

**James R. Rocco**  
**Sage Risk Solutions LLC**

**Education**

B.S., Civil Engineering, New Jersey Institute of Technology, Newark, New Jersey, 1974

**Professional Experience**

**Sage Risk Solutions LLC**

*Principal*, Aurora, Ohio (1999–present)

Develop and implement environmental risk management programs and approaches for public, commercial, and industrial properties. Risk management activities include human health risk evaluation, risk-based decision making for corrective action and property transfer; structured decision making processes; redevelopment and reuse; community and stakeholder communication and interaction; environmental compliance and management program development; legislative and regulatory technical support; and environmental information management including database and geographic information system development and implementation. Summaries of selected projects are included below:

- Complete risk-based evaluations for commercial and industrial facilities including former railroad maintenance yards, dry cleaners, retail gasoline facilities, manufacturing facilities, and petroleum storage and distribution facilities. The risk-based evaluations included the identification and management of environmental data and information, development of site conceptual exposure models, calculation of site-specific target levels, and conservative fate and transport analysis. The calculation of the site-specific target levels involved the implementation of dose response and transport equations, default and site-specific input parameters. The evaluations also included recommendations to address complete exposure pathways including further data collection, remedial action objectives, and potential institutional and engineering controls.
- Participate as a member of a team of professionals that focus on the redevelopment and restoration of environmentally impaired sites. Responsibilities include the development of risk-based evaluations considering environmental characterization data, potential human exposure pathways associated with current property condition and proposed redevelopment options; participation in design charrettes and community meetings; recommendations for further data collection, remedial options, and institutional and engineering controls consistent with the redevelopment plan; and recommendations for liability reduction mechanisms to address post development environmental and contractual issues.
- Participate as a member of a team of professionals developing an open, transparent process that involves community input as advice to decision makers to reduce public

health risks and ecological impacts from a large Department of Energy facility. As a member of this team:

- Completed the development of a facility-wide site conceptual exposure model for sources associated with the facility.
  - Participated in community involvement activities related to corrective action for sources associated with the facility.
  - Developed and conducted community focus groups to learn about the types of information that the community believes should be considered when decisions about risk reduction are made for the facility.
  - Developed a prototype decision support tool to provide stakeholders with a risk-informed basis for evaluating and making decisions about prioritizing sources for action and risk reduction alternatives for chemicals and radionuclides. The decision support tool is intended to help guide recommendations for risk reduction decisions by providing a mechanism to objectively rank sources of chemicals and radionuclides and compare alternative approaches for reducing risks for those sources identified as most important.
- Completed an evaluation of human health risk associated with surface water runoff from radionuclides and chemicals released by the Cerro Grande Fire that burned a large area associated with the Los Alamos National Laboratory.
  - Developed an objective-based decision analysis model to identify risks and liabilities associated with transferring the responsibility for corrective action for retail service station sites. The model provided a mechanism to organize information about the sites, identify the possible outcomes from the different decisions, and defined the decision criteria for site transfer.
  - Developed a relational database and software model decision and planning tool to evaluate the impacts of disinfectants used to neutralize biological agents in buildings by identifying the byproducts that are likely to form considering the quantity and type of disinfecting agent used. The model was developed in conjunction with research conducted by the University of Texas at Austin.
  - Provide technical, regulatory and legislative support as a retained consultant to the Ohio Petroleum Marketers and Convenience Store Association (OPMCA) and the Petroleum Marketers Association of America (PMAA) for environmental compliance, regulatory, and legislative issues, equipment design and utilization, and environmental compliance and management related to petroleum storage, handling and distribution systems and facilities. Serve as the PMAA representative for NFPA 30 and 30A Technical Committees.
  - Provided technical support to a Midwestern state's underground storage tank (UST) regulatory agency for the development and implementation of a risk-based corrective action program. Support included the identification, evaluation, and recommendation of dose response algorithms, fate and transport equations and default input parameters for

the calculation of risk-based screening levels and site-specific target levels; development of a draft guidance document to support the implementation of the risk-based program; and conducting training sessions for state personnel.

### **BP Exploration and Oil, Inc.**

*Various Positions, Cleveland, Ohio (1974 - 1999)*

Held various positions with increasing responsibility in the areas of construction, maintenance, health, safety, and environmental compliance, and environmental corrective action. Managed a professional staff of engineers, geologists and technicians responsible for construction, maintenance, and environmental compliance for retail marketing and product stewardship, and industrial hygiene and corrective action at over 1700 retail, terminal, pipeline, and refinery facilities. Developed and managed technical solutions for facility environmental risk management including the upgrade and replacement of underground storage tanks, environmental compliance for retail marketing facilities, and corrective action for retail marketing, terminal, pipeline, and refinery facilities. Managed environmental regulatory development and legislative issues on the state and federal level related to corrective action and environmental compliance.

