



**Q5. What is the budget for the VBDR?**

A5. Total annual operating costs are estimated at \$1million.

**Q6. Where is the VBDR located?**

A6. The National Council on Radiation Protection and Measurements (NCRP) provides technical and administrative support for the VBDR. Administratively, the VBDR is located at:

Veterans' Advisory Board on Dose Reconstruction

c/o NCRP

7910 Woodmont Ave., Suite 400

Bethesda, MD 20814-3095

<http://vbdr.org>

**Q7. How can I contact the VBDR?**

A7. You can contact the VBDR through its toll-free line at 1-866-657-VBDR (8237).

The VBDR website is <http://vbdr.org> or via e-mail at: [pa@vbdr.org](mailto:pa@vbdr.org) or [aa@vbdr.org](mailto:aa@vbdr.org).

**Q8. Who has primary responsibility for the advisory board?**

A8. The Department of Defense (DoD) has the primary responsibility for the advisory board and has appointed a Designated Federal Officer to oversee compliance with Federal Advisory Committee Act (FACA) regulations. The advisory board members and chairperson were appointed by DoD and VA in accordance with FACA regulations. For more information on FACA, go to: <http://www.fido.gov/facadatabase/>.

**Q9. How long will the board members serve?**

A9. Board members, upon approval, become special government employees and are entered into the civil service system by the Washington Headquarters Service. Each board member receives a one-year appointment that must be renewed annually.

**Q10. Who is the designated federal officer on the board?**

A10. The designated federal officer is Ms. Shari Durand, Deputy Director of the Business Directorate, Defense Threat Reduction Agency (DTRA), Fort Belvoir, VA.

**Q11. What criteria were used to select board members?**

A11. Board members were selected to fulfill the statutory requirements mandated by Congress in Section 601 of Public Law 108-183. They were also selected to provide expertise in historical dose reconstruction, radiation health matters, risk communication, radiation epidemiology, medicine, quality management, decision analysis and ethics, as well as a VA representative, a DTRA representative, three veterans, one of whom is a member of an atomic veterans group to better enable the VBDR to represent and address veterans' concerns.

**Q12. Who are the board members, and what are their qualifications?**

A12. Board members and their qualifications.

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

Dr. Zimble was selected as the fourth President of the Uniformed Services University of the Health Sciences in 1991, following his retirement as a Vice Admiral and the 30th Surgeon General of the U.S. Navy. After thirteen years of dedicated service to the university he retired with the title of President Emeritus. Upon his retirement he was awarded the Department of Defense Civilian Distinguished Service Medal by the Secretary of Defense, and the USUHS University Medal. As the 30th Surgeon General of the Navy, he was the principal advisor to the Department of the Navy, responsible for developing and establishing overall Naval health care policies and priorities, contingency and wartime planning, and program development for a four billion dollar health care system affecting more than 2.8 million Navy and Marine Corps active duty and retired beneficiaries, and their families.

**Members:**  
**Harold L. Beck**

Mr. Beck is an expert in radiation dose reconstruction. A physicist for the U.S. Department of Energy/Atomic Energy Commission for over 36 years, he retired in 1999 as the Director of the Environmental Science Division of the DOE Environmental Measurements Laboratory (EML) in New York City. He is presently a private consultant. During his tenure at EML, he also served as Director of the EML Instrumentation Division and as Acting Deputy Director of the Laboratory. Mr. Beck has authored over 100 publications in the areas of radiation physics, radiation protection, dose reconstruction, environmental radiation, radiation dosimetry and instrumentation. His efforts in the development of the scientific approach to reconstructing fallout doses to the U.S. population from above-ground nuclear weapons testing in Nevada earned him the DOE Meritorious Service award in 1988, the second highest award in the department. Mr. Beck served as Scientific Vice President for Radiation Measurements and Dosimetry of the National Council on Radiation Protection and Measurements (NCRP) from 1996-2003, and in 2004 was elected to lifetime honorary membership in NCRP. In 2004, he was appointed as a member of the National Academy of Sciences, National Research Council (NAS/NRC) Board on Radiation Effects Research (BRER). He has served as an expert member or chair on a number of recent NCRP and NAS/NRC Scientific Studies related to radiation dosimetry.

