

**Department of Veterans Affairs  
Veterans' Advisory Committee on Environmental Hazards**

**Minutes of the Meeting  
June 26-27, 2006**

Committee Members Present:

Mary V. StremLOW, Col, USMCR (Ret), General Chair  
Henry D. Royal, M.D., Scientific Chair  
Theodore Colton, Sc.D.  
Edward R. Epp, Ph.D.  
Nancy L. Oleinick, Ph.D.  
Mary Ann Stevenson, M.D. Ph.D.  
George Hunt  
Shannon Middleton

Committee Member Not Present:

Amir H. Soas, M.D.; Ph.D.

In Attendance from VA:

Isabel Hicks, Alternate, Committee Manager and Designated Federal Officer  
Bernice Green, VBA, Compensation and Pension Service  
Neil Otchin, M.D., VHA Public Health and Environmental Hazards Office  
Dorothy Hartung, VHA, Public Health and Environmental Hazards Office  
Donald Rosenblum, VHA, Public Health and Environmental Hazards Office  
Isidro Reyna, VHA, Public Health and Environmental Hazards Office  
Jonathan Gurland, Attorney, Office of the General Counsel (June 27 only)  
Helen Malaskiewicz, VHA, Public Health and Environmental Hazards

In Attendance from the Public

Isaf Al-Nabulsi, Ph.D., Veterans Board on Dose Reconstruction (June 27 only)  
Paul Blake, Defense Threat Reduction Agency (June 27 only)  
Mark Wrobel, Colonel, Air Force (June 27 only)  
Sara Comley, M.D.; International Observer, President

The meeting was held at the Department of Veterans Affairs (VA) Central Office,  
810 Vermont Avenue, Washington, DC 20420.

Department of Veterans Affairs Veterans' Advisory Committee on Environmental Hazards  
Minutes of Meeting, June 26-27, 2006

Isabel Hicks called the meeting to order at 8:17 a.m., June 26, 2006. Ms. Hicks welcomed all the committee members and guests.

Ms. Hicks reminded all committee members who were charged for cancellation of hotel or airline reservations to attend the April meeting, which was canceled at the last minute, that reimbursement will be authorized for the fees incurred. She also informed the committee that the minutes of the December 2005 meeting is not ready because the transcript has not been received from the court reporting company from Tampa.

Ms. Hicks turned the floor to Ms. Stremlow and Dr. Royal, for the introduction of the new committee member. Ms. Stremlow introduced the new public member, Ms. Shannon Middleton and handed her the certificate of appointment which was signed by Secretary James Nicholson.

As suggested by Ms. Stremlow, all committee members and guests in attendance introduced themselves. Dr. Royal stated that Dr. Amir Soas, who is the 6<sup>th</sup> member of the Scientific Subcommittee, will not be attending the meeting.

Dr. Royal started by addressing the agenda to be discussed in the meeting: (1) future meeting dates, (2) BEIR VII Report purchase, and (3) the selection of a speaker to represent the committee at the National Association of Atomic Veterans on September 25, 2006 in St. Louis, MO. In addition, Dr. Neil Otchin was supposed to present medical opinion on radiation. Dr. Royal asked if Dr. Otchin can do his presentation after Drs. Oleinick and Stevenson arrive. Their flights were delayed due to inclement weather in the DC area. Dr. Otchin agreed to come back in the afternoon.

It was also brought up by Dr. Royal that the Veterans Advisory Board on Dose Reconstruction (VBDR) is asking the committee's opinion regarding the addition of skin and prostate cancer to the presumptive list based on exposure to radiation. It was noted that the VBDR is running under the umbrella of the National Council on Radiation Protection and Measurements (NCRP).

The committee decided to start reviewing the articles while waiting for Drs. Oleinick and Stevenson, and later in the afternoon, Dr. Otchin agreed to come back and make his presentation.

The scientific committee members who were present in the morning session, (Drs. Royal, Epp and Colton) started the review of articles assigned to them.