### **Professional Associations and Awards**

American Society of Civil Engineers (ASCE), 1974 to present

American Society for Testing and Materials (ASTM), 1991 to present

National Fire Protection Association (NFPA), 1992 to 1999, 2004 to present

Chi Epsilon National Civil Engineering Honor Society, (1974 - Present)

### **Other Achievements and Activities**

- Member (appointed by the Ohio Governor) of the Ohio Petroleum UST Release Compensation Board since 1989. Chairman of the Board since 1997.
- Chairman of the NFPA Technical Committee on Tank Leakage and Repair Safeguards.
- Past chairman of the American Society for Testing and Materials (ASTM) Corrective Action Task Group that developed standards for remediation by natural attenuation and accelerated site characterization and principal author of the Guide for Corrective Action for Petroleum Releases (ASTM E1599-94) and the Guide for Risk-Based Corrective Action (“RBCA”) Applied at Petroleum Release Sites (ASTM E1739-95).
- Past chairman of the ASTM Risk-Based Corrective Action Training Task Group and a principal author of the ASTM modular training program for implementation of RBCA in state underground storage tank regulatory programs; the ASTM RBCA Workshop; and the ASTM RBCA Outreach program presented to USEPA Region RCRA and Superfund programs.

- Past co-chairman of the ASTM sustainable Redevelopment Task Group and a principal author of the Standard Guide for Process of Sustainable Brownfields Redevelopment (ASTM E1984-98).

## Publications

### Book and Journal Publications

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, DC.

**Rocco, J. R.**, L. Hay Wilson. 2001 "The Process of Sustainable Brownfields Redevelopment", Chapter 19 in *Brownfields: A Comprehensive Guide to Redeveloping Contaminated Property*, Second Edition, T. S. Davis and K. D. Margolis, editors, American Bar Association, Chicago, IL, 2001.

**Rocco, J. R.**, L. Hay Wilson, L. 2001 "Risk-Based Decision Making for Corrective Action", Chapter 22 in *Brownfields: A Comprehensive Guide to Redeveloping Contaminated Property*, Second Edition, T. S. Davis and K. D. Margolis, editors, American Bar Association, Chicago, IL, 2001.

Hay Wilson, L., **Rocco, J. R.**, Till, J. E. 1997 "Can We Make Good Environmental Management Decisions Without Considering Risk?" *ES&H News*, Volume 4, Number 1, Fall 1997.

**Rocco, J. R.**, Hay Wilson, L. 1997. "The Risk-Based Corrective Action Process," Chapter 18 in *Brownfields: A Comprehensive Guide to Redeveloping Contaminated Property*, First Edition, T. S. Davis and K. D. Margolis, editors, American Bar Association, Chicago, IL, 1997.

### Technical Reports

Hay Wilson, L., **J.R. Rocco**, S.S. Mohler, E.A. Stetar, H.A. Grogan, H.J. Mohler, J. Wilson, B. Jacobs, and P. Voilleque. 2007. *Risk Analysis, Communication, Evaluation, and Reduction at LANL. Decision Support Tool Methodology Report*. RAC Report No. 18-RACER LANL-2007-FINAL. Prepared by *Risk Assessment Corporation*, Neeses, South Carolina for Colorado State University. July 20.

Stetar, E.A., L. Hay Wilson, J.R. Rocco, S.S. Mohler, and H.A. Grogan. 2007. *Risk Analysis, Communication, Evaluation, and Reduction at LANL. Focus Group Data Evaluation Report*.

RAC Report No. 19-RACER LANL-2007-FINAL. Prepared by *Risk Assessment Corporation*, Neeses, South Carolina for Colorado State University. July 20.

Lesley Hay Wilson, Paul C. Johnson, **James R. Rocco**. 2006 "Collecting and Interpreting Soil Gas Samples from the Vadose Zone A Practical Strategy for Assessing the Subsurface Vapor-to-Indoor Air Migration Pathway at Petroleum Hydrocarbon Sites", Publication Number 4741, American Petroleum Institute, Washington D.C

**J.R. Rocco**, E.A Stetar, and L. Hay Wilson, 2005. Risk Analysis, Communication, Evaluation, and Reduction at *Los Alamos National Laboratory: Site Conceptual Exposure Model*. RAC Report No. 10-RACER LANL-2005-Final. <http://www.racteam.com/RACERatLANL.htm>. August.