**Paul Kingsley Blake, Ph.D., CHP**  
**CAPT, MSC, USN (Ret.)**

Dr. Blake is the Program Manager for the Nuclear Test Personnel Review (NTPR) Program at the Defense Threat Reduction Agency (DTRA). A retired Navy Captain of the Medical Service Corps, he was the Officer in Charge, Naval Dosimetry Center, and a

faculty member of the Radiology Department of the Uniformed Services University of the Health Sciences, Bethesda, MD. Dr. Blake was the Navy/DoD representative on President Clinton's interagency taskforce on occupational hazards and illness of the Department of Energy workforce. This taskforce resulted in Public Law (PL 106-398 & EO 13179) the Energy Employees Occupational Illness Compensation Program Act of 2000. Dr. Blake also led the effort to implement a new thermoluminescent dosimeter, DT-702/PD, for monitoring 50,000 naval personnel, two national labs, and two commercial shipyards associated with naval nuclear activities.

**Ronald Ray Blanck, D.O.  
LTG, USA (Ret.)**

Dr. Blanck is currently a partner in Martin, Blanck and Associates, a health care consulting company. He was formerly the President of the University of North Texas Health Science Center and is a retired Lieutenant General in the U.S. Army Medical Corps. The presence of a medical expert on the Board is essential for addressing important issues such as the probability of causation of specific types of cancer and other diseases by ionizing radiation exposure. Dr. Blanck's 32-year military career commenced as a General Medical Officer in Vietnam and concluded as The Surgeon General, US Army, and Commanding General, U.S. Army Medical Command. He has also held academic faculty positions at the Uniformed Services University of the Health Sciences, the University of Texas Health Science Center at San Antonio, Howard University School of Medicine, George Washington University, and Georgetown University.

**John Dunning Boice, Jr., Sc.D.  
CAPT, USPHS (Ret.)**

Dr. Boice is the Scientific Director of the International Epidemiology Institute, Rockville, MD, and Professor of Medicine at Vanderbilt University School of Medicine. He serves on the Main Commission of the International Commission on Radiological Protection and as a U.S. advisor to the United Nations Scientific Committee on the Effects of Atomic Radiation. During the past 30 years, Dr. Boice has conducted a wide range of studies in the field of radiation epidemiology. This discipline has provided the fundamental basis for the current understanding of radiation health effects, such as an elevated risk of cancer in exposed populations. Long-term epidemiological studies on the Japanese survivors of the atomic bomb, on patients who received medical radiation treatments, on workers engaged in radiation-related activities, and on other exposed populations have provided data upon which estimates have been made of the risk of cancer and other diseases as a function of radiation dose. Epidemiologic studies also have been conducted on atomic veterans in several countries, including the United States, to learn whether adverse health effects are associated with their prior radiation exposure. A leading cancer epidemiologist, Dr. Boice will provide insights into the results of epidemiologic studies on atomic veterans.

**Patricia Ann Fleming, Ph.D.**

Dr. Fleming is senior associate dean of the College of Arts and Sciences and associate professor in the Department of Philosophy at Creighton University in Omaha, Nebraska. She received her master's and doctorate from Washington University in St. Louis, Missouri. While there, she served as the assistant editor of the *Philosophy of Science Journal*. She has also served as an editor for the international journal *ESEP (Ethics in Science and Environmental Politics)* and as an external observer (thematic rapporteur) for the Organization for Economic Co-operation and Development (OECD)/Nuclear Energy Agency's (NEA) Forum On Stakeholder Conference in Ottawa Canada. She is currently a Board Member of the Swedish-based international group VALDOC (Values on Decisions of Complexity). Her areas of specialization are philosophy of science, epistemology, and applied ethics. She has published and lectured internationally on the ethical and epistemological issues associated with the disposal of high-level nuclear waste, including the use of expert elicitation methodology in site characterization, waste management and indigenous populations, informed consent in stakeholder populations, and circularity in regulatory policy. She teaches courses in applied ethics—particularly ethics and public policy, medical ethics, environmental ethics, and the philosophy of science—at Creighton University. Her familiarity with ethical concerns regarding the health effects from radiation exposure led to her appointment on the National Academy of Science Committee to Assess the Scientific Information for the Radiation Exposure Screening and Education Program.

**Kenneth L. Groves  
CDR, MSC, USN (Ret.)**

Mr. Groves is an expert in radiation health and nuclear weapons effects. He served for over 26 years as an enlisted man and commissioned officer in the Navy before retiring as a Commander. He is the President of S 2-Sevorg Services, LLC, a small service company (Veteran-Owned Small Business) specializing in Environmental, Safety and Health (ES&H) program reviews and also Emergency Response and Operations assessments, and Accident/Incident Investigations. Mr. Groves is also retired from the University of California where he worked both at Los Alamos National Laboratory (LANL) and the Office of the President where he was the Deputy Director for ES&H before retiring in 2002. While working at LANL, Mr. Groves held a number of senior ES&H positions including Deputy Group Leader for Health Physics, which included responsibility for conducting radiation dose reconstructions. While in the Navy, he held a number of senior positions including: Director, Navy Radiological Controls Program Office, with responsibilities for the Navy-wide Nuclear Weapons Radiological Controls Program; and Director, Radiological Affairs Support Office and Director of Training at the Naval Nuclear Power Unit/Naval Energy and Environmental Support Office, responsible for shipboard radiation surveys for all sources including nuclear weapons. Mr. Groves has a BA in Chemistry from the University of New Mexico and an MS in Biophysics/Health Physics from Texas A&M University.

