

## Michael A. Smith

Radiological Science and Engineering  
Scientist III  
Pacific Northwest National Laboratory  
PO Box 999  
Richland, WA 99352  
E-mail: [Michael.Smith@pnl.gov](mailto:Michael.Smith@pnl.gov)

### Biography

Mr. Smith has a diverse academic background in environmental science and nuclear engineering, along with practical research, laboratory, and teaching experience. Since arriving at Pacific Northwest National Laboratory in June 2005, he has contributed to updates and training for the FRAMES, MEPAS, and GENII computer codes; reviews of environmental impact statements for North Anna, Grand Gulf, and Clinton early site permits; technical contributions to Vogtle ESP EIS and North Anna COL EIS; team lead and technical contributor to Levy County COL EIS; calibrator for RPMP; review of the Hanford radiological exposure tracking system (REX), review of NIOSH dose reconstruction spreadsheet calculations, PI for separate projects on the review and dose assessment for use of source material under 10 CFR Part 40 and byproduct material under 10 CFR Part 30, and dose assessments for exemption request for release of granular activated carbon and resin from Hanford.

Prior to arriving at PNNL, Mr. Smith contributed to ongoing work at Southwest Research Institute in performance, safety, and environmental assessment of high-level waste geologic repositories, independent spent fuel storage facilities, uranium reprocessing facilities, uranium in-situ leaching facilities, and various decommissioning projects. For 5 years, he was principal investigator for a public outreach project that developed posters, brochures, presentations, and physical and computer models for use at public meetings and exhibits to communicate complex regulatory concepts about high-level waste to members of the public and affected units of local government. He was principal investigator for a project that performed an evaluation of multi-media models for complex dose analysis, specifically GoldSim, MEPAS, GENII, and RESRAD-OFFSITE. From 2001–2003, he was principal investigator for a project that evaluated potential doses to members of the public if licensees seek to remove soils from NRC-licensed facilities. From 2000–2005, he was a member of the Institute's radiological health and safety committee.

During his practicum for his Master's degree at Oak Ridge National Laboratory he gained experience in the operation and maintenance of a radiation detection laboratory, completed formal training in Gamma-Ray Spectrometry with Techniques and Applications for Investigating Environmental Processes, and completed a 15-week study for his thesis project. The study characterized and modeled the movement of radionuclides through soil, vegetation, and surface water at a 25-acre pasture on the U.S. Department of Energy Oak Ridge Reservation where contaminated biosolids had been applied by surface spraying.

### Research Interests

His research interests include environmental radiation detection, transport, and modeling; risk assessment; communications; and environmental policy.

### Education and Credentials

- B.S. Nuclear Engineering, Kansas State University, 1994
- M.S. Environmental Science, Ohio State University, 1997
- M.S. Nuclear Engineering, Ohio State University, 1997
- American Board of Health Physics, Certified Health Physicist, 2006

## Affiliations and Professional Service

- American Geophysical Union
- Health Physics Society
- Columbia Chapter Health Physics Society

## Selected Publications

### 2008

Smith MA, IL Larsen, and AW Fentiman. 2008. *Fate of Co-60 at a Sludge Land Application Site*. Journal of Environmental Radioactivity 99(10):1611-1616. doi:10.1016/j.jenvrad.2008.06.006

Coauthor. 2008. *Final Environmental Impact Statement for an Early Site Permit (ESP) at the Vogtle Electric Generating Plant Site, Final Report, Main Report*. NUREG-1872, Vol. 1. U.S. Nuclear Regulatory Commission, Washington, DC.

Coauthor. 2008. *Final Environmental Impact Statement for an Early Site Permit (ESP) at the Vogtle Electric Generating Plant Site, Final Report, Appendices A through J*. NUREG-1872, Vol. 2. U.S. Nuclear Regulatory Commission, Washington, DC.

