. With the Board's support for prostate and skin cancer, 882 cases were expedited over the past year.

He also provided a snapshot as of 12 February 2007 of pending non-presumptive cases and a breakdown by type. The snapshot also included numbers of inquiries, SPAREs, questionnaires, etc.

A summary the NTPR actions that have been completed or will be completed to address the November 2006 Board's recommendations and the 11 added comments was presented.

The first recommendation deals with NTPR including, at a defined frequency in terms of percentage of cases, the processing of a double-blind RDA. Dr. Blake indicated NTPR is addressing the issue and explained how it will be done.

The second recommendation is the development of a QA Plan, Program and Procedures Manual, with specific QA tracking results to be submitted to Subcommittee 3 on a quarterly basis. Dr. Blake reported that he anticipates the Plan will be completed in the summer and delivered to the Board for review. Dr. Blake also reported it is expected that NTPR will complete a draft QA Plan, though full implementation will most likely not occur until fall 2007.

The 11 recommended items were discussed briefly. In part they included that Dr. Kocher's draft technical report on dermal contamination is scheduled for release to peer reviewers in June 2007, NTPR is collecting data from SAIC and will develop a table that compares film badge readings with reconstructed doses for the same exposures, Dr. Kocher will be exploring the upper bound factor with internal dosimetry with a publication date yet to be announced, and a definitive report has been developed for the adjustment factor for neutron exposure and will be published on the website by the end of March 2007. In addition, Dr. Blake provided a list of DTRA Technical Reports and the status of their peer-review release dates.

Turning to the pending cataract and other non-radiogenic cases, Dr. Blake mentioned that based on a review of 61 posterior subcapsular cataract (PSC) RDAs and recent peer-review literature, the potential to expedite approximately 70 PSC claims exists. Dr. Blake explained that NTPR has prepared a point paper for VBDR review. Based on facts within that paper, NTPR proposes to expedite PPG and NTS cases. Hiroshima and Nagasaki PSC cases would still require a complete RDA. This initiative is based on the previous VBDR-endorsed expedited skin dose initiative.

The next matter discussed was non-radiogenic diseases. At the last Board meeting, NTPR presented a point paper on non-radiogenic conditions. The report described how based on historical dose reconstruction data and analysis of VA non-radiogenic disease medical opinions, the chance of a successful VA claim adjudication was practically non-existent for such diseases.

Since that meeting, NTPR's medical advisory has reviewed more than 80 cases requiring a radiation dose assessment. Included are cases with non-radiogenic conditions and cases requiring clarification of conditions and/or disease sites on the veteran's body. A summary of these cases was sent to Subcommittee 2 (including 15 case files) in late February 2007 for their review. Dr. Blake reported that NTPR remains concerned that generation of RDAs for non-radiogenic conditions is pointless, and only delays the dose assessments for those veterans suffering from radiogenic diseases.

Looking ahead, Dr. Blake indicated the first half of 2007 is dedicated to maximize SPARE production, produce an expedited cataract initiative, and publish multiple technical basis documents. The second half of 2007 is dedicated to the release of processing and QA procedures and initiating revision of 32 CFR 218, "DTRA Dose Reconstruction Policy" expected to be completed in 2008.

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**Update on VA Radiation Claims  
Compensation Program for Veterans**

**Mr. Thomas Pamperin,  
Assistant Director for Policy  
Compensation and Pension Service  
Department of Veterans Affairs**

Mr. Pamperin began his presentation by explaining the process to amend a regulation. He then reminded the Board that all radiation claims will be adjudicated by the Jackson VA Regional Office (RO), the only exception being cases under appeal. The consolidation of pending claims has been completed, with Jackson presently having about 3,400

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cases on hand. Other ROs are sending approximately 60 cases a month to Jackson.

Addressing the handling of expedited radiation doses for skin and prostate cancer claims, Mr. Pamperin explained that the Under Secretary for Benefits has given the Jackson RO authority to make final decisions on atomic veterans' claims for those specific cancers without referral to the Compensation and Pension (C&P) Service. Those expedited cases will utilize the screening dose tables DTRA has provided for that purpose.