### **John Lathrop, Ph.D.**

Dr. Lathrop is an expert in decision analysis, societal decision analysis, risk assessment/management, and incident management. He has been an integral contributor for over 50 complex projects and published extensively involving public and private-sector issues. For example, comparing risks of alternative waste management regulations, he developed and demonstrated an evaluation model using value tradeoffs between different types of risk elicited from 58 representatives of four stakeholder/expert groups (pro-nuclear, anti-nuclear, pro-citizen-involvement, and technical expert). He has authored/co-authored papers on the role of risk assessment in the political process, evaluating technological risk, and using a decision analytic perspective to determine acceptable risk. The VBDR will evaluate the complex set of interactions involving the Department of Veterans Affairs (VA), the Defense Threat Reduction Agency (DTRA), and contractor organizations supporting these organizations which underlie the decision process on compensation claims filed by veterans. Dr. Lathrop is a highly experienced decision analyst of complex, interactive systems.

### **David E. McCurdy, Ph.D.**

Dr. McCurdy is an expert in quality management relevant to radiation biology and radiological health. He is a widely published technical consultant to government agencies, national laboratories, universities and the nuclear power industry in the areas of safety assessment oversight, quality assurance, radiochemical and radiometrological procedure development, environmental radiation monitoring, radiological site release/remediation programs and radioanalytical data verification and validation. A major criticism of the Nuclear Test Personnel Review (NTPR) program in a report issued by the National Research Council in 2003 was the lack of well-documented procedures and quality control. This criticism relates to both the dose reconstruction procedures that are used and the mechanisms of communications with veterans. Dr. McCurdy will provide insight into quality assurance aspects of procedures used for dosimetry and dose reconstruction for veterans.

### **Thomas J. Pamperin, MBA LTC, USAR (Ret.)**

Mr. Pamperin is the Assistant Director for Policy of the Compensation and Pension Service of the Department of Veterans Affairs. He has 34 years of federal service and over 32 years with the Department of Veterans Affairs in the disability claims processing business. He has been a claims processor, rating specialist, supervisor, division chief, and is currently responsible for the development and maintenance of regulations concerning the payment of service connected disability benefits, policy development, budget formulation for the compensation and pension programs, litigation liaison, and advisory review. During his career with the VA he has been responsible for the development and deployment of Benefit delivery at discharge, contract examination, the consolidation of claims processing for VA's needs based pension programs from 57 regional offices to 3 pension centers, and has served as principle liaison with the Department of Defense on

Concurrent Receipt and Combat Related Special Compensation. Upon his retirement from the United States Army Reserve he was awarded the Meritorious Service Medal.

**Curt W. Reimann, Ph.D.**

Dr. Reimann is an expert in quality management. He earned a Ph.D. in chemistry from the University of Michigan and served in a variety of research and management positions at the National Institute of Standards and Technology (NIST). He served as first Director (1987–1995) of the Malcolm Baldrige National Quality Award, led by NIST. The award, created by Public Law 100-107, promotes quality awareness, recognizes excellent U.S. organizations, and publicizes successful quality strategies. A major criticism of the NTPR program in a report issued by the National Research Council in 2003 was the lack of well-documented procedures and quality control. This criticism relates to both the dose reconstruction procedures that are used and the mechanisms of communications with veterans. Dr. Reimann brings to the Board knowledge of quality management for complex, interactive systems such as the dose reconstruction and claims adjudication program for veterans. Dr. Reimann currently holds the Mayberry Chair of Excellence at Tennessee Technological University, College of Business.

