

**Kathleen R. Meyer, Ph.D.**  
**Keystone Scientific, Inc.**

**Education**

Ph.D., Radiological Health Sciences, Colorado State University, Fort Collins, 1977  
M.S., Health Physics, Colorado State University, Fort Collins, 1975  
M.S., Biology, Marquette University, Milwaukee, Wisconsin, 1970  
B.A., Biology, Carroll College, Helena, Montana, 1968

**Professional Experience**

**Keystone Scientific, Inc.**

*President/Owner*, Fort Collins, Colorado (1990–present)

Owner and president of Keystone Scientific, Inc., which focuses on a range of activities dealing with chemical and radiological risk evaluations at sites containing radioactive materials and chemicals. The primary focus has been on environmental data analysis and historic document review at various sites across the U.S. With Risk Assessment Corporation (RAC), Keystone has been involved in historic dose reconstruction projects at the Feed Materials Production Facility in Fernald, Ohio; the Savannah River Site in South Carolina; the Rocky Flats Facility in Colorado; the Idaho National Laboratory in Idaho; and the Uravan Uranium Mill site in Colorado. Recent work includes providing assistance to the San Ildefonso Pueblo in New Mexico with their Tribal Risk Assessment process and communicating human health impacts to the Pueblo community and assisting in the development of the RACER tools to guide efforts to reduce public health risk and ecological impact from radionuclides and chemicals originating at the Los Alamos National Laboratory.

**Independent Consultant**

Albuquerque, New Mexico (1982–1989)

Completed scientific literature editing, abstracting, indexing, and categorizing for input into U.S. DOE Office of Scientific and Technical Information databases in the areas of biochemistry, genetics, and radiation biology for the Information Management Services, Inc., Oak Ridge, Tennessee.

**Oak Ridge National Laboratory**

*Post-Doctoral Research*, Oak Ridge, Tennessee (1977–1981)

Conducted research in carcinogenesis and assessed the radiation damage and subsequent recovery capabilities of normal tissue, both in cell culture and in animal models.

**Front Range Community College**

*Adjunct Biology Faculty*, Fort Collins, Colorado (1999–2011)

Taught college-transfer courses in general biology and anatomy and physiology; involved in course development and web-based instruction and assessment.

**Roane State Community College**

*Adjunct Faculty*, Harriman, Tennessee (1980–1982)

Taught college-transfer courses in general biology.

**Colorado State University**

*Research Assistant*, Fort Collins, Colorado (1974–1976)

Researched the effectiveness of elevated temperatures combined with radiation in the control of animal tumors, analyzed the role of hyperthermia in radiotherapy, and established techniques for maintaining tumor cells in culture.

**College of Lake County**

*Biology Division Faculty*, Grayslake, Illinois (1970–1974)

Taught college-transfer courses in general biology, genetics, and microbiology; involved in course development.

**Professional Associations and Awards**

Member of National Academy of Science Committee on Safety and Security of Commercial Nuclear Spent Fuel Storage, 2004

Academic Achievement Award, Carroll College, Helena, Montana, 2000

Member of National Council on Radiation Protection Scientific Committee 64-19

National Institute of Health Assistantship at Colorado State University

AEC Institute in Radiation Biology at Kansas State University

Phi Sigma Society Award for Graduate School Achievement

**Peer-Reviewed Publications**

J.W. Aanenson, H.A. Grogan, B. Jacobs, G.G. Killough, **K.R. Meyer**, H.J. Mohler, S. Mohler, J.R. Rocco, A.S. Rood, E.A. Stetar, L.H. Wilson, and J.E. Till. 2009. "Ranking Tool Methodology." Risk Analysis, Communication, Evaluation, and Reduction at LANL. RAC Report No. 35-RACER LANL-2008-FINAL. April.

H.A. Grogan, J.W. Aanenson, P.D. McGavran, **K.R. Meyer**, S.S. Mohler, H. J. Mohler, J.R. Rocco, A.S. Rood, J.E. Till and L.H. Wilson. 2006. "Applied Modeling of the Cerro Grande Fire at Los Alamos: An Independent Analysis of Exposure, Health Risk, and Communication with the Public." In *Applied Modeling and Computations in Nuclear Science*. ACS Symposium Series 945. Edited by T.M. Semkow, S. Pommé, S.M. Jerome, and D.J. Strome. American Chemical Society, Washington, D.C.