Additionally, OPHEH has provided instructions to VBA for the use of the tables to assist in the decision-making process. And the C&P Service has provided the Jackson RO with worksheets and instructions for implementation of those tables. Mr. Pamperin noted that some claims may still require a medical opinion from OPHEH.

In an earlier VBDR meeting Mr. Pamperin had described the VA's national quality assurance program for measuring claims processing accuracy. That program is the Systematic Technical Accuracy Review (STAR) and radiation claims are reviewed as part of the STAR workload. Anticipated to be completed by September 2007 is an initial STAR review which will deal specifically with radiation claims.

Mr. Pamperin described several specific areas to be assessed as part of the QA review. He also noted that radiation workload management and individual performance factors will be reviewed during recurring site visits to the Jackson RO by the C&P Service. They will conduct a liaison visit with Jackson before April 2007.

Mr. Pamperin expressed the VBA's appreciation to the Board for their work in developing draft notification letters. The information contained in these letters is being incorporated into VA's initial development letters to atomic veterans. It is hoped that a better understanding of the process by the veterans will provide for a more harmonious relationship.

Mr. Pamperin reported that the prototype brochure developed by the Board is under review and possible expansion and when published, will be distributed at a number of VA facilities and locations.

Congressional modification of legal representation was also discussed, as well as the impact of Operation Enduring Freedom and Operation Iraqi Freedom. There are approximately 690,000 Guard, Reserve and active duty personnel from those two operations who have been separated from the service. Roughly 160,000 of them have filed claims, with about 35,000 claims pending. The VA Secretary has directed that those claims

in addition to claims from atomic veterans be processed in 100 days or less.

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**Having concluded the day's business, an adjournment was taken until Thursday, March 8, 2007.**

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**Thursday, March 8, 2007**

Dr. Zimble reconvened the fifth meeting of the Veterans' Advisory Board on Dose Reconstruction, observing that the previous day's meeting had been something of an educational session. Today will be a working session with reports from the four subcommittees, assessing recommendations, and then voting on these recommendations. He announced that **Dr. Elaine Vaughan** would be joining by phone.

Ms. Durand offered a reminder to turn off cell phones during the meeting.

**Briefings by Subcommittee Chairs**

**Mr. Harold Beck  
A Report from Subcommittee 1 on  
DTRA Dose Reconstruction Procedures**

Mr. Beck outlined the major points in Subcommittee 1's report and referred the Board to the written report. He then reviewed the two tasks of Subcommittee 1: 1) to assess the dose reconstruction (DR) procedures, and 2) to audit a random sample of NTPR dose reconstructions.

Mr. Beck outlined the activities of Subcommittee 1 since the November Board meeting. They included selection of further DRs for audit, distribution of reports on previous sets of DRs, and meeting with the NTPR'S contractor and interviewing the analyst who prepared RDA reports of each case to be sure the subcommittee understands the reasoning, methodology, and conclusions. This has proved useful to both the subcommittee and the contractor.

He went on to say that NTPR generally provides benefit of the doubt in development of SPAREs. Further, the benefit of the doubt is usually applied in RDAs, but it is not always done consistently. Issues raised in the SPARE are not always addressed in the RDA report.

Mr. Beck said that case file documentation can still be improved. Analysts need more consistency in applying upper bound factors. There needs to be greater attention to QA in dose reconstructions with respect to dating references, annotating and identifying symbols used in equations, and a need to develop SOPs. Some audits suggest the upper bounds were not properly calculated. Cohort badge and film badge availability were not consistently investigated. Thus, potential errors may have resulted in reporting calculated doses lower than actual doses.

Future plans were outlined to include an audit of six additional cases prior to VBDR's next meeting in September 2007, continuing to interview NTPR contractors as part of the audit process, monitoring reviews of procedures and development of SOPs, monitoring NTPR established and proposed methodology, and monitoring implementation of duplicate blind analysis.

