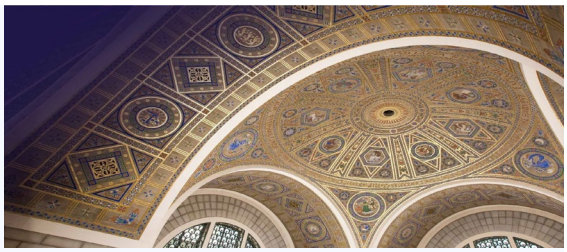
NATIONAL ACADEMIES Sciences Engineering Medicine

Nuclear and Radiation Studies Board | Division on Earth and Life Studies

42nd Meeting of the Nuclear and Radiation Studies Board
April 18, 2023
Public: Virtual
Agenda for Open Sessions



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TUESDAY, APRIL 18, 2023 (ALL TIMES LISTED ET)
OPEN SESSION

1:00 pm **Call to Order and Welcome to NRSB's Open Session**
William H. Tobey, Chair, or Amy Berrington, Vice Chair

1:05 pm **Structured Decision-Making**
Paul K. Black, PhD, Founder, Neptune and Company, Inc. (confirmed)

1:25 pm **Q&A (Board and staff only)**

1:50 pm **Overview of the NIAID Radiation and Nuclear Countermeasures Program (RNCP)**
Andrea "Andie" DiCarlo, PhD, Director, Radiation and Nuclear Countermeasures Program (RNCP), Division of Allergy, Immunology, and Transplantation (DAIT), National Institute of Allergy and Infectious Diseases (NIAID), National Institutes of Health (NIH) (confirmed)

2:15 pm **Q&A (Board and staff only)**

2:45 pm **BREAK (5 minutes)**

2:50 pm **Update on the Waste Isolation Pilot Plant**
Betsy Forinash, Acting Deputy, Carlsbad Field Office (CBFO), U.S. Department of Energy (confirmed)

3:10 pm **Q&A (Board and staff only)**

3:30 pm **Future of the Radiation Workforce**
Wayne Newhauser, PhD, Dr. Charles M. Smith Chair in Medical Physics in the Department of Physics and Astronomy at the Louisiana State University, and Director of the Medical Physics Program (confirmed)

3:55 pm **Q&A (Board and staff only)**

4:15 pm **ADJOURN OPEN SESSION**

SPEAKER BIOGRAPHIES

Paul Black, Ph.D., is a co-founder and business development lead of Neptune and Company, Inc. (Neptune), an environmental consulting company with a mission to improve the quality of environmental decision making through the application of state-of-the-art methods in statistics and data science, risk assessment, decision analytics and stakeholder engagement, environmental modeling, and quality assurance. With a strong background in statistical theory, and more than 30 years of experience applying statistics to a wide range of environmental problems, he brings unparalleled expertise to projects. Dr. Black has performed work for the Environmental Protection Agency (EPA), Department of Energy (DOE), Department of Defense (DOD), and Food and Drug Administration (FDA), as well as many state and local groups. Dr. Black received an M.S. and Ph.D. in statistics from Carnegie Mellon University and a B.Sc. (with honors) from the University of Lancaster, United Kingdom.

Andrea "Andie" DiCarlo earned her Ph.D., from the University of Maryland for work on targeting heat shock proteins to reduce oxidative stress caused from radiation exposure and other stressors. These studies led to post-doctoral work at The Catholic University of America (CUA), where she studied radioprotection of normal tissues in animal models of cancer. In 2004, Andrea became a Program Officer in the Radiation and Nuclear Countermeasures Program (RNCP) at the National Institute of Allergy and Infectious Diseases (NIAID), within the National Institutes of Health (NIH). She was named Director of the RNCP in 2019. She has published extensively in government reports and peer-reviewed journals on the biological effects of radiation exposure, medical countermeasure development, and evaluation of biodosimetry devices and biomarkers for triage. Representing NIAID, she has worked with many organizations to support global research activities and has served as a subject matter expert and presenter for multiple working groups and conferences.

Betsy Forinash is the Deputy Assistant Secretary for Waste and Materials Management in the U.S. Department of Energy's (DOE's) Office of Environmental Management. She's currently serving a temporary assignment as the Acting Deputy Manager of DOE's Carlsbad Field Office, which manages the Waste Isolation Pilot Plant (WIPP) disposal facility. At DOE, Betsy previously led programs related to radioactive waste disposal, decommissioning and infrastructure management . Prior to DOE, she spent 15 years in regulatory and oversight programs at the U.S. Environmental Protection Agency (EPA), including the WIPP and Yucca Mountain nuclear waste repositories, radioactive air emissions, contaminated site clean-up, naturally-occurring radioactive materials, and radiological emergency preparedness. She also worked for five years at the OECD Nuclear Energy Agency, based in Paris, with international expert groups on strategic and technical aspects of radioactive waste disposal. Betsy holds a B.S. degree from Duke University and an M.S. from Northwestern University, both in civil engineering.

Wayne Newhauser, Ph.D., holds the Dr. Charles M. Smith Chair in Medical Physics in the Department of Physics and Astronomy at the Louisiana State University. He serves as director of the Medical Physics Program. He is a board certified and licensed medical physicist. After earning degrees in nuclear engineering and medical physics from the University of Wisconsin, he worked at the German National Standards Laboratory (PTB), Harvard Medical School and Massachusetts General Hospital and The University of Texas M. D. Anderson Cancer Center. Dr. Newhauser has published more than 80 peer-reviewed journal articles, leads federal research grants, and mentors students and post-doctoral fellows. In his spare time, he serves in leadership roles of the American Association of Physicists in Medicine and the American Nuclear Society. Dr. Newhauser's research team focuses on cancer prevention and cancer survivorship. Specifically, we seek to better understand the risks of treatment-related health problems faced by cancer survivors. The long-term goal is to provide an enhanced based of evidence for making clinical decisions (e.g., selection of radiation treatment modality) and health care policy decisions (rational allocation of scarce health care resources). Our

recent research has focused on children and young adults, e.g., with tumors of the central nervous system and Hodgkin Disease. We have also studied treatments for cancer of the prostate, liver, lung, and other sites. Our research examines advanced radiotherapies, such as intensity modulated proton and photon therapies, as well as conventional photon therapy. This research is trans-disciplinary, including medical physics, software and nuclear engineering, high performance computing, statistics, cancer prevention and epidemiology, and oncology.