Department of Veterans Affairs Veterans' Advisory Committee on Environmental Hazards

Minutes of Meeting, June 26-27, 2006

After Drs. Stevenson and Oleinick arrived later in the afternoon, Dr. Otchin from the Office of Public Health and Environmental Hazards began his presentation on radiation medical opinions. He mentioned that his office stopped using screening doses from the Committee on Interagency Radiation Research and Policy Coordination (CIRRPC) since April 2005. They are now using the National Institute for Occupational Safety and Health (NIOSH) version of the Interactive RadioEpidemiological Program (IREP), computer software, when applicable for most radiation medical opinions. He further explained that for claims involving multiple malignancies and/or other disorders, each disease has been considered individually. When multiple cancer models were used in accordance with the NIOSH IREP guidance, such as when the primary site of the cancer was unknown, the specific pathology of the veteran's neoplasm has been considered to determine which probability of causation values were relevant.

Dr. Otchin discussed that his office has been working with the Defense Threat Reduction Agency (DTRA) to make it easier for veterans to establish eligibility for ionizing radiation registry (IRR) examinations and priority Group 6 for enrollment for VA health care. A new VA directive will clarify that atomic veterans and those who participated in another "radiation risk activities" as defined by the VA may self-certify their participation in order to be eligible for the IRR examinations. He further stated that the VA's Health Eligibility Center and the DTRA will work closely together to verify that atomic veterans who participated in the occupation of Hiroshima and/or Nagasaki, Japan, or an atmospheric nuclear weapons test, are eligible for free, no-copay, medical care for any condition recognized by the VA as possibly due to radiation exposure, including all cancers.

The floor was opened for questions pertaining to Dr. Otchin's presentation. Members of the committee and guests participated in the discussion.

The rest of the afternoon was dedicated to reviewing the scientific publications. The meeting adjourned at 4:29 pm.

Department of Veterans Affairs Veterans' Advisory Committee on Environmental Hazards  
Minutes of Meeting, June 26-27, 2006

July 27, 2006

The meeting reconvened at 8:41 a.m. with Dr. Royal requesting that all the members and guests introduce themselves because there were new people in attendance.

Mr. Jonathan Gurland, attorney, from the Office of the General Counsel was introduced as the first speaker. He talked about the ethics rule applying to special government employees, such as the members of the advisory committee. He focused on the statutes and the ethical standards. Mainly he emphasized that the main provision prohibits employees from participating personally and substantially in any particular matter that affects employees' financial interests.

The second speaker, Lt Col Mark Wrobel talked primarily about the Air Force occupational radiation exposure program, and also made a presentation on the Army and the Navy's radiation exposure program in comparison with the Air Force. Dr. Paul Blake, from the Defense Threat Reduction Agency, made additional statements regarding the Navy's occupational radiation exposure program.

The third speaker, Dr. Isaf Al-Nabulsi, the program administrator for the Veterans Advisory Board on Dose Reconstruction (VBDR), made a slide presentation on her point paper regarding VBDR's activities. She indicated that VBDR was established after publication of the National Research Council report on a review of the dose reconstruction program of the Defense Threat Reduction Agency. It was determined that there was a need for an advisory board that will provide suggestion for improvements in dose reconstruction and the claim adjudication procedures. As mandated by Public Law 108-183, Veterans Benefits Act of 2003, the advisory board was formed.

VBDR made recommendations for VA to recognize and automatically place all validated radiation issues into the Ionizing Radiation Registry, and recommended to 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, which previously required radiation dose assessment under 38 CFR 3.311.

Dr. Al-Nabulsi continued with VBDR recommendation that the VA should improve interaction and communication with atomic veterans, more effective approaches should be established to communicate the meaning of information on radiation risk to the veterans, and in general information should be communicated to the veterans who file claims regarding the significance of their doses in relation to their diseases.

Department of Veterans Affairs Veterans' Advisory Committee on Environmental Hazards

Minutes of Meeting, June 26-27, 2006

The floor was opened for questions and answers after each presentation. Dr. Royal asked Ms. Isabel Hicks if the committee has copies of previous letters of recommendation to the Secretary to be used as a guide in developing recommendation for skin and prostate cancer as presumptive condition. Ms. Hicks replied that she will try to find copies of the letters.