Mohler, H.J., K.R. Meyer, H.A. Grogan, J.W. Aanenson, and J.E. Till. 2004. Application of NCRP Air Screening Factors for Evaluating Both Routine and Episodic Radionuclide Releases to the Atmosphere. *Health Physics* 86(2): 135–144. February.

Till, JE, AS Rood, PG. Voillequé, PD McGavran, **K.R. Meyer**, H.A. Grogan, W.K. Sinclair, J.W. Aanenson, H.R. Meyer, S.K. Rope, and M.J. Case. 2002. Risks to the Public from Historical

- Releases of Radionuclides and Chemicals at the Rocky Flats Environmental Technology Site. *J of Exp. Analysis and Epidemiology* 12(5): 355-372.
- Till, J.E. and **K.R. Meyer**. 2001. Public Involvement in Science and Decision Making. *Health Physics* 80(4): April.
- Till, J.E., G. G. Killough, **K. R. Meyer**, J. W. Aanenson, and A.S. Rood. 2000. Calculating Soil Action Levels and Uncertainties for Decision-Making during Cleanup of Contaminated Sites. *Proc of International Radiation Protection Association*. IRPA-10 Plenary Session, PS-2-3, Hiroshima. May.
- Till, J.E. G. G. Killough, **K. R. Meyer**, W.K. Sinclair, P.G. Voillequé, S.K. Rope, and M.J. Case. 2000. "The Fernald Dosimetry Reconstruction Project. *Technology* 7: 279-295. October.
- Meyer, K.R.**, P.G. Voillequé, G.G. Killough, D.S. Schmidt, S.K. Rope, B. Shleien, R.E. Moore, M.J. Case, and J.E. Till. 1996. "Overview of the Fernald Dosimetry Reconstruction Project. *Health Physics* 71 (4). October. pp. 425–437.
- Holton, G.A., **K.R. Meyer**, and H. R. Meyer. 1987. "Siting a Radioactive Waste Facility: A Pathways Analysis Case Study." *Proceedings of the Air Pollution Control Association Annual Meeting*. New York, New York. June 21–26.
- Ullrich, R.L. and **K.R. Meyer**. 1982. "The Influence of Butylated Hydroxytoluene-Induced Cell Proliferation on Mouse Lung Damage After X Rays or Fission Neutrons." *Radiation Research* 89. pp. 428–432.
- Meyer, K.R.** and R.L. Ullrich. 1981. "Effects of X Rays and Fission Neutrons on an Induced Proliferative Response in Lung Type 2 Epithelial Cells." *Radiation Research* 85 (2). pp. 380–389.
- Witschi, H., W.M. Haschek, **K.R. Meyer**, R.L. Ullrich, and W.E. Dalbey. 1980. "A Pathogenic Mechanism in Lung Fibrosis." *Chest* 78 (2). pp. 395–399.
- Meyer, K.R.**, H. Witschi, and R.L. Ullrich. 1980. "Proliferative Response of Type 2 Lung Epithelial Cells After X Rays and Fission Neutrons." *Radiation Research* 82. pp. 559–569.
- Haschek, W.M., **K.R. Meyer**, R.L. Ullrich, and H. Witschi. 1980. "Potentiation of Chemically-Induced Lung Fibrosis by Thorax Irradiation." *International Journal Radiation Oncology, Biology and Physics* 6. pp. 449–455.
- Meyer, K.R.**, L.E. Hopwood, and E.L. Gillette. 1979. "The Response of Mouse Adenocarcinoma Cells to Hyperthermia and Radiation." *Radiation Research* 78. pp. 98–107.
- Meyer, K.R.**, L.E. Hopwood, and E.L. Gillette. 1979. "The Thermal Response of Mouse Adenocarcinoma Cells at low pH." *European Journal of Cancer* 15. pp. 1219–1222.
- Meyer, K.R.** and R.L. Ullrich. 1979. "Response and Recovery of Type 2 Alveolar Cells After Radiation." *Proceedings of the American Association of Cancer Research* 20. p. 129.
- Meyer, K.R.**, L.E. Hopwood, and E.L. Gillette. 1978. "Radiation Response and Characteristics of a Cell Line Derived from a Mouse Mammary Adenocarcinoma." *Radiation Research* 73, pp. 315–329.
- Meyer, K.R.**, E.L. Gillette, and L.E. Hopwood. 1977. "The Effect of Heat and Irradiating Order on MADCAP 37 Tumor Cells." *Radiation Research* 70, p. 630. June.
- Meyer, K.R.**, E.L. Gillette, and L.E. Hopwood. 1976. "Radiation and Heat Response of a Mouse Mammary Tumor-Derived Cell Line Assayed in Vivo and In Vitro." *Radiation Research* 67, p. 609. July.