Mr. Beck presented the following Subcommittee 1 recommendations for Board discussion:

- Use of upper bound factors is a priority issue. Further we recommend development of an SOP to specify when and how upper bound factors are applied.
- Continued recommendation that the default upper bound factor for ingestion dose be re-evaluated.
- Continued recommendation for development of a method for adjusting the upper bound on uncertainty for doses based on cohort film badges. Further recommend development of an SOP for implementing such method.
- Continued recommendation that, for any new skin RDAs not based on expedited assessment, apply a new interim upper bound factor.
- Recommend VBDR Chair task Subcommittee 4 to work with DTRA to develop a plan for improving RDA reports with respect to content and required references.
- Recommend VA provide NTPR and VBDR information on claim outcomes; this could be used to expedite dose reconstruction and claims processing.
- Recommend VBDR request NTPR propose an appropriate modified expedited RDA process for cataracts for review by Subcommittee 1.

Mr. Ken Groves and Dr. Vaughan indicated agreement with the recommendation related to Subcommittee 4.

Dr. Zimble authorized Subcommittee 1 to act for the Board by reviewing and approving a modified expedited RDA process for cataracts in order to hasten the availability of the new procedure.

**A motion was made and seconded to accept the report of Subcommittee 1. There being no objection, the report was accepted, with the caveat that specific doses for cataracts would be replaced by wording that indicated a range of doses.**

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**Dr. Ronald Blanck,  
A Report from Subcommittee 2 on  
VA Claims Adjudication Procedures**

Dr. Blanck stated that the purposes of subcommittee 2 are to conduct audits of the procedures and policies used by the VA and the decisions made on claims, and prepare a summary of the subcommittee's findings for the Board's approval.

Dr. Blanck reported that the Subcommittee's consultant reviewed six additional VA cases from four VA Regional Offices (ROs), and her results were similar to those reported by the Subcommittee at previous meetings. Subcommittee 2 believes that VA acceptance of the previous Board recommendations will address many of the issues raised in its audits. Thus, it is unnecessary to audit additional cases until the Jackson RO is in operation and has established SOPs for processing atomic veterans' claims. Once the operation at that RO has matured, Dr. Blanck noted the consultant will be asked to audit claims from that office.

In presenting Subcommittee 2 recommendations, Dr. Blanck observed that since VA feels they are required by law to send non-radiogenic cases to NTPR, the Subcommittee members recommend for those diseases, DTRA render competent, expert medical opinion. Those claims for non-radiogenic diseases not warranting dose reconstruction will be returned to the VHA for review prior to final adjudication.

Dr. Blake interjected that cases in that category represent fewer than two percent of the cases and do not represent a major problem. Even if DTRA did a dose reconstruction, there would never be a positive medical opinion. Therefore, the time that is devoted to the cases does slow the process. Dr. Kristin Swenson asked that this specific recommendation be tabled because Subcommittee 3 has a similar recommendation, and they could be discussed and decided at the same time.

Dr. Blanck further stated that, because of the complexity and delays involved in dose reconstruction, Subcommittee 2 members recommend VA consider establishing Special Exposure Groups, similar to the Special Exposure Cohort in the Energy program, to expedite veterans' non-presumptive claims.

Dr. Zimble offered that this suggestion was within the scope of existing legislation and was being implemented by NTPR. He further suggested that a special exposure group apply to all atomic veterans and eliminate dose reconstruction for their claims. The reasons provided include: 1) the veterans' age makes it difficult to reconstruct their actions of more than 40 years ago, 2) danger was only a minor consideration at the time, 3) radiation measuring devices were not sophisticated, and 4) safety measures were lax or not enforced. He recommended legislative action to establish a special exposure group consisting of atomic veterans, as currently defined.

The suggestion met with Dr. Blanck's agreement, and it was further agreed that the Board would need to discuss further alternative methods for DR with the understanding that the fairness of the present system resides in the law, rather than DR procedures.

Dr. Blanck stated that, based upon feedback provided by veterans, Subcommittee 2 has concluded that VA should provide outcome of claims to NTPR to enhance DTRA methodology, and VA should provide the Board with data on the population of atomic veterans.