Mohler, S.S., J.W. Aanenson, H.A. Grogan, L. Hay Wilson, P.D. McGavran, K.R. Meyer., H.J. Mohler, **J.R. Rocco**, and A.S. Rood. 2002. *Analysis of Exposure and Risks to the Public from Radionuclides and Chemicals Released by the Cerro Grande Fire at Los Alamos. Summary Report*. RAC Report No. 5-NMED-2002-FINAL. Prepared by *Risk Assessment Corporation*, Neeses, South Carolina for New Mexico Environment Department, Santa Fe. June 12.

**J.R. Rocco.**, K.R. Meyer, H.J. Mohler, J.W. Aanenson, L. Hay Wilson, A.S. Rood, P. D. McGavran, and J.E. Till. 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*. RAC Report No. 4-NMED-2002-Final. June

H.J. Mohler, K.R. Meyer, J.W. Aanenson, H.A. Grogan, **J.R. Rocco.**, and J.E. Till. 2001. *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-2001-Final. June

H.J. Mohler, H.A. Grogan, K.R. Meyer, **J.R. Rocco.**, L. Hay Wilson, and J.E. Till. 2001. *Analysis of Exposure and Risks to the Public from Radionuclides and Chemicals Released by the Cerro Grande Fire at Los Alamos, Task 0.2: Evaluation of Data Compilation Process*. RAC Report No. 4-NMED-2001-Final. June

### Conference Proceedings

Hay Wilson, L, Romanek, A.P., Maidment, D.R., **Rocco, J.R.** 1999. "Using a Geographic Information Systems Application to Implement Risk Based Decisions in Corrective Action," Problem Solving with Geographic Information Systems – A National conference 1999, Cincinnati, Ohio.

Hay Wilson, L. L. N. Koerner, A. P. Romanek, **J. R. Rocco**, and R. B. Gilbert. 1999. "Critical Success Factors for Implementing Risk-Based Decision Making at a Large Refinery Site,"

*Contaminated Sites Remediation Conference: Challenges Posed by Urban & Industrial Sites Proceedings*, March 23-25, 1999, Fremantle Western Australia.

- Hay Wilson, L., A. P. Romanek, D. R. Maidment, and **J. R. Rocco**. 1999. "Using a Geographic Information Systems Application to Implement Risk Based Decisions in Corrective Action," *USEPA Environmental Problem Solving with Geographic Information Systems (GIS): A National Conference*, Proceedings EPA/625/R-00/010.
- Hay Wilson, L. and **Rocco, J. R.** 1998. "Development of a Site Corrective Action Cost Comparison Model Based on the ASTM RBCA Guide and Decision Theory," American Society of Civil Engineers Geo Congress 1998, Risk-Based Decision Workshop, Boston MA.
- Hay Wilson, L. L. N. Koerner, A. P. Romanek, **J. R. Rocco**, R. B. Gilbert. 1998. "Critical Success Factors for Implementing Risk-Based Decision Making at a Large Refinery Site," *Contaminated Sites Remediation Conference: Challenges Posed by Urban & Industrial Sites Proceedings*, in press.
- Koerner, L. N., Hay Wilson, L., Romanek, A. P., **Rocco, J. R.**, Sharp, S. L., Gilbert, R. B. 1998. "Maximizing the Value of Information in Risk-Based Decision-Making: Challenges and Solutions," American Nuclear Society Conference, April 3-5, 1998, Pasco WA.
- Phillips, G., **Rocco, J. R.**, Hay Wilson, L. 1998. "Integration of Risk Management and Project Management for Efficient RCRA Corrective Action," American Society of Civil Engineers Geo Congress 1998, Risk-Based Decision Workshop, Boston MA.
- Rocco, J. R.** and Hay Wilson, L. 1998. "The Evolution of Risk-Based Corrective Action," American Society of Civil Engineers Geo Congress 1998, Risk-Based Decision Workshop, Boston MA.
- Taylor, M. B., **Rocco, J. R.** 1998, "ASTM Proposed Guide to the Process of Sustainable Brownfields Redevelopment," American Society of Civil Engineers, Geo Congress 1998, Risk-Based Decision Workshop, Boston, MA.