**Kristin Swenson, Ph.D., ABR-D, T  
Lt Col, USAF (Ret.)**

Dr. Swenson, certified in diagnostic radiological physics and therapeutic radiological physics by the American Board of Radiology, and a retired Air Force Lieutenant Colonel, is an expert on radiation health matters. Dr. Swenson is currently a medical physicist for RadAmerica, Inc., where she performs physics calculations for patients and verification of documentation for conventional and 3D treatment. In the Air Force, she served as an Assistant Professor at the Uniformed Services University of the Health Sciences, Preventive Medicine and Biometrics Department, Environmental and Occupational Health Division where she provided instruction and research for the Public Health and Health Physics Masters' programs. Dr. Swenson also served tours as the Chief, Radiation Protection Division of the Office of the Surgeon General of the Air Force, and as the Chief Medical Physicist at the David Grant Medical Center at Travis Air Force Base, CA.

**George Edwin “Ed” Taylor  
COL, USA (Ret.)**

Mr. Taylor, a retired army Colonel and Distinguished Military Graduate of Clemson University, is a member of the National Association of Atomic Veterans (NAAV). Trained as a nuclear weapons employment officer, he participated in nuclear weapons testing exercises-including exposure to a 47 kiloton nuclear explosion less than one mile from “ground zero”. A thirty-year career army officer, he gained extensive combat experience at several organizational levels-from company or troop to division and higher-both in command and operations. Mr. Taylor served in Korea late in the Korean War, completed two combat tours in Vietnam and served for seven years in West Germany and Berlin during the Cold War, earning numerous decorations and awards for valor,

including the Silver Star with 2 Oak Leaf Clusters (OLC) (Nation's third highest award for valor-3 awards), and the Purple Heart and the Combat Infantry Badge (CIB). He also earned a MBA in human relations management from The George Washington University. With his active duty and more than twenty years involvement and leadership of veterans' organizations, his experience and continued interest on military history (visiting battlefields and interviewing heroes) greatly enhances the Board.

**Elaine Vaughan, Ph.D.**

Dr. Vaughan is an expert in risk analysis and communication. She is an Associate Professor in the Department of Psychology and Social Behavior, with joint appointments in the Department of Environmental Science and Policy and the Department of Policy, Planning and Design at the University of California, Irvine, CA. Dr. Vaughan has published extensively in the areas of science and public policy, quantitative risk assessment and policy, risk communication and psychological response to risk, to include her book: *Some Factors Influencing the Nonexpert's Perception and Evaluation of Environmental Risks*. Dr. Vaughan has served on several panels, including as a selected review panel member for the Department of Veterans Affairs National Centers for the Study of War-Related Illnesses, and as an appointed committee member for the National Academy of Sciences (Institute of Medicine) Committee on Strategies to Protect the Health of Deployed U.S. Forces. She received her Ph.D. in psychology from Stanford University.

**Paul G. Voillequé, CHP**

Mr. Voillequé, a certified health physicist, is an expert on historical dose reconstruction. His work on dose reconstruction projects includes source term development for radionuclide releases from the Fernald, Rocky Flats, and Savannah River Site facilities. He was co-author of an assessment of doses and risks from inhalation exposures to <sup>239</sup>Pu. He led a project to develop methods for estimating radiation doses to on-site military personnel, construction workers, and nearby residents from short-lived gaseous radionuclides and radioactive particles during the early years of Hanford operations. He chaired the State of Tennessee's Oak Ridge Health Agreement Steering Panel, which guided dose reconstruction studies dealing with historic releases at Oak Ridge. He assists the Fred Hutchinson Cancer Research Center and the National Cancer Institute with reconstruction of radiation doses to persons in the Russian Federation, Ukraine, and Belarus who were exposed following the Chernobyl accident.

**Gary H. Zeman, Sc.D., CHP  
CDR, MSC, USN (Ret.)**

Dr. Zeman, a certified health physicist, is an expert on radiation health matters. Dr. Zeman served a 20-year career as a Radiation Health Officer in the U.S. Navy Medical Service Corps, and retired from the U.S. Navy with the rank of Commander. He currently holds the position of Radiological Safety Officer at Argonne National Laboratory, and previously held the position of Radiological Control Manager at Lawrence Berkeley

National Laboratory. He has also worked at AT&T Bell Laboratories and Lucent Technologies as Manager of Radiation Protection and Product Safety. In the Navy, Dr. Zeman's assignments included Radiation Safety Officer for the National Naval Medical Center, and research scientist and research programs manager at the Armed Forces Radiobiology Research Institute of the Defense Nuclear Agency. While serving at the Armed Forces Radiobiology Research Institute, Dr. Zeman was active in research on the biological effects of ionizing radiation, and supported the activities of NATO Research Study Group 5 on the potential effects of nuclear weapons in battlefield situations. He has authored a number of publications on ionizing radiation effects and measurements.