**A motion was made and seconded to accept the report of Subcommittee 2. There being no objection, the report was accepted.**

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**Public Comment Session**

Dr. Zimble interrupted the Subcommittee reports to allow for the public comment session to take place at the time scheduled. Speakers included Mr. Nick Verlinich, Mr. Clyde Wyant and Mr. Charles Clark. Their concerns included understanding forms required for submitting claims; the multitude of problems and the time required for dose reconstruction, and introduction of bills to eliminate dose reconstruction.

A verbatim transcription of all comments and any responses by Board members can be found on the Board's web site at <http://VBDR.org>.

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**Continued Briefing by Subcommittee Chairs**

**Dr. Curt Reimann**  
**Report from Subcommittee 3 on**  
**Quality Management**

Dr. Reimann explained Subcommittee 3 is concerned with all aspects of quality management, including quality control, and quality assurance and related procedures. It also includes relationships, overall strategy, communications, and costs and other aspects of performance. The Subcommittee also performs liaison function with several entities, including the agencies and other VBDR Subcommittees.

Beginning his report with observations, Dr. Reimann commended NTPR's and VA's vigorous responses to previous recommendations. He noted much better cooperation between the agencies and the Board, creating a better focus on quality requirements. Checklists, guidance documents and worksheets are moving well, and this needs to continue.

On behalf of Subcommittee 3, Dr. Reimann presented the following recommendations:

- To VA, it is recommended they capitalize on the consolidation at Jackson and their STAR system. VA should provide Subcommittee 3 with a status report of performance with respect to STAR metrics and cycle time for atomic veterans' claims.
- VA should provide a medical opinion evaluating the evidence for and against the radiogenicity of non-radiogenic diseases and determine whether a radiation dose estimate would be warranted for adjudicating the claim.
- To NTPR, there is an urgent need for finalizing the RDA and QA SOPs, and Policy and Guidance Manuals. Subcommittee 3 and Subcommittee 1 should receive final drafts per established NTPR schedules.
- When the QA Plan and implementing procedures are completed by NTPR and reviewed by VBDR, no case file should be at NTPR for more than six months.

Dr. Reimann emphasized that Subcommittee 3 strongly endorses the comments of Subcommittee 1 regarding case file documentation. He noted this will help to ensure the program is working as intended.

Dr. Zimble asked for comments on all recommendations except the one regarding competent medical authority. There were none.

**A motion was made and seconded to accept the report of Subcommittee 3. There being no objection, the report was accepted.**

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Dr. Blanck opened the discussion on competent medical authority review of non-radiogenic diseases. He summarized earlier testimony that if the veteran provides a medical opinion to VA, VA feels obligated to send the case to DTRA for review by a radiation oncologist for an expert opinion. The DTRA review could lead to further DR actions. However, most cases would be returned to VA where VA Benefits would send the case to VA Health for a final review before adjudication; Dr. Blanck felt this seemed to be the best solution.

Dr. Swenson asserted that VHA should make the decision on health and that there is no reason to go to DTRA for a medical opinion. Dr. Patricia Fleming and Mr. Pamperin discussed the need for the veteran to have a medical opinion from his physician. Mr. Pamperin suggested there is a legal motivation for sending these cases to DTRA. He also said DTRA is the focus of activities related to radiation exposure of veterans, and that it provides consistency for case-handling.

Dr. Zimble suggested VA and DTRA negotiate the "competent medical authority" question and arrange for an opinion that meets the Daulbert criteria.

Further discussion resulted in the adoption of Dr. Zimble's suggestion, and it was approved by the Board without objection.

**All recommendations of Subcommittee 2 and Subcommittee 3 were approved.**

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**Mr. Kenneth Groves,  
Report from Subcommittee 4 on  
Communications and Outreach**

Mr. Groves referred the Board to Subcommittee 4's report and outlined the responsibilities and authority of the Subcommittee and its relationship to VA and DTRA.