**Technical Reports and Conference Proceedings**

- K.R. Meyer**, H.J. Mohler, and J.R. Rocco. 2011. *San Ildefonso Tribal Risk Assessment Project*, 2010 Work Summary. January 12.
- K.R. Meyer** and J. Mohler, 2010. *San Ildefonso Tribal Risk Assessment Project*, 2009 Work Summary. January 15.
- K.R. Meyer**, J.W. Aanenson, H.J. Mohler, E.A. Stetar, J.R. Rocco, and B.L. Jacobs. 2007. *San Ildefonso Tribal Risk Assessment Project, Final Project Overview Report*. RAC Report No. 3-San I-2007-FINAL. *Risk Assessment Corporation*, Neeses, South Carolina. December 31.
- J. E. Till, G. G. Killough, **K. R. Meyer**, J. W. Aanenson, and A.S. Rood. 2004. "Technical Basis and Public Process for Deriving Cleanup Levels at Rocky Flats. *Proc. Workshop on Solutions to Security Concerns about Radioactive Legacy of the Cold War that Remain in Urban Environments*. International Institute for Applied System Analysis at Vanderbilt University. Nashville, TN. November 14-16, 2004.
- Grogan, H.A., J.E. Till, **K.R. Meyer**, and J. Mohler. 2004. "Involving Stakeholders and Tailoring Environmental Databases for Shared Analysis of a Contaminated Site." *Proc. EnviroInfo 2004*. 18th International Conference Informatics for Environmental Protection. October 21-23, 2004. Sh@ring. CERN, Geneva, Switzerland.
- Aanenson, J.W., J. Goldberg, H.A. Grogan, L. Hay-Wilson, G.G. Killough, **K.R. Meyer**, H.J. Mohler, S. Mohler, J.R. Rocco, A.S. Rood, P. Shanahan, W.K. Sinclair, C. Slack, .A. Stetar, P. G. Voillequé, J. Wilson, and J.E. Till. 2004. *Risk Analysis, Communication, Evaluation, and Reduction at Los Alamos National Laboratory. Contemporary Risk Assessment: Demonstration of an Integrated Methodology*. RAC Report No. 11-RACER LANL-2004-DRAFT. <http://www.racteam.com/RACERatLANL.htm>. July.
- Rocco, J.R., **K.R. Meyer**, H.J. Mohler, J.W. Aanenson, L. Hay Wilson, A.S. Rood, and P.D. McGavran. 2002. Analysis of Exposure and Risks to the Public from Radionuclides and Chemicals Released by the Cerro Grande Fire at Los Alamos. Task 2.7: Estimated Risks from Releases to Surface Water. Final Report, RAC Report No.4-NMED-2002-FINAL(Rev.1). *Risk Assessment Corporation*, Neeses, South Carolina. June 12.
- Mohler, H.J., **K.R. Meyer**, J.W. Aanenson, and H A. Grogan. 2002. *Analysis of Exposure and Risks to the Public from Radionuclides and Chemicals Released by the Cerro Grande Fire at Los Alamos. Task 3: Calculating and Communicating Risks: Observations and Recommendations*. RAC Report No.15-NMED-2002-FINAL(Rev.1). *Risk Assessment Corporation*, Neeses, South Carolina. June 12.
- Aanenson, J.W., P.J.Boelter, M.J. Case, M. Dreicer, H.A. Grogan, M.O. Langan, P.D. McGavran, **K.R. Meyer**, H.R. Meyer, H. J. Mohler, A.S. Rood, R.C. Rope, S.K. Rope, L.A. Stetar, P.G. Voillequé, T.F. Winsor, W. Yang, and J.E. Till. 2001. Savannah River Site Environmental Dose Reconstruction Project Phase II: Source Term Calculation and Ingestion Pathway Data Retrieval-Evaluation of Materials Released from the Savannah River Site. RAC Report No.1-CDC-SRS-1999-Final. *Risk Assessment Corporation*, Neeses, South Carolina. April 30.
- K.R. Meyer**, J. Mohler, J.W. Aanenson, and J.E. Till. 2000. *Identification and Prioritization of Radionuclide Releases from the Idaho National Engineering and Environmental Laboratory*. Task Order 5-Center for Disease Control and Prevention. RAC Report No. 3-CDC Task Order 5-2000-Draft. *Risk Assessment Corporation*, Neeses, South Carolina. September 30.