Coauthor. 2008. *Supplemental Environmental Impact Statement for the Combined License (COL) for North Anna Power Station Unit 3*. NUREG-1917. U.S. Nuclear Regulatory Commission, Washington, DC.

### 2007

Smith MA, BA Napier, DJ Strom, SM Short, CV Beatty, NF Stoker, and T Newman. 2007. *Dose Assessment for Current and Projected Uses of Source Material Under a U.S. NRC General License and Exemption Request*. PNNL-16148, Revision 1, Pacific Northwest National Laboratory, Richland, WA.

Smith MA, BA Napier, DL Strenge, PS Stansbury, SM Short, and A Gilca. 2007. *Evaluation of Existing and Draft Safety Criteria in Part 32 for Approving Certain Products for Use under General License or Exemptions from Licensing*. PNNL-16361, Revision 1, Pacific Northwest National Laboratory, Richland, WA.

### 2006

Strenge DL, and MA Smith. 2006. *Multimedia Environmental Pollutant Assessment System (MEPAS): Receptor Intake Module Description*. PNNL-16163, Pacific Northwest National Laboratory, Richland, WA.

Strenge DL, and MA Smith. 2006. *Multimedia Environmental Pollutant Assessment System (MEPAS): Human Health Impact Module Description*. PNNL-16164, Pacific Northwest National Laboratory, Richland, WA.

Strenge DL, and MA Smith. 2006. *Multimedia Environmental Pollutant Assessment System (MEPAS): Exposure Pathway Module Description*. PNNL-16165, Pacific Northwest National Laboratory, Richland, WA.

Gelston GM, MA Smith, DS Schwartz, and TE Seiple. 2006. *Summary Report for REX Annual Report Card Testing*. PNNL-16042, Pacific Northwest National Laboratory, Richland, WA.

Gelston GM, MA Smith, DS Schwartz, and TE Seiple. 2006. *Annual Report Card Version 1 (5/24/2006)*. PNNL-16043, Pacific Northwest National Laboratory, Richland, WA.

Gelston GM, MA Smith, DS Schwartz, and TE Seiple. 2006. *Representative Test Scenarios*. PNNL-16044, Pacific Northwest National Laboratory, Richland, WA.

## 2005

Whelan G, KJ Castleton, GM Gelston, DL Strenge, and MA Smith. 2005. *FRAMES 2.0 Workshop for NRC*. Presented by Gene Whelan, Karl J Castleton, Dennis L Strenge, Michael A Smith (Invited Speaker) at FRAMES 2.0 Workshop for NRC, Rockville, MD on November 15, 2005. PNNL-SA-47454.

## 2002

CNWRA (contributing author). 2002. *Yucca Mountain Review Plan, Draft Report for Comment*. NUREG-1804, Revision 2. U.S. NRC, Washington, DC.

CNWRA (contributing author). 2002. *Integrated Issue Resolution Status Report*. NUREG-1762. U.S. NRC, Washington, DC.

## 2001

Mackin, P, D Daruwalla, J Winterle, M Smith, D Pickett. 2001. *A Baseline Risk-Informed Performance-Based Approach for In-Situ Leach Uranium Extraction Licensees*. NUREG/CR-6733. Center for Nuclear Waste Regulatory Analyses, San Antonio, TX.

## 2000

McKenney, C, P LaPlante, J Weldy, and M Smith. 2000. *Incorporation of Dose Modeling into NRC's Total System Performance Code*. Society for Risk Analysis Annual Meeting. Seattle, WA. December 2–5, 2000.

## 1999

Smith, M, T McCartin, and S Mohanty. 1999. *Demonstration of TPA 3.2 Code's Capability to Evaluate the Effects of Human Intrusion*. Transactions of the American Nuclear Society: Vol. 81, Long Beach, CA.

## 1997

Smith, M, A Fentiman, and I Larsen. 1997. *Investigation of Co-60 at a Sludge Land-Application Site*. Transactions of the American Nuclear Society: Vol. 76, Orlando, FL.