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Ph.D., Nuclear Engineering, University of Illinois, Urbana, 1987
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James Durham is a health physicist with diverse experience in many areas of nuclear engineering and radiological health. His background includes radiation detection and measurement, skin dosimetry, environmental monitoring and characterization, teaching, project management, and personnel management. He is the author of over 30 journal publications.

At the Center for Nuclear Waste Regulatory Analyses, Dr. Durham currently contributes to the performance assessments of the potential geologic repository for high-level nuclear waste at Yucca Mountain, Nevada, and to the evaluation of risk insights. He manages the Biosphere Characteristics project and he led a project to write a user guide for the performance assessment code TPA Version 5.1. He recently successfully completed Varskin 3, a skin dose calculation tool, and the associated User's Manual for the U.S. Nuclear Regulatory Commission (NRC). In addition, he was the principal investigator for a project evaluating the effects of potential natural phenomena and aviation accidents at the proposed Pa'ina Hawaii, LLC, irradiator facility for the NRC.

Before joining the Geosciences and Engineering Division, Dr. Durham was an assistant professor in the Department of Environmental and Radiological Health Sciences at Colorado State University. He taught lectures and laboratories in radiation physics, internal and external dosimetry, instrumentation, and waste management. He served for 5 years as Chair of the Radiation Safety Committee and advised 5 MS candidates. His research involved design and development of an extremity dosimeter and an in-situ, long-term monitor for radioactive contamination based on OSL readout of aluminum oxide.

From 1995 through 1998, Dr. Durham was the principal engineer for the CsCl Legacy Safety Program in the 324 Building, a Hazard Category 2 non-reactor nuclear facility located on the Hanford Site for Pacific Northwest National Laboratory (PNNL) and for B&W Hanford Company. Dr. Durham managed up to 24 staff members. While at PNNL from 1986 through 1995, he participated in radiation safety assessments at several Department of Energy sites, and he was the manager and principal investigator for a project to measure extremity doses received by Pantex employees during weapon disassembly operations. His research included several projects in the field of beta and skin dosimetry, including managing a project that studied the biological effects of hot particles on pigskin for the Electric Power Research Institute.

PROFESSIONAL CHRONOLOGY: Battelle Pacific Northwest National Laboratory, Health Protection Department: senior research scientist, 1986–95; Project Management and Engineering Technical Group: technical group manager, 1995–6; B&W Hanford Company: project engineer, 1996–8; Colorado State University, Department of Environmental and Radiological Health Sciences: assistant professor, 1998–2005; Southwest Research Institute: senior research engineer, 2005–present.

MEMBERSHIPS: Health Physics Society; American Nuclear Society, International Solid State Dosimetry Organizing Committee.

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