- G. G. Killough, A.S. Rood, J.W. Aanenson, **K.R. Meyer**, H.A. Grogan, W.K. Sinclair, and J.E. Till. 2000. *Task 5: Independent Calculation*. Radionuclide Soil Action Level Oversight Panel. RAC Report No. 16-RSALOP-RSAL-1999-FINAL. Risk Assessment Corporation, Neeses, South Carolina. February.
- J. Weber, G. G. Killough, **K.R. Meyer**, A.S. Rood. 1999. *Task 3: Inputs and Assumptions*. Radionuclide Soil Action Level Oversight Panel. RAC Report No. 15-RSALOP-RSAL-1999-FINAL. Risk Assessment Corporation, Neeses, South Carolina. October.
- G. G. Killough, A.S. Rood, J. Weber, and **K.R. Meyer**. 1999. *Task 2: Computer Models*. Radionuclide Soil Action Level Oversight Panel. RAC Report No. 4-RSALOP-RSAL-1999-FINAL. Risk Assessment Corporation, Neeses, South Carolina. July.
- Grogan, H.A., P.D. McGavran, H.R. Meyer, **K.R. Meyer**, H.J. Mohler, A.S. Rood, W.K. Sinclair, P.G. Voillequé and J.M. Weber. 1999. *Technical Summary Report for the Historical Public Exposures Studies for Rocky Flats Phase II*. RAC Report No. 14-CDPHE-RFP-1999-DRAFT. Radiological Assessments Corporation. Neeses, South Carolina. August.
- Killough, G.G., M.J. Case, **K.R. Meyer**, R.E. Moore, S.K. Rope, D.W. Schmidt, B. Shleien, W.K. Sinclair, P.G. Voillequé, and J.E. Till. 1996. *Task 6: Radiation Doses and Risk to Residents from FMPC Operations from 1951–1988*. RAC Report No. 4-CDC-Fernald-1996-DRAFT (Volumes I and II). Radiological Assessments Corporation, Neeses, South Carolina.
- Voillequé, P.G., **K.R. Meyer**, D.W. Schmidt, S.K. Rope, G.G. Killough, R.E. Moore, M.J. Case, B. Shleien, and J.E. Till. 1995. *The Fernald Dosimetry Reconstruction Project, Tasks 2 and 3, Radionuclide Source Terms and Uncertainties*. Report CDC-5. Final Report. Radiological Assessments Corporation, Neeses, South Carolina. June.
- Stetar, L.A., M.J. Case, L.W. Bell, H.A. Grogan, **K.R. Meyer**, H.R. Meyer, S.K. Rope, D.W. Schmidt, and J.E. Till. 1995. *Savannah River Site Dose Reconstruction Project, Task 4, Identifying Sources of Environmental Monitoring and Research Data*. RAC Report #2 CDC-SRS-95-Final. Radiological Assessments Corporation, Neeses, South Carolina. March.
- Meyer, K.R.**, P.D. McGavran, P.G. Voillequé, H.A. Grogan, L.W. Bell, H.R. Meyer, S.K. Rope, and J.E. Till. 1995. *Savannah River Site Dose Reconstruction Project, Task 3, Evaluation of Materials Released from the SRS*. RAC Report #1 CDC-SRS-95-Final. Radiological Assessments Corporation, Neeses, South Carolina. June.
- McGavran, P.D., **K.R. Meyer**, and P. Voillequé. 1995. *Task 2c. An Analysis of Historical Source Term Estimated for Carbon Tetrachloride at the RFP*. Technical Memorandum for the Rocky Flats Dose Reconstruction. Radiological Assessments Corporation, Neeses, South Carolina. November.
- Grogan, H.A., **K.R. Meyer**, P.G. Voillequé, S.K. Rope, M.J. Case, H.R. Meyer, R.E. Moore, T. Winsor and J.E. Till. 1994. *Verification of Phase I Source Term and Uncertainty Estimates (Critique of Phase I and Recommendations for Phase II of the Historical Public Exposures Studies on Rocky Flats)*. Final Task 2 Report. Radiological Assessments Corporation, Neeses, South Carolina. September.
- Case, M.J., P.D. McGavran, H.R. Meyer, **K.R. Meyer**, A.S. Rood, S.K. Rope, D.W. Schmidt, T.F. Winsor. 1994. *Recommendations for Monitoring to Verify Phases I and II of Part I*, Final Report. Colorado Department of Public Health and Environment. Prepared by Radiological Assessments Corporation, Neeses, South Carolina. November.
- Voillequé, P.G., **K. R. Meyer**, D.W. Schmidt, S.K. Rope, G.G. Killough, R.E. Moore, M.C. Case, B. Shleien and J.E. Till. 1993. *The Fernald Dosimetry Reconstruction Project, Tasks 2*