After the speakers made their presentations, the committee members continued to review the remaining scientific publications. When the last article was discussed, Dr. Royal stated that Dr. Comley would like to address the committee.

Dr. Comley distributed flyers with announcement regarding a conference which is the 2<sup>nd</sup> International Conference on Biodosimetry and the 7<sup>th</sup> International Symposium on ESR Dosimetry and Applications, to be held in July at the Uniformed Services University of Health Sciences at Bethesda, MD. She noted the purpose of the conference will be focused on passing dosimetry systems that provide dose information following some form of quantitative measurement.

Dr. Royal brought up the invitation made by the National Association of Atomic Veterans for a representative from this advisory committee to make a presentation. Dr. Royal stated that since he is from St. Louis, where the meeting will take place, then he would most likely make the presentation.

Dr. Royal informed the committee members that the next meeting will either be late in October or early November. The members will e-mail one another and the decision will be made as to the best dates for everyone to hold the next meeting. It was decided that the next meeting will be held in Washington, DC.

The meeting adjourned at 1:02 pm.

A list of the papers reviewed, in the order of review, may be found in the attachment to these minutes.

Department of Veterans Affairs Veterans' Advisory Committee on Environmental Hazards  
 Minutes of Meeting, June 26-27, 2006

Ref Number	Reference
04/06-1	Bennett, B. G. and C. A. Waldren (2005). "60 years since atomic bombings of Hiroshima and Nagasaki: radiatio effects research at RERF." <i>Radiat Res</i> 164(3): 235-6.
04/06-2	Huber, T., W. Ruhm, et al. (2005). "The Hiroshima thermal-neutron discrepancy for (36)Cl at large distances. P I: New (36)Cl measurements in granite samples exposed to A-bomb neutrons." <i>Radiat Environ Biophys</i> 44(2): 75-86.
04/06-3	Jhun, H. J., Y. S. Ju, et al. (2005). "Present status and self-reported diseases of the Korean atomic bomb survivors: a mail questionnaire survey." <i>Med Confl Surviv</i> 21(3): 230-6.
04/06-4	Kodama, Y., K. Ohtaki, et al. (2005). "Clonally expanded T-cell populations in atomic bomb survivors do not sho excess levels of chromosome instability." <i>Radiat Res</i> 164(5): 618-26.
04/06-5	Nolte, E., T. Huber, et al. (2005). "The Hiroshima thermal-neutron discrepancy for (36)Cl at large distances. Pa II: Natural in situ production as a source." <i>Radiat Environ Biophys</i> 44(2): 87-96.
04/06-6	Bauer, S., B. I. Gusev, et al. (2005). "Radiation exposure due to local fallout from Soviet atmospheric nuclear weapons testing in Kazakhstan: solid cancer mortality in the Semipalatinsk historical cohort, 1960-1999." <i>Radia Res</i> 164(4 Pt 1): 409-19.