**Q13. How does the Veterans' Advisory Board on Dose Reconstruction (VBDR) operate?**

A13. The Veterans' Advisory Board on Dose Reconstruction is governed by the provisions of the Federal Advisory Committee Act (FACA), PL 92-463, as amended (5 U.S.C. App 2), which sets forth standards for the formation and conduct of government advisory committees. The advisory board will:

- Conduct periodic, random audits of dose reconstructions and decisions on claims for radiogenic diseases under the dose reconstruction program.
- Assist the VA and DTRA in communicating to veterans' information on the mission, procedures and evidentiary requirements of the dose reconstruction program.
- Make such recommendations on modifications in the procedures of the dose reconstruction program as the advisory board considers appropriate as a result of audits performed under item (1) above.
- Carry out such activities with respect to the review and oversight of the Dose Reconstruction Program as the Secretaries shall jointly specify.

The Board will provide oversight and guidance on new issues in the dose reconstruction program as they arise, including implementation of the future plans. The Board should also develop and communicate quantifiable measures of success and opportunities for improvement of the dose reconstruction program and the claims adjudication process.

**Q14. Is the advice and decisions of the VBDR reviewed by other knowledgeable, experienced people in field testing and evaluation of atomic/nuclear detonations when evaluating veterans' claims?**

A14. The Veterans' Advisory Board on Dose Reconstruction has no role in medical decisions or the adjudication of claims. However, on the basis of its audits on randomly selected dose reconstruction and VA claim cases, the Board makes recommendations, not decisions, on modifications in the procedures of the dose reconstruction program. Per Federal Advisory Committee Act (FACA) regulations, Board meetings, deliberations, and recommendations are accessible to the public. The Board is not chartered to track how their guidance are reviewed or evaluated.

**Q15. Test conditions for atomic/nuclear detonations varied widely. How do you factor in these variables in your decisions on a veteran claims when you don't have any actual field data and do not know how the veteran was involved in the test?**

A15. The DTRA fact sheet

([http://www.dtra.mil/newsservices/fact\\_sheets/display.cfm?fs=ntpr\\_pre](http://www.dtra.mil/newsservices/fact_sheets/display.cfm?fs=ntpr_pre)), Radiation Exposure in U.S. Atmospheric Nuclear Weapons Testing (Nuclear Test Personnel Review Program) explains the variables used in determining radiation exposure for veterans. The following information is taken from the fact sheet.

Approximately 230,000 DoD military and civilian personnel participated in U.S. atmospheric nuclear tests that were conducted primarily in Nevada and the Pacific Ocean between 1945 and 1962. Many participants were exposed to low levels of ionizing radiation while performing various activities. Over 99 percent of these participants received radiation doses that were below the current federal occupational whole body dose limit (5 rem per year). The average whole body dose was about 0.6 rem. Current occupational dose limits for DoD personnel are codified in DoD Instruction 6055.8 (DODI 6055.8) and are based upon the Environmental Protection Agency's "Radiation Protection Guidance to Federal Agencies for Occupational Exposure" (1987).

With regard to not knowing the conditions of how the veteran was involved, Nuclear Test Personnel Review Program (NTPR) developed a generic Scenario of Participation and Radiation Exposure (SPAREs) and templates for preparing radiation dose assessments based on these generic SPAREs. The SPARE is reviewed and approved or disapproved by the veteran as a tool for determining the veteran's involvement. These templates then are used to assign doses to individuals whose exposures are adequately represented by the generic SPARE.

**Q16. It is a fact that natives involved and exposed to the testing areas in the South Pacific were seriously affected medically. What has been done for them besides a very large monetary settlement?**

A16. The Board is charged to provide guidance and oversight only for veterans who participated in the 1945-1946 occupation of Hiroshima or Nagasaki, Japan, and in U.S. sponsored atmospheric nuclear testing between 1945 and 1962. For information about Pacific islanders and their exposure to radiation, please consult:

U.S. Department of Energy  
National Nuclear Security Administration  
Nevada Site Office  
P.O. Box 98518  
Las Vegas, NV 89193-8518  
Phone: 702-295-3521  
<http://www.nv.doe.gov/library/testingarchive.htm>.

The following text was largely reprinted from the National Nuclear Security Administration (NTA) Web site.

Background: The Nevada Site Office of the U.S. Department of Energy (DOE), National Nuclear Security Administration opened the Coordination and Information Center (now referred to as the Nuclear Testing Archive) July 17, 1981, to collect and make available all historical documents, records, and data dealing with radioactive fallout from all U.S. testing of nuclear devices.