- and 3, *Radionuclide Source Terms and Uncertainties*. Report CDC-4. Draft report for comment. *Radiological Assessments Corporation*, Neeses, South Carolina. November.
- Shleien, B., S.K. Rope, M.J Case, G.G Killough, **K.R. Meyer**, R.E. Moore, D.W. Schmidt, J.E. Till, P.G. Voillequé. 1993. *The Fernald Dosimetry Reconstruction Project, Task 5: Review of Historic Data and Assessments for the FMPC*. Report CDC-4. Draft report for comment. *Radiological Assessments Corporation*, Neeses, South Carolina. May.
- Voillequé, P.G., **K. R. Meyer**, D.W. Schmidt, G.G. Killough, R.E. Moore, V.I. Ichimura, S.K. Rope, B. Shleien and J.E. Till. 1991. *Tasks 2 and 3, Radionuclide Source Terms and Uncertainties–1960-1962. The Fernald Dosimetry Reconstruction Project*. Draft interim report for comment. *Radiological Assessments Corporation*, Neeses, South Carolina. December.
- Till, J.E. and **K.R. Meyer**. 1990. “The Additivity of Radionuclide and Chemical Risk Estimates in Assessment of Mixed-Waste Sites.” *Environmental Monitoring, Restoration and Assessment: What Have We Learned*. Twenty-Eighth Hanford Symposium on Health and the Environment. Edited by R.H. Gray. Pacific Northwest Laboratory, Richland, Washington, pp. 207–218.
- Till, J.E., R.E. Moore, G.G. Killough, **K.R. Meyer**, and D.W. Schmidt. 1989. “MICROAIRDOS™: A Version of the AIRDOS-EPA Radionuclide Dispersion and Dose Assessment Code Specifically Developed for Microcomputers.” *Radiological Assessments Corporation*, Neeses, South Carolina.
- Till, J.E. and **K.R. Meyer**. 1989. “A Review of Protective Actions Taken During the Chernobyl Accident-Implications for the U.S. and the State of Illinois.” *Chernobyl: Implications for Illinois*. Proceedings of conference held in Chicago, Illinois, October 22–23, 1987. Illinois Department of Nuclear Safety, Springfield, Illinois. June.
- Till, J.E. and **K.R. Meyer**. 1988 “The Use of Chemical and Radionuclide Risk Estimates in Site Performance Evaluation of Mixed Waste Sites.” *Proceedings of the Tenth Annual DOE Low-Level Waste Management Conference*. Denver, Colorado. August 30–September 1. pp. 148-161.
- Meyer, K.R.** 1977. *Heat and Radiation Response of a Mouse Mammary Tumor-derived Cell Line*. Ph.D. dissertation. Colorado State University, Fort Collins, Colorado.