04/06-7	George, K., V. Willingham, et al. (2005). "Stability of chromosome aberrations in the blood lymphocytes of astronauts measured after space flight by FISH chromosome painting." <i>Radiat Res</i> 164(4 Pt 2): 474-80.
04/06-8	Montoro, A., P. Rodriguez, et al. (2005). "Biological dosimetry in a group of radiologists by the analysis of dicentrics and translocations." <i>Radiat Res</i> 164(5): 612-7.
04/06-9	Cramers, P., P. Atanasova, et al. (2005). "Pre-exposure to low doses: modulation of X-ray-induced dna damage and repair?" <i>Radiat Res</i> 164(4 Pt 1): 383-90.
04/06-10	Morales-Ramirez, P. and M. T. Mendiola-Cruz (2004). "Kinetics of the early adaptive response to gamma rays: induction of a cellular radioprotective mechanism in murine leukocytes in vivo." <i>Biosci Rep</i> 24(6): 609-16.
04/06-11	Mothersill, C. and C. B. Seymour (2006). "Actions of radiation on living cells in the "post-bystander" era." <i>Exs</i> (9) 159-77.
04/06-12	Trosko, J. E., C. C. Chang, et al. (2005). "Low-dose ionizing radiation: induction of differential intracellular signalling possibly affecting intercellular communication." <i>Radiat Environ Biophys</i> 44(1): 3-9.
04/06-13	Wang, R. and J. A. Coderre (2005). "A bystander effect in alpha-particle irradiations of human prostate tumor cells." <i>Radiat Res</i> 164(6): 711-22.
04/06-14	Zhu, A., H. Zhou, et al. (2005). "Differential impact of mouse Rad9 deletion on ionizing radiation-induced bystander effects." <i>Radiat Res</i> 164(5): 655-61.
04/06-15	Barcellos-Hoff, M. H., C. Park, et al. (2005). "Radiation and the microenvironment - tumorigenesis and therapy." <i>Nat Rev Cancer</i> 5(11): 867-75.
04/06-16	Fink, C. A. and M. N. Bates (2005). "Melanoma and ionizing radiation: is there a causal relationship?" <i>Radiat R</i> 164(5): 701-10.
04/06-17	Kishikawa, M., K. Koyama, et al. (2005). "Histologic characteristics of skin cancer in Hiroshima and Nagasaki: background incidence and radiation effects." <i>Int J Cancer</i> 117(3): 363-9.
04/06-18	Koturbash, I., I. Pogribny, et al. (2005). "Stable loss of global DNA methylation in the radiation-target tissue--a possible mechanism contributing to radiation carcinogenesis?" <i>Biochem Biophys Res Commun</i> 337(2): 526-33
04/06-19	Linet, M. S., D. M. Freedman, et al. (2005). "Incidence of haematopoietic malignancies in US radiologic technologists." <i>Occup Environ Med</i> 62(12): 861-7.
04/06-20	Ronckers, C. M., C. A. Erdmann, et al. (2005). "Radiation and breast cancer: a review of current evidence." <i>Breast Cancer Res</i> 7(1): 21-32.
04/06-21	Sowa, M., B. J. Arthurs, et al. (2006). "Effects of ionizing radiation on cellular structures, induced instability and carcinogenesis." <i>Exs</i> (96): 293-301.
04/06-22	Travis, L. B., D. Hill, et al. (2005). "Cumulative absolute breast cancer risk for young women treated for Hodgkin lymphoma." <i>J Natl Cancer Inst</i> 97(19): 1428-37.