As a result of a suggestion by Subcommittee 1 earlier in the meeting, Mr. Groves reiterated that Subcommittee 4 should and is willing to look at all the documents that flow between veterans and the agencies in

question to determine if they can be clarified and simplified to enhance the veterans' understanding of the process. This would facilitate the veterans' participation in the claims process. He also mentioned that it has been difficult to get more people to attend the Board meetings, but noted that turnout at this meeting exceeds that of earlier meetings.

A matter of particular interest to the Subcommittee is contacting the major veterans' organizations and publicizing the Board and its activities through their publications. Mr. Groves reported that the glossy brochure explaining the claims process and the role of the Board is in the final stages of preparation. There is a graduate student doing a study on intergenerational communication whose assistance is available to Subcommittee 4, and she will be asked to provide pertinent findings.

Mr. Groves reported Subcommittee 4 was making no formal recommendations at this meeting.

**A motion was made and seconded to accept the report of Subcommittee 4. There being no objection, the report was accepted.**

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#### **Board Discussion and Recommendations**

Dr. Zimble appointed a fifth subcommittee to explore alternative methods for dose reconstruction. It will consist of the chairs of the four standing subcommittees or a representative of a chair (Dr. Lathrop for Dr. Reimann), with Dr. Fleming as ethicist and Dr. Vaughan as a consultant. Dr. Zimble asked Dr. Blanck to chair the Subcommittee.

\* \* \*

Addressing future Board meetings, Dr. Zimble reminded the Board of the meeting that is scheduled for September 2007 in Chicago, Illinois. Mr. Groves noted that there are also meetings scheduled for December 2007 and January 2008, and suggested the December meeting be canceled. The Chicago meeting will be held at the Jesse Brown VA Medical Center. Dr. Gary Zeman has been asked to determine if the facilities there are appropriate. Two speakers who were deferred from this meeting will be scheduled for the September 2007 meeting. Suggestions for future speakers were solicited.

Dr. Blake suggested a speaker from DTRA on quality assurance. Mr. Pamperin suggested Mr. Joe Adair, Director of the Jackson RO, as a possible speaker. Ms. Durand and Colonel Ed Taylor discussed the

physical and financial obstacles that certain locations present to both the Board and to the veterans.

Dr. Zimble posed possible site locations for the January 2008 meeting: Tampa, Florida, Oakland California, San Diego, California, and San Antonio, Texas were suggested. Veterans' organizations in the area were raised as a major means of communication about the meetings. It was decided to defer the decision until Subcommittee 4 could make a firm recommendation. Dr. Boice gave a strong endorsement for having the meeting in the resident hotel, and recommended the possibility of having a speaker from the United Kingdom, and possibly one from Japan.

Dr. Zeman noted the Health Physics Society has a meeting in January 2008 near the dates proposed for the Board meeting, which could affect three or four of this Board's members. Mr. Ritter suggested Phoenix, Arizona for consideration as a meeting site.

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#### **Special Public Comment**

Ms. Stephanie Evans had requested to be allowed to read into the record a letter from her mother, Ms. Pat Broudy, Vice Commander and Legislative Director, National Association of Atomic Veterans. The letter pointed out the thousands of underground test participants from 1962 through 1992 who are not included in the purview of the VBDR. Many of the DoD and DOE-affiliated personnel were military and contractor personnel.

Dr. Zimble explained that the appeal is beyond the authority of VBDR for action.

A verbatim transcription of all comments and any responses by Board members may be found on the Board's web site at <http://VBDR.org>.

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Mr. Groves briefed the Board on their visit to the atomic testing museum later in the afternoon.

**With no further business to come before the Board, a motion for adjournment was made and seconded.**

**End of Summary Minutes**

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Summary Minutes      March 7-8, 2007  
Veterans' Advisory Board on Dose Reconstruction

I hereby confirm these Summary Minutes are accurate, to the best of my knowledge.

/s/

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James A. Zimble, M.D., Chair  
VADM, USN (Ret.)

May 31, 2007

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Date