The Nuclear Testing Archive collects and consolidates, for long-term preservation, historical documents, records, and data. The collection includes documentation on the detection and measurement of radioactive fallout and the related factors resulting from nuclear test device activities at the Nevada Test Site, TRINITY event, Pacific Proving Grounds, and other on-continent test locations, as well as information on the health effects of radiation, and various related scientific and technical studies and reports.

This collection of over 370,000 documents is available to the public through use of the Nuclear Testing Archive (Public Reading Facility). This facility maintains more than 40,000 documents relating to Human Radiation Experiments by the Atomic Energy Commission, as well as over 270,000 documents dealing with the U.S. nuclear testing program.

The bibliographic information for the collection at Nuclear Testing Archive can be accessed through OpenNet. OpenNet is DOE's bibliographic database containing declassified and publicly available documents. It is an automated searchable database which enables the interested stakeholder to identify documents of interest, determine their location within the DOE complex, and obtain ordering information.

Normal library services, such as assistance in locating documents, are provided at no charge. Other services, such as copying and proxy research by staff, will be provided according to a fee schedule.

The Nuclear Testing Archive is located at 755 East Flamingo Road, Las Vegas, Nevada, and is open to visitors from 7:30 a.m. - 4:30 p.m., Monday through Friday, except holidays.

Requests for services can be made through the following:

Mailing Address:

U.S. Department of Energy  
National Nuclear Security Administration  
Nevada Site Office  
Nuclear Testing Archive, M/S 400  
P.O. Box 98521  
Las Vegas, NV 89193-8521  
Phone: (702) 794-5117  
Fax: (702) 794-5198  
Email: [cic@nv.doe.gov](mailto:cic@nv.doe.gov)

**Q17. It is a fact that hundreds of animals were affected, off-spring mutated or died in the downwind areas of the atomic/nuclear detonations at the Nevada Test Site? Is the situation still continuing? How were the people affected, living in those areas where heavy, dense, radioactive, dust-like particles fell from the cloud and settled on everything?**

A17. The goal of the Board is to provide guidance and oversight of the dose reconstruction and claims compensation program for veterans. In addition, the Board will assist VA and DTRA in communicating with veterans. We cannot comment on radiation affects on animals or civilians downwind from the Nevada Test Site.

Please contact:

U.S. Department of Energy  
National Nuclear Security Administration  
Nevada Site Office  
P.O. Box 98518  
Las Vegas, NV 89193-8518  
Phone: 702-295-3521

<http://www.nv.doe.gov/library/testingarchive.htm>.

**Q18. Have any pseudo, or hypothetical studies and investigations been conducted trying to simulate radioactive detonations and if so, what were the results of the studies?**

A18. The report, Radiological Effluents Released from U.S. Continental Tests, 1961 through 1992 documents all continental tests from September 15, 1961, through September 23, 1992, from which radioactive effluents were released. Information for each test includes date, time, location, type of test, purpose and the extent of the release.

**Q19. Are cost figures available as to how much studies and investigations have cost the government in their assessment of medical damage to personnel involved in the tests?**

A19. This question cannot be answered by the Board. The goal of the Board is to provide guidance and oversight of the dose reconstruction and claims compensation program for veterans. In addition, the Board will assist VA and DTRA in communicating with veterans.

**Q20. Are the opinions of experts and evaluators changing on the medical effects to participants involved with testing many years ago?**

A20. Our understanding of radiation and its effects on humans is based on studies of populations exposed to radiation from medical, occupational and environmental sources including the atomic bombings of Hiroshima and Nagasaki, Japan, and from experimental studies involving irradiation of animals and cells. Much of our knowledge comes from the high levels of radiation exposure occurring in these studies.

However, whether or not exposure to radiation will cause cancer depends on a variety of factors. These include: the amount and type of radiation dose; age; gender; individual characteristics that make some people more susceptible to cancer than others; whether the

exposure occurred over a short or a long time; and the presence of other substances that may enhance the cancer-causing power of radiation. Further, cancer unfortunately is not an uncommon disease and the American Cancer Society now estimates that 1 of every 2 men will develop cancer during their lifetime. For these reasons, cancer rates in populations receiving very low doses of radiation may not show increases over the rates for unexposed populations.

In fact, large scale and comprehensive studies of US troops and British troops who participated in atmospheric nuclear weapons tests came to the same conclusion that a statistically significant increased risk of developing cancer or other fatal diseases was not apparent in the exposed populations. A slight increase in leukemia was seen but the authors could not exclude the play of chance as a possible explanation for the observation.

The most recent review of studies of populations exposed to ionizing radiation, including weapons test participants, can be found in: NRC (National Research Council). *BEIR VII: Health Risks from Exposure to Low Levels of Ionizing Radiation*. Washington, DC: National Academy Press; 2006.

