

Sunita Kamboj

Environmental Science Division
Argonne National Laboratory

Education:

C.H.P. American Board of Health Physics, 1997
Ph.D. Georgia Institute of Technology, Health Physics, 1994
M.S. Georgia Institute of Technology, Health Physics, 1990

Professional Experience:

1994-Present Environmental Systems Engineer
Environmental Science Division
Argonne National Laboratory

Have expertise in human and non-human (biota) risk and dose assessment, the NRC license termination process, radiation protection standards and regulations, release of real and non-real property for reuse and recycle, and health physics instrumentation.

She has been involved in many NRC projects including the environmental impact statement (EIS) for the construction and operation of a uranium enrichment facility in North Carolina, generic environmental impact statement (GEIS) for license renewal of nuclear power plants, the environmental impact statement for combined license (COL) for Enrico Fermi Unit 3. She has mainly worked on the human health, waste, and decommissioning Sections of the EISs. She is currently working on environmental impact statements for early site permit for Victoria County Site.

She has also been involved in the RESRAD model development and risk assessment program. She co-developed an external exposure model to improve the external ground pathway dose estimation in RESRAD family of codes. She has been involved in performing RESRAD calculations for different sites and deriving residual radioactive materials guidelines. She has performed dose and risk analysis for many projects related to the release of the U.S. Department of Energy's real and non-real property for reuse and recycle. She has been involved in the development of the operational guidelines for use in a radiological dispersal device incident, and a training course for the NRC staff in evaluating license termination plans. She calculated internal and external dose coefficients (DCC) using the Monte Carlo transport code MCNP for the eight reference geometries in the RESRAD-BIOTA code.

Summary of Previous Experience:

7/94-9/94 MGP Instruments, Smyrna, GA

Performed Monte Carlo simulations for in-duct monitoring of gaseous effluent releases from

a nuclear reactor. Calculated the detection sensitivity of a selected set of isotopes for an encapsulated NaI(Tl) detector placed inside the monitoring duct.

1989-6/94 Georgia Institute of Technology, Atlanta, GA

Worked in the Environmental Radiation Laboratory at Georgia Tech and analyzed different environmental samples. Used Monte-Carlo simulations to analyze and quantify different interactions in thick germanium detectors under various geometric conditions. Instructor for a problem-solving health physics practice course.

Research Interests:

Human and non-human (biota) dose and risk assessment
Environmental modeling of nuclear incident
Waste disposal facility performance assessment

Professional Activities:

International Commission on Radiological Protection – Member ICRP C5 Task Group
American National Standard Institute (ANSI) N14.36 Subcommittee
Journal Reviewer: Journal of Environmental Radioactivity, Health Physics
Health Physics Society – Member of the Continuing Education Committee
American Academy of Health Physics – Part 2 Panel Member
Midwest Chapter of Health Physics Society – Treasurer

Honors and Awards

Argonne National Laboratory Pacesetter Award, October 2000 and December 2004
Excellence in Government Fellows Senior Fellows Award For Achieving Results, 2010

Publications:

Author or co-author of more than 180 publications, including 30 journal articles, and more than 150 reports, NUREG/CR documents, conference papers and posters.