Department of Veterans Affairs Veterans' Advisory Committee on Environmental Hazards  
 Minutes of Meeting, June 26-27, 2006

Ref Number	Reference
04/06-23	Tubiana, M. (2005). "Dose-effect relationship and estimation of the carcinogenic effects of low doses of ionizing radiation: the joint report of the Academie des Sciences (Paris) and of the Academie Nationale de Medecine." <i>J Radiat Oncol Biol Phys</i> 63(2): 317-9.
04/06-24	Varma, G., R. Varma, et al. (2005). "Array comparative genomic hybridisation (aCGH) analysis of premenopausal breast cancers from a nuclear fallout area and matched cases from Western New York." <i>Br J Cancer</i> 93(6): 699-708.
04/06-25	Nakashima, E., K. Neriishi, et al. (2006). "A reanalysis of atomic-bomb cataract data, 2000-2002: a threshold analysis." <i>Health Phys</i> 90(2): 154-60.
04/06-26	Sachs, R. K., M. Chan, et al. (2005). "Modeling intercellular interactions during carcinogenesis." <i>Radiat Res</i> 164(3): 324-31.
04/06-27	Zhang, Q., E. S. Williams, et al. (2005). "Suppression of DNA-PK by RNAi has different quantitative effects on telomere dysfunction and mutagenesis in human lymphoblasts treated with gamma rays or HZE particles." <i>Radiat Res</i> 164(4 Pt 2): 497-504.
04/06-28	Thornberg, C., R. Vesanen, et al. (2005). "External and internal irradiation of a rural Bryansk (Russia) population from 1990 to 2000, following high deposition of radioactive caesium from the Chernobyl accident." <i>Radiat Environ Biophys</i> 44(2): 97-106.
04/06-29	Guiraud-Vitoux, F., N. Jacquet, et al. (2005). "Induction of unstable and stable chromosomal aberrations by <sup>99m</sup> Tc: in-vitro and in-vivo studies." <i>Nucl Med Commun</i> 26(10): 913-8.
04/06-30	Mognato, M. and L. Celotti (2005). "Modeled microgravity affects cell survival and HPRT mutant frequency, but not the expression of DNA repair genes in human lymphocytes irradiated with ionising radiation." <i>Mutat Res</i> 578(1-2): 417-29.
04/06-31	Short, S. C., S. Bourne, et al. (2005). "DNA damage responses at low radiation doses." <i>Radiat Res</i> 164(3): 292-302.
04/06-32	Silver, K. (2005). "The Energy Employees Occupational Illness Compensation Program Act: new legislation to compensate affected employees." <i>Aaohn J</i> 53(6): 267-77; quiz 278-9.
04/06-33	Monleau, M., M. De Meo, et al. (2006). "Genotoxic and inflammatory effects of depleted uranium particles inhaled by rats." <i>Toxicol Sci</i> 89(1): 287-95.
04/06-34	Allan, J. M. and L. B. Travis (2005). "Mechanisms of therapy-related carcinogenesis." <i>Nat Rev Cancer</i> 5(12): 943-55.
04/06-35	Brooks, A. L. (2005). "Paradigm shifts in radiation biology: their impact on intervention for radiation-induced disease." <i>Radiat Res</i> 164(4 Pt 2): 454-61.
04/06-36	Feinendegen, L. E. and R. D. Neumann (2006). "The issue of risk in complex adaptive systems: the case of low-dose radiation induced cancer." <i>Hum Exp Toxicol</i> 25(1): 11-7.
04/06-37	Hu, B., W. Han, et al. (2005). "In situ visualization of DSBs to assess the extranuclear/extracellular effects induced by low-dose alpha-particle irradiation." <i>Radiat Res</i> 164(3): 286-91.
04/06-38	Unak, P. and B. Cetinkaya (2005). "Absorbed dose estimates at the cellular level for <sup>131</sup> I." <i>Appl Radiat Isot</i> 62(6): 861-9.
04/06-39	Boice, J. D., Jr., M. T. Mumma, et al. (2005). "Childhood cancer mortality in relation to the St Lucie nuclear power station." <i>J Radiol Prot</i> 25(3): 229-40.
04/06-40	Miller, R. W. and P. B. Zanzonico (2005). "Radioiodine fallout and breast-feeding." <i>Radiat Res</i> 164(3): 339-40.
04/06-41	Yarmonenko, S. P. (2005). "The cause of attenuation of the radiation genetic effect in man as compared to mouse and <i>Drosophila</i> ." <i>Dokl Biochem Biophys</i> 403: 317-9.
04/06-42	Mao, J. H., J. Li, et al. (2005). "Genomic instability in radiation-induced mouse lymphoma from p53 heterozygous mice." <i>Oncogene</i> 24(53): 7924-34.
04/06-43	Mountford, P. J. and C. J. Gibson (2005). "The CERRIE Report and its implications for nuclear medicine." <i>Nucl Med Commun</i> 26(8): 667-70.
04/06-44	Balonov, M., R. Alexakhin, et al. (2006). "Report from the techa river dosimetry review workshop held on 8-10 December 2003 at The State Research Centre Institute of Biophysics, Moscow, Russia." <i>Health Phys</i> 90(2): 97-106.