### Book Reviews

- Meyer, K.R.** 1998. Book review of *Handbook of Radiobiology*, second edition, by Kedar N. Prasad, CRC Press. *Health Physics* 74 (1): p. 218. March.
- Till, J.E. and **K.R. Meyer**. 1989. Book review of *Living Without Landfills: Confronting the 'low-level' Radioactive Waste Crisis*, by Marvin Resnikoff. *Health Physics* 57 (1): pp. 217–218. July.

### Selected Presentations

2011. *Biological Basis of Radiation Safety*. February 14, 2011. Texas Commission on Environmental Quality, Radiation Safety Officer Training. Austin, Texas.
2011. *Biological Effects of Radiation*. November 2, 2011. Web presentation for Waste Control Specialists, Andrews, Texas. Training for license permit application.

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2010. *The Foundation of Radiation Science*. September 20, 2010. Cameco Corporation, Casper, Wyoming. Annual radiation training. Cheyenne, Wyoming.
2009. *DNA Repair Processes and Current Technology*. June 1-2, 2009. Waste Control Specialists, Andrews, Texas. License permit training—week 3. Fort Collins, Colorado.
2007. *Tribal Risk Assessment Tools: Putting Health Impact Results into Perspective*. November 15, 2007. Department of Environmental and Cultural Preservation, San Ildefonso Pueblo, New Mexico.
2004. *Use of Exposure Scenarios in Risk Assessment*. Part of Three Short Courses for Regulators and Radiation Health Specialists: Emerging Topics in Radiation Protection and Risk Assessment. March 16-18, 2004. Kiawah Island, South Carolina. 25 Attendees.
2004. *The Starting Point: Screening for Source Terms and Pathways*. Part of Three Short Courses for Regulators and Radiation Health Specialists: Emerging Topics in Radiation Protection and Risk Assessment. March 16-18, 2004. Kiawah Island, South Carolina. 25 Attendees.
2002. “Estimated Risks from Releases to Surface Water in the Analysis of Exposure and Risks to the Public from Radionuclides and Chemicals Released by the Cerro Grande Fire at Los Alamos.” Public progress meeting presentation at the New Mexico Environment Department. February.
2001. *Public Involvement in Science and Decision Making: Review of the Radionuclide Soil Action Levels at the Rocky Flats Environmental Technology Site*. Invited lecture to the Public Radiation Health class in the Radiological Health Department. November 1.
2001. “Evaluation of Surface Water Monitoring Data Acquired in Relation to the Cerro Grande Fire at Los Alamos in May 2000. Public meeting presentation in Santa Fe, New Mexico. August 22.
1999. “Evaluation of Potential Exposure Pathways Involving Ducks from the TRA Ponds and Doses from  $^{137}\text{Cs}$  and  $^{239,240}\text{Pu}$ .” Presented to the Idaho National Engineering and Environmental Laboratory Health Effects Subcommittee. Boise, Idaho. December 7.
1999. *Screening for Important Pathways and Radionuclides*. Part of a five-day course developed and presented by Risk Assessment Corporation. Calculating and Understanding Risks from Radionuclides Released to the Environment. November 15-19, 1999. Seattle, Washington. 40 Attendees.
1998. “How Screening Methods Guide Efforts to Reconstruct Historic Release Estimates.” Presented at the SRS Health Effects Subcommittee meeting. Sheraton Augusta Hotel, Augusta, Georgia. February 18.
1997. “Past Operations at Rocky Flats: Contaminant Releases to Surface Water.” Presented at a public meeting for the Rocky Flats Historical Public Exposure Studies. Sheraton Denver West, Lakewood, Colorado. May 29.
1994. “Overview Of The Fernald Dosimetry Reconstruction Project.” Invited paper for special session on dose reconstruction. Presented at the Thirty-Ninth Annual Meeting of the Health Physics Society, San Francisco, California. June 29.
1993. “Uncertainty Analysis in the Rocky Flats Dose Reconstruction Project.” Presented a public meeting for the Rocky Flats Historical Public Exposure Studies. Ramada Inn, Westminster, Colorado. December 15.
1988. “The Use of Chemical and Radionuclide Risk Estimates in Site Performance Evaluation of Mixed Waste Sites.” Presentation at the Tenth Annual DOE Low-Level Waste Management Conference, Denver, Colorado. August 30–September 1.