**Q21. How much does it cost the government to support the VBDR? Are these cost figures available to the public and NAAV?**

A21. Total annual operating costs are estimated at \$1 million.

**Q22. How many veteran claims have been evaluated by VBDR? How many have been awarded a settlement? What has been the cost of the awards?**

A22. The Veterans' Advisory Board on Dose Reconstruction has no role in medical decisions or the adjudication of claims. The mission of the Board is to provide guidance and oversight of the dose reconstruction and claims compensation program for veterans. In addition, the Board will assist VA and DTRA in communicating with veterans.

On the basis of its audits on randomly selected dose reconstruction and VA claim cases, the Board makes recommendations, not decisions on modifications in the procedures of the dose reconstruction program. Per Federal Advisory Committee Act (FACA) regulations, Board meetings, deliberations, and recommendations are accessible to the public. The Board is not chartered to track how their guidance are reviewed or evaluated.

The VA is solely responsible for making medical determinations regarding the Service-connection of disabilities and administering benefits associated with radiation exposure. VA makes compensation decisions based on participation status information, dose estimates/reconstructions, probability of causation and medical evidence.

Rates of compensation depend upon the degree of disability and follow a payment schedule that applies to all veterans. Current rates are listed in VA's handbook, "Federal Benefits for Veterans and Dependents," and are available on the Web by following the compensation link at <http://www.va.gov/>.

For deaths in 1993 and after, compensation to survivors is paid at a flat rate regardless of the deceased veteran's rank in the military. An additional amount may be paid if the veteran had been rated 100-percent disabled for service-connected disabilities for at least eight years before death and had been married to the surviving spouse during the same period. Additional amounts so may be paid to the surviving spouse for dependent minor children.

**Q23. Your literature says that VBDR provides guidance and oversight of the dose reconstruction and claims compensation programs for veterans of the era 1945-1962. Can you explain how you do this? Who makes the final decision of a yes or no, on an award?**

A23. On the basis of its audits on randomly selected dose reconstruction and VA claim cases, the Board makes recommendations, not decisions on modifications in the procedures of the dose reconstruction program. Per Federal Advisory Committee Act (FACA) regulations, Board meetings, deliberations, and recommendations are accessible to the public. The Board is not chartered to track how their guidance are reviewed or evaluated.

**Q24. What is dose reconstruction? What steps are being taken to improve the dose reconstruction process for veterans?**

A24. Dose reconstruction is a commonly accepted scientific method used to estimate a person's past radiation dose. The VA uses information from the dose reconstruction along with other relevant information, in adjudicating claims for disability compensation. The Defense Threat Reduction Agency (DTRA) is the Department of Defense (DoD) Executive Agent for the Nuclear Test Personnel Review (NTPR) Program, which serves veterans who participated in U.S. atmospheric nuclear tests, served with the American occupation forces of Hiroshima and Nagasaki, Japan, or were prisoners of war in Japan at the conclusion of World War II. The primary purpose of the NTPR Program is to provide participation data and radiation dose information to veterans. It also informs veterans of health care availability and possible compensation benefits provided by the Department of Veterans Affairs (VA) and the Department of Justice (DOJ).

The NTPR dose reconstruction process is defined by federal regulation and has been independently reviewed on several occasions by the NAS and General Accounting Office. Although the most recent NAS report identified several areas for improvement, these reviews have continually validated the dose reconstruction process as a tool for estimating radiation exposures. For more detailed information on independent studies of the NTPR program, see [http://www.dtra.mil/press\\_resources/fact\\_sheets/display.cfm?fs=ntpr\\_studies](http://www.dtra.mil/press_resources/fact_sheets/display.cfm?fs=ntpr_studies).

The Board will audit dose reconstruction and VA claims decisions for service connection of radiogenic diseases. They are also studying ways to improve the procedures of the dose reconstruction process. Some of the Board's recommendations are;

- Develop a screening procedure for skin radiation dose assessments that would expedite processing of cases for which the doses are well below or above the level

- likely to result in a successful claim. Worst case upper bounds would be used to provide the veteran the maximum benefit of the doubt.
- Develop a screening procedure for prostate cancer cases that expedites processing of cases for which the doses are well below the level likely to result in a successful claim.
  - Perform a comprehensive analysis of uncertainties for all beta dose exposure scenarios.
  - Hire a consultant to write a quality assurance (QA) plan.
  - Develop and implement a QA program to be integrated into the current contracting process.
  - Develop standard operating procedures addressing QA elements, including metrics.
  - Provide the adjudicated case outcomes to NTPR.
  - Grant service connection to veterans whose basal cell skin cancers and melanomas are claimed to be as a result of participation in aboveground nuclear tests and service in Hiroshima and Nagasaki, and whose participation in these activities has been verified by Department of Defense.
  - Centralize claims with radiation issues in a single site staffed with trained and experienced personnel, co-located with the Veterans Benefits Administration (VBA).
  - Establish a centralized database to track radiation issues with information readily available.
  - VA provide the Board with a timetable and status for the development of a QA plan and program, including metrics, in the radiation exposure claims adjudication process.
  - Include all validated radiation issue claimants in the Ionizing Radiation Registry.
  - Award service connection retroactively to the date of the initial claim for all current and future radiation risk activity conditions held to be presumptively service connected under 38 CFR 3.309.
  - Improve interaction and communication with veterans of Hiroshima and Nagasaki, Japan or were prisoners of war there, or took part in atmospheric nuclear tests between 1945 and 1962.
  - Communicate information on radiation risk and significance of veterans' doses in relation to their diseases.

**Q25: What are presumptive and non presumptive diseases?**

A25. There are two types of Compensation: Presumptive (P) or Non-presumptive (NP). Presumptive Compensation: Presumptive diseases are diseases that are presumed “by law” to have been caused by exposure to ionizing radiation without regard for the amount or magnitude of radiation exposure. The 21 cancers that are presumed to be service-connected for veterans who participated in “radiation-risk activities,” include:

- Leukemia other than chronic lymphocytic leukemia;
- Cancer of the thyroid;
- Cancer of the breast;

- Cancer of the pharynx;
- Cancer of the esophagus;
- Cancer of the stomach;
- Cancer of the small intestine;
- Cancer of the pancreas;
- Multiple myeloma;
- Lymphomas (except Hodgkin's disease)
- Cancer of the bile ducts;
- Cancer of the gall bladder;
- Primary liver cancer except if cirrhosis or hepatitis B is indicated;
- Cancers of the salivary gland;
- Urinary tract cancer (kidney/renal, pelvis, ureter, urinary bladder, and urethra);
- Bronchio-alveolar cancer (a rare form of lung cancer);
- Cancer of the bone;
- Cancer of the brain;
- Cancer of the colon;
- Cancer of the lung; and
- Cancer of the ovary.

Non-Presumptive Compensation: A non-presumptive condition is an illness that is not automatically presumed "in law" to have been caused by participation in a radiation risk activity. An evaluation is required to determine probability of causation from radiation exposure, necessitating a dose reconstruction. Compensation is only awarded if it can be shown that there was a 50% or greater probability that the disease resulted from radiation exposure associated with the radiation risk activity.

**Q26. What are the differences in presumptive and non-presumptive programs?**

A26. "Presumptive" means that the disease is presumed to have occurred due to radiation exposure, regardless of the dose. It follows that compensation will be granted. "Non-presumptive" means compensation may be awarded if there is evidence supporting the veterans' claim that it is at least as likely as not that the illness was incurred in or aggravated by military service. It also applies if the veteran has a presumptive illness but participation cannot be verified and VA has conceded participation because military records cannot establish presence at or absence from the site [See 3.311(a)(4)(i)]. These are two programs under which VA provides monthly payments to eligible veterans.

**Q27. Has DTRA done anything to improve its process?**

A27. DTRA has already taken numerous steps to improve the NTPR dose reconstruction process. Changes to radiation dose assessments include placement of Government personnel at contractor worksites, the development of templates for facilitating case processing, external technical review and extensive telephone outreach for veteran input to exposure scenarios. Emphasis is on completeness and attention to veterans to ensure exposure scenarios are thorough and all potential doses are included in the assessments.

**Q28. How can the Board best help veterans who believe they have medical problems associated with their participation in atmospheric nuclear testing or in the occupation forces of Hiroshima and Nagasaki?**

A28. This is not the Board's mandate; the Board cannot help with veterans' claims. However, the Board can certainly help veterans understand radiation dose-response by reiterating the National Research Council conclusions that 1) the policy of using upper-bound (95<sup>th</sup> percentile) dose estimates with extreme lower bound estimates of doses associated with a 50 percent probability of causation is highly favorable and in the veterans' best interest, and 2) in most cases, the doses received by veterans during their participation likely are NOT the cause of their cancers.

The best thing the Board can do is improve the process and help veterans better understand the science of radiation and risk. It's up to the legislators (and to some extent the Veterans Advisory Committee on Environmental Hazards) to decide which diseases merit consideration for compensation.