Department of Veterans Affairs Veterans' Advisory Committee on Environmental Hazards  
 Minutes of Meeting, June 26-27, 2006

Ref Number	Reference
	113.
04/06-45	Kossenko, M. M., T. L. Thomas, et al. (2005). "The Techa River Cohort: study design and follow-up methods." <i>Radiat Res</i> 164(5): 591-601.
04/06-46	Krestinina, L. Y., D. L. Preston, et al. (2005). "Protracted radiation exposure and cancer mortality in the Techa River Cohort." <i>Radiat Res</i> 164(5): 602-11.
04/06-47	Hida, A., M. Akahoshi, et al. (2005). "Do glucose and lipid metabolism affect cancer development in Nagasaki atomic bomb survivors?" <i>Nutr Cancer</i> 52(2): 115-20.
04/06-48	Imaizumi, M., T. Usa, et al. (2006). "Radiation dose-response relationships for thyroid nodules and autoimmune thyroid diseases in Hiroshima and Nagasaki atomic bomb survivors 55-58 years after radiation exposure." <i>Jama</i> 295(9): 1011-22.
04/06-49	Kopecky, K. J., L. Onstad, et al. (2005). "Thyroid ultrasound abnormalities in persons exposed during childhood to 131I from the Hanford nuclear site." <i>Thyroid</i> 15(6): 604-13.
04/06-50	Trerotoli, P., A. Ciampolillo, et al. (2005). "Prevalence of thyroid nodules in an occupationally radiation exposed group: a cross sectional study in an area with mild iodine deficiency." <i>BMC Public Health</i> 5: 73.
04/06-51	Kubale, T. L., R. D. Daniels, et al. (2005). "A nested case-control study of leukemia mortality and ionizing radiation at the Portsmouth Naval Shipyard." <i>Radiat Res</i> 164(6): 810-9.
04/06-52	Shin, H., T. Ramsay, et al. (2005). "The effect of censoring on cancer risk estimates based on the Canadian National Dose Registry of occupational radiation exposure." <i>J Expo Anal Environ Epidemiol</i> 15(5): 398-406.
04/06-53	Collier, C. G., J. C. Strong, et al. (2005). "Carcinogenicity of radon/radon decay product inhalation in rats--effect of dose, dose rate and unattached fraction." <i>Int J Radiat Biol</i> 81(9): 631-47.
04/06-54	Chang, P. Y., K. A. Bjornstad, et al. (2005). "Effects of iron ions, protons and X rays on human lens cell differentiation." <i>Radiat Res</i> 164(4 Pt 2): 531-9.
04/06-55	Kuhne, M., G. Urban, et al. (2005). "DNA double-strand break misrejoining after exposure of primary human fibroblasts to CK characteristic X rays, 29 kVp X rays and 60Co gamma rays." <i>Radiat Res</i> 164(5): 669-76.
04/06-56	Berrington de Gonzalez, A. and G. Reeves (2005). "Mammographic screening before age 50 years in the UK: comparison of the radiation risks with the mortality benefits." <i>Br J Cancer</i> 93(5): 590-6.
04/06-57	Baumstark-Khan, C., C. E. Hellweg, et al. (2005). "Cellular monitoring of the nuclear factor kappaB pathway for assessment of space environmental radiation." <i>Radiat Res</i> 164(4 Pt 2): 527-30.
04/06-58	Chang, P. Y., J. Bakke, et al. (2005). "Proton-induced genetic damage in lacZ transgenic mice." <i>Radiat Res</i> 164(4 Pt 2): 481-6.
04/06-59	Desai, N., E. Davis, et al. (2005). "Immunofluorescence detection of clustered gamma-H2AX foci induced by HZE-particle radiation." <i>Radiat Res</i> 164(4 Pt 2): 518-22.
04/06-60	Ding, L. H., M. Shingyoji, et al. (2005). "Gene expression changes in normal human skin fibroblasts induced by HZE-particle radiation." <i>Radiat Res</i> 164(4 Pt 2): 523-6.
04/06-61	Durante, M. (2005). "Biomarkers of space radiation risk." <i>Radiat Res</i> 164(4 Pt 2): 467-73.
04/06-62	Boice, J. D., Jr. (2006). "Thyroid disease 60 years after Hiroshima and 20 years after Chernobyl." <i>Jama</i> 295(9): 1060-2.
04/06-63	Nikiforov, Y. E. (2004). "The molecular pathways induced by radiation and leading to thyroid carcinogenesis." <i>Cancer Treat Res</i> 